Cycling and Identity: Examining the role of social identity processes in transport choice and cycling

IAN COOKSON

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Department of Psychology

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RESEARCH ABSTRACT

This thesis adds to the extant literature on transport choice, by applying a social identity framework to modal shift. According to the Department of Transport 71% of all journeys are short trips under five miles (Department for Transport, 2023a). Of these trips, 67% of journeys between one and five miles, and 16% of journeys under 1 mile are completed by private motor vehicles. Moving from the use of private motor vehicles to Active travel (walking and cycling) is beneficial for personal physical and mental health, while being environmentally sustainable.

Psychological research has previously focused on the Theory of Planned behaviour (Ajzen, 1985). The social identity approach has contributed to a limited number of studies considering bicycle use (Gatersleben & Haddad, 2010), or as an extension to the theory of planned behaviour (Lois et al., 2015). However, few studies have explicitly sought to understand how social identity and group processes contributes to bicycle use as a mode of transport.

This thesis draws together three distinct studies, a thematic analysis of how the media represents people on bicycles, a discourse analysis of modal choice across all transport users, and a phenomenological study of cycling that uses photo-elicitation to explore participants worlds.

The findings are discussed in relation to various aspects of the social identity approach. The hierarchy of transport users is a common theme, explored through the othering of people on bicycles in the media, and the discursive constructions around forced choice and discussions of power. Cycling as a solo activity which results in flow experiences is also discussed and how this relates to personal and social identities which are made salient at specific points.

This thesis therefore adds new knowledge by applying the social identity approach to transport choice, while also offering a novel methodological approach in this domain.

DEDICATION

To Mum

This thesis is dedicated to the memory of my mum who died on the 6th of February 2022 after a short but typically stoic battle with cancer.

Mum returned to education as a mature student after having five children and went on to achieve a first-class law degree alongside the prize for top student. Her career included work for an international law firm, and as the chair of a renowned hospital.

My return to education as a mature student was partly possible because I had such an outstanding role model. Mum was incredibly intelligent but allied that with a ferocious work ethic. She cared deeply about those she worked with, and those who worked for her, as well of course for her friends and family.

I am humble that I had such an incredible person to look up to, and equally devastated she isn't here to see the completion of my own educational journey.

Mum's advice to me was often direct and uncompromising, no frills, no filter. I have no inspirational words she left for me that I could pass on to anyone reading this passage. For her, inspiration was through deeds and in actions. Life was about surrounding herself with friends and family, and the odd glass of sauvignon blanc.

I hope my own journey shows others these lessons. Work hard, take action, surround yourself with friends and family. It has taken all of these to complete this thesis. Now time for a glass of wine.

Thanks Mum.

Love, Ian.

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Thankyou.

Chapter 1. INTRODUCTION AND RATIONALE

1.1 Outline of thesis structure

This thesis sets out to explore transport choices and cycling through a group-based approach, specifically adopting the social identity approach, to consider its usefulness in this domain. The rest of chapter 1 sets out the context for this study including an introduction, and the rationale behind why this research is needed at this time in terms of the environmental impact of transport choices.

In 0 I review the literature, which has endeavored to provide further context for the research presented here. The literature review is split into four areas, looking at identity, mobility and health, mobility choices, and behaviour change. As identity sits at the core of this thesis, I first consider how identity has been considered within the transport domain. The choices we make in terms of mobility can have either positive or negative impacts on health and the climate, hence the focus on these two themes. Finally, mobility choices and behaviour change considers research that looks at how we might encourage people to switch to more sustainable modes. In curating the literature, I have presented research that demonstrates the need for this piece of research, both theoretically and in terms of a solution to an applied problem.

Chapters three to five are the three empirical studies that comprise this thesis. As there are three studies within the thesis each part has its own introduction, literature review, methods, analysis, and discussion. Therefore, there is no distinct methods section for the thesis overall. The analysis and discussion for studies two and three are combined into single chapters rather than being split into separate chapters.

Study one considers how the media represents people on bicycles, an important consideration in how certain groups may be perceived by the general public, explored through thematic analysis (Braun & Clarke, 2006). Study 2 adopts a discursive approach to explore how people talk about transport in, drawing on discourse analysis as understood by Potter & Wetherell (1987). Finally study three

draws on photo-elicitation and semi-structured interviews to understand the lived experiences of people on bicycles through phenomenology.

While methodologically different the three approaches used here are philosophically congruent. Thematic analysis is compatible with both essentialist and constructivist approaches, and therefore is a valid methodological approach to consider how the specific social category of the cyclist is constructed. That is, as social identity theory is itself a constructionist theory then using thematic analysis to explore media representations through the lens of social identity theory is congruent. Similarly, the discursive approach of Potter and Wetherell considers how social categories are constructed in everyday talk. Phenomenology stands alone as a philosophy, distinct from the constructive epistemology of social identity theory, and yet they are compatible as interpretative phenomenology is in part premised on the belief the individual's lifeworld is always in relation to another.

Chapter 6 includes a discussion of the three studies, and a conclusion that draws the piece of research together including the wider implications of this piece of work, along with suggestions for future research. In the discussion I have created several themes that cut across the three studies and draw together the theoretical arguments that support the research statement. That is, how useful is the social identity approach in discussions of transport choice and cycling?

1.2 Research questions

1.2.1 Thesis research question:

To consider the usefulness of the social identity approach in being able to explore how groups and intergroup processes are seen in cycling for transport.

1.2.2 Study 1 Research question:

Applying thematic analysis to explore how newspapers represent people on bicycles.

1.2.3 Study 2 Research question:

Using semi-structured interviews to *explore everyday discourses around the social identities* of different transport user groups.

1.2.4 Study 3 Research question:

Through interpretative phenomenological analysis, how do we *understand intergroup processes and individual experiences of cycling?*

1.3 Definitions

Throughout this research 'active travel' is used to denote any form of mobility that is understood to be under human propulsion. While there is debate around recent technologies such as e-scooters and e-bikes, when I began to conduct this research, these technologies were in their infancy, and were not a major consideration for this topic.

Similarly, the inclusion of 'wheeling' for those using mobility aids was admittedly not something I had considered as part of the active travel debate. It is only through the experience of conducting this research that I have become more aware of the heterogenous nature of non-motorized transport, and that terminology other than 'active travel' is often preferred. For example, Sustrans currently advocate 'walking and wheeling' to denote the range of mobilities that are included in the discussions around non-motorised transport. However, for simplicity, active travel is used to denote any non-motorised form of transport.

It should also be noted that within this thesis I have used the terms 'person on a bicycle' and 'people on bicycles' apart from where I have quoted from the literature or participants. This was a conscious decision to avoid categorization of people in a particular way as people may reject the label 'cyclist' considering it to refer to someone who looks and behaves in a particular way.

1.4 Introduction

Often referred to under the umbrella term 'Active travel' walking and cycling are sustainable forms of transport that are beneficial for air quality, the global climate and for individual physical and mental health. However, private motor vehicles are routinely used to undertake journeys of under five miles which could feasibly be completed by walking and cycling. The Department for Transport in the UK report that 67% of journeys under five miles, and 16% of journeys under 1 mile are undertaken by car (Department for Transport, 2023a).

If people switched these short journeys to more sustainable modes it would have a resultant positive effect on individual health, air quality and the climate. It has been reported that a shift towards active travel would generate economic savings to the

NHS of £319m over 21 years from 2019, predominantly by overcoming the lack of physical activity in the population (Pidd, 2019). Projected healthcare savings have been reported consistently (Jarrett et al., 2012; Mizdrak et al., 2019) in addition to reductions in greenhouse gas emissions (Mizdrak et al., 2019) and improvements in air quality (Sofia et al., 2020).

During 2020 when the Covid-19 pandemic swept the globe, the benefits of modal shift were highlighted with cycling enjoying a renaissance while private car use reduced dramatically. While this was primarily due to a lack of a need to drive motor vehicles, it also brought focus to the lack of road space given over to active travel compared to motor vehicles, with 'pop-up' walking and cycling lanes being implanted as a result (Rérat et al., 2022).

With many benefits to shifting populations away from car use and towards Active Travel, research has focused on why individuals use different forms of transport, and more notably, how to facilitate change. The extant literature predominantly focusses on individual behaviour change, and how people can be encouraged to swap short journeys from motor vehicles to active travel.

Previous research in how to encourage modal shift is not only multi-disciplinary but often inter-disciplinary, see Handy et al., (2014). In their review of the extant literature Handy et al., (2014) consider the integration of infrastructure design, geography, sociology, and psychological factors behind transport choice and where there may be opportunities for further research. This is reflected in the mobilities turn, following the work of John Urry, a paradigm shift that focusses on people and movement, not just from place to place, but about what that journey means to people (Cresswell, 2006). To reflect the inter-disciplinary nature of the extant literature and the mobilities turn, this review takes a thematic approach, considering concepts related to transport and modal shift rather than writing from a disciplinary viewpoint. In the literature review to follow I explore this topic across four themes, the environment, health, mobility choice and behaviour change, and identity. The intention here is to guide the reader through the impact of different forms of travel, and why active travel is an important solution for problems created by motorised transport.

Social psychology, in exploring modal shift – from single use motor vehicles to walking or cycling - has predominantly focused on behaviour change through the application of Ajzen's (1985) theory of planned behaviour (de Souza et al., 2014; Frater et al., 2017), although other behaviour change models have also been considered such as stages of change theory (van Bekkum et al., 2011a). Theories of identity have also considered correlations between identity constructs and transport behaviour (Jones et al., 2012; Murtagh et al., 2012), or how identity can inform questions of interaction between road users (Füssl & Haupt, 2017). In a unique study Lois, Moriano and Rondinella (2015) applied social identity theory to extend the theory of planned behaviour to consider whether this adapted model could provide greater predictability of intention to cycle than the individual theories, and in doing so "capture the motivational factors relevant to cycling" (Lois et al., 2015, pp.101).

While identity forms part of that body of work, social identity is little utilized as a theoretical framework, particularly regarding transport choices. Therefore, the literature review is structured in such a way that it speaks to the research question, namely 'To consider the usefulness of the social identity approach in being able to explore how groups and intergroup processes are seen in cycling for transport'.

The social identity approach within psychology comprises two theories, Social Identity Theory (Tajfel et al., 1979) and Self-categorisation theory (Turner, 1982), and have been used extensively to understand group processes starting with Tajfel's own work in eradicating genocide and extending into other domains. While the social identity approach has contributed to studies considering bicycle use (Gatersleben & Haddad, 2010; Hoekstra et al., 2018) few studies have explicitly sought to understand how social identity contributes to bicycle use as a transport choice and the discourses around it. This body of work therefore attempts to fill the gap in the extant literature to elucidate aspects of the social identity approach and transport choice. This is a novel approach and brings a new focus to the issue of transport choice. Additionally, through the three studies that explore the topic from three different perspectives I present a diversity of complementary methodological approaches.

My personal interest in this topic grew as a result of cycling around Greater Manchester, coupled with my developing career as a sport and exercise psychologist. I had begun cycling when, as a father of two young children, we could not afford to own two cars. Cycling then became a hobby, cycling for leisure and fitness in addition to utility journeys. Once I had started a master's course in sport and exercise psychology I was drawn to the social aspects of sport, and therefore when an opportunity arose to combine research into cycling and social identity theory, I was keen to understand how these topics may be related.

As a result of cycling around Greater Manchester and Cheshire I became deeply aware of issues related to cycling such as safety, a lack of investment, and the impact on personal physical and mental health in addition to the impact on the climate and air pollution from motor vehicles. Through social media I also saw how these issues were framed and discussed, and as such felt drawn strongly to the subject matter, becoming a member of a local advocacy group for active travel.

Reflexivity in qualitative research helps strengthen academic rigour and trustworthiness in the results, and guide researchers to be mindful of their own values and biases (Berger, 2013) and in positioning myself as an 'insider' in terms of active travel it is clear that I am sympathetic to the people who use, or would like to use, active travel for leisure and utility journeys. However, as a parent of a child with chronic health conditions I am also aware of the benefits of motorised transport, and that for some they present a means of accessing society that may not be feasible through active travel or public transport alone. Reflecting on this position as I conducted this research, my intention was to engage with participants as openly as possible, and in doing be open to the participants interpretations and views of transport choice.

1.5 Methodological approach

The unique methodological approach outlined above uses three complementary methods that have been adopted to provide a broader exploration of the subject than one could expect in only using one approach. Specifically, a thematic analysis of media representations following Braun & Clarke's (2006) guidelines, discourse

analysis in line with Potter & Wetherell (1987), and finally an interpretive phenomenological analysis of cycling (Smith & Osborn, 2008).

The rationale for adopting a mixed methods approach was to enable me to explore the value of the social identity approach to the complex issue of modal choice. Jackson & Sherriff (2013) suggest adopting a mixed qualitative approach for research that considers the social identity approach to complex real life issues in order to understand such issues in depth. Employing only one methodological approach would have limited my ability to consider how useful the social identity approach is to questions of modal choice and in contrast by employing three different methods, each with a different perspective, I aimed to provide a deep and rich exploration of the research question.

This rich exploration is achieved through the different perspectives that the three methods offer. The thematic analysis of media representations considers how cycling is perceived from the external perspective of a powerful group, the media. The discourse analysis explores everyday understandings of transport from the public users of the transport system, and how they perceive modal choice. Phenomenology offers us a view of the lived experience of one mode, cycling, from an insider's perspective.

While these different perspectives offer complementary perspectives on the modal choice from a social identity perspective, they do not offer triangulation per se, and should therefore be considered as adding depth and different perspectives rather than attempting to locate a phenomenon.

Chapter 2. LITERATURE REVIEW

This literature review is structured along thematic lines, considering mobility and its relationship to the environment, health, and identity. Given the fact that our transport choices impact these three important domains, I also explore the literature on transport choice and behaviour change. This review is not designed to be an exhaustive exploration of all the literature in this domain, but instead intends to explore research conducted on transport choice and its impact, and therefore where the gap exists in our understanding of transport choice.

Active travel along with increased use of public transport has been held aloft as a panacea for social ills and poor health outcomes resulting from physical inactivity. Active travel describes travel that occurs solely through human locomotion without any mechanical intervention, and while it can include horse riding or the use of scooters and skateboards, in the context of transport we generally consider it to mean walking and cycling. The concept of active travel is often discussed alongside other sustainable transport solutions such as public transport, where active travel is one of the 'stages' of a journey, not solely the complete journey. These transport solutions are healthier and more sustainable alternatives to motor vehicle use, particularly as motor vehicles often transport a single occupant.

As I am adopting three different approaches to explore how useful the social identity approach is in relation to transport choices and cycling, it is appropriate to adopt a broad approach to the topic, and not focus on a single aspect. This means that an inter-disciplinary approach would be particularly useful.

This inter-disciplinary approach to transport and travel is captured by the 'mobilities turn' or new mobilities paradigm (henceforth referred to as 'mobilities') which has adopted a different ontological base from the traditionally positivist field of transport geography. The work of John Urry amongst others (Sheller & Urry, 2006; Urry, 2001), sought to draw together multiple disciplines in order to look beyond simple descriptions of places or points on a map. Urry describes five different types of mobility, namely corporeal travel, movement of products, imaginative travel, virtual travel, and communicative travel. Thus, mobilities

concerns itself with “the complex interplay between movement, its representation and the embodied experience” (van Duppen & Spierings, 2013, pp.234). Most relevant to this thesis is the view that identity is not necessarily a product of being rooted in a place, but instead is realised through “networks of people, ideas and things moving” (Cresswell, 2011, pp.251), that is, as people move through their world, identity is a product of this movement as it encounters other people, ideas and objects. Therefore, by considering meaningful aspects of people’s lives in relation to mobility we move beyond the concept of modal choice as a means of getting from A to B but consider the impact modal choice has on people’s daily lives including their identity.

Finally, I look at the social identity literature in relation to transport choice and cycling to position this thesis within it. Research on behaviour change and identity in relation to transport choices and modal shift often tends to be individual in nature and provides a rationale for approaching this topic from a social identity perspective. Within the literature review I have not included a discussion of the methods used, as they are included in the individual methods sections for each study.

2.1.1 Identity

While the social identity approach underpins this research, the concept of identity has been applied to the issue of transport and cycling from several different perspectives, and as such is conceptualized in a number of different forms. This includes demographic descriptions (Department of Transport, 2019) to how identity interacts with social contexts (Law & Karnilowicz, 2015) and social identity (Hoekstra et al., 2018). Therefore, this section first explores the demographics of cycling in the UK to illustrate who is cycling, and then focuses on sociological and psychological research on identity and transport.

The Governments National Travel Survey (NTS) and Active Lives data sets provide us with demographic information about who uses different modes of transport. Within the data we find that men make three times more cycling trips than women, and men also cycle further than women, while younger people are much more likely to cycle (Department of Transport, 2019). This demographic picture of cycling being

predominantly a male activity is reinforced by the data that shows women make more trips by car than men, although men travel further. The NTS data on public transport also suggests differences in public transport use, with more women using local bus services while men more commonly use rail services. The reasons for the discrepancies in modal share become a little clearer when we consider the data around journey *intention*. Men commute more and travel more for business than women, while women travel more for shopping and most notably for educational escort (i.e. the school run). In this category women are responsible for 50% more trips than men. Also notable in the Active Lives data set is that cycling for leisure is reasonably equitable across age and gender (Brainard et al., 2019).

Furthermore, when we consider cycling for transport, which includes commuting where commuters primarily use one form of transport, then 3% of all commuting trips are by bike (Stillwell et al., 2019). Within this group approximately twice as many men as women commute by bike (Department of Transport, 2019). Where cycling frequency is lower such as once a month, younger people are more likely to cycle, however once cycling becomes more frequent (five times per week) then the number of people cycling is relatively consistent across age groups. Ethnically those who class themselves as white other are more likely to cycle than any other ethnic group, and those with no disability are more likely to cycle compared with those with a limiting or non-limiting disability.

Of the different socio-economic groups, students are the most likely to cycle for transport, irrespective of the frequency of cycling while those least likely to cycle are those of intermediate occupations which includes clerical, sales and service roles, and the self-employed. There are also notable differences in who cycles when we consider the level of deprivation. The wealthiest quartile is more likely to cycle at lower frequencies, but at higher frequencies (i.e. between three and five times per week) it is the most deprived that are most likely to cycle. We can interpret this as the wealthier having the choice to cycle on occasions that suit them, while for the most deprived it is more of a necessity. This corresponds with the socio-demographic group of students who cycle the most. Taken together, when considering the demographic profile of a typical commuter person on a bicycle, is

that they are likely to be young white males with no disability but of low economic means such as students. In contrast the identity of those most likely to drive are women, of minority ethnic groups, in clerical, sales or service roles that place them in the second least deprived quartile.

While the demographic sketches of identity suggest that cycling is dominated by adult white males (Aldred et al., 2016; Damant-Sirois & El-Geneidy, 2015; Goodman & Aldred, 2018), even when considered in terms of geographical areas where there has been an increase in cycling levels such as London, a lack of diversity persists. Oglivie and Goodman's (2012) research on the users of a bicycle hire scheme in London found a similar pattern of participation levels as others, and yet when they factored in the distance from the cycle hire docking stations, then males in the most deprived areas were most likely to use the scheme. For Oglivie and Goodman, while this supports the data collected by the DfT, it also suggests that expanding the scheme into lower income areas may help to counter the lack of diversity in cycling.

This illustration of how transport use in the UK is explored through demographics gives us some indication of the identity of those using modes of transport, and for what purpose. However, if modal shift is to be encouraged then understanding why a certain demographic predominantly does or does not use one form of transport over another is key. There are clearly several barriers to cycling for a significant proportion of the population, resulting in under representation of certain demographics, which serves to highlight the complexity of modal shift. Therefore, while research in the transport domain seeks to understand how best to improve heterogeneity in the cycling population, the quantitative data presented in studies around demographics, due to their cross-sectional nature, can only provide a limited understanding.

What these studies may well benefit from is supplementary research of a longitudinal or qualitative nature (Handy et al., 2014), complementing the quantitative research in exploring topics where the research question is better suited to more in depth and complex questions. This is particularly relevant to cycling where there are more perceived barriers than say walking or car use (Guell et al., 2012). While quantitative studies do speak to issues of identity such as the

demographic characteristics of different commuter groups, they are not able to elucidate more complex conceptualizations of identity.

For example, some of the factors that lead to inequalities between men and women may be due to a lack of safe infrastructure, resulting in less women cycling as outlined by Steinbach who refers to "the cultivation of a particular 'assertive' style to defend against the risks of road danger and aggression" (Steinbach et al., 2011, pp. 1). However, it may also be connected to issues of childcare, and the design of cycling infrastructure that fails to accommodate that it is predominantly females that are responsible for the school run (Cosgrave et al., 2020) as discussed at the beginning of this section on the demographic profile of motorists, or in issues around household decision making (Pooley et al., 2011).

Further research that has sought to elucidate issues of participation in diverse groups have examined several hypotheses. Steinbach et al., (2011) report that the lack of visibility of people on bicycles from ethnic minority groups may be a factor in their under representation in the cycling population, that is, in not seeing other people from ethnic minorities cycling people from ethnic minorities are less likely to participate in cycling. Additionally, Law and Karnilowicz (2015) research on Culturally and Linguistically Diverse (CALD) populations in Australia suggests that when displaced from their country of birth, CALD populations struggle to cycle due to deprivation, which dictates that they have to live further out from urban centres at distances unsuitable for cycling. Further, in terms of identity, Law and Karnilowicz considered how CALD populations interpret the cultural symbols of the adopted country relative to their sense of self. For them cycling is inextricably linked to their social identity, class, and status, so while in their home countries poor people may ride bikes, in Australia there is a culture of symbols including expensive road bikes and hi-tech gear, which are at odds with their memories of place and cycling. Additionally, there is a sense of being Australian which includes being sporty and therefore being non-sporty relates to notions of non-Australian.

Similarly, Barajas suggests that there are other social factors that influence an individual's perception of whether they feel they are a person on a bicycle or not such as "gentrification, immigrant experiences, and cultural narratives" (Barajas,

2018, pp.1). Joshi considers various factors such as a lack of political will to implement pro-cycling initiatives as barriers to cycling, but their central theme is that cycle use is, certainly in India, inextricably linked with poverty. They explore how a "post-liberalization era" (Joshi & Joseph, 2015, pp. 34) has led to increased wealth, and therefore increased use of motor vehicles resulting in inclusion in this new world for the rich, but exclusion for those in poverty. Identity and cycling can therefore be understood not as a fixed set of demographics, but as an interaction between the individual and culture, a classical sociological interpretation of identity and in line with the mobilities literature. In exploring cycling rates and the impact of the dominance of the car, Joshi's cultural lens on India is focused on "policies, statutes, newspaper reports and secondary literature" (Joshi & Joseph, 2015, pp. 24), and not just empirical research. This reinforces the earlier point that while research that describes the demographics of various groups may provide us with a two-dimensional picture about who are included and excluded, it may not enlighten us as to the motivations behind inclusion and exclusion of various groups, and therefore a wider exploration of culture is required if we are to understand the identity of people on bicycles.

This raises the joint issues of identity and transport as viewed within different domains such as sociology and psychology. Sociologist theories of identity are complex and theoretically beyond the scope of this discussion, but relate the self to society through a reciprocal relationship (Burke & Stets, 2003). Identities are expressions of the self in specific contexts, so as a father, student, colleague etc. Therefore, the context plays an integral part of a person's identity, and indeed there is an interaction between the two, specifically that an identity is salient depending on the other person that an interaction occurs with. Sociological research therefore takes the static demographic view of identity and adds context and interactions to develop our understanding of the identity of those who cycle.

For example, research by Rachel Aldred (2010, 2013a) demonstrates a clear need for further exploration of group processes from a psychological perspective within the social identity tradition, as both studies apply concepts that can be reinterpreted as aspects of the social identity approach. In the first of these papers

on ‘Constructing cycling citizenship', Aldred discusses how “cycling might affect perceptions the self” (Aldred, 2010, pp. 1), that an individual’s identity is linked to transport, and that citizenship is not solely defined through national identity, or more accurately that there are different conceptualizations of citizenship. Aldred here identifies four dimensions of cycling citizenship namely being environmentally aware, self-care, being locally rooted, and community minded, which combine into the proposed model of the cycling citizen. Notably these are all dimensions made in comparison with other transport users, or other forms of transport, and from a social identity perspective could be seen to represent the values along which people make social comparisons with referential groups. Indeed, the fact that individuals seek different dimensions, or values, along which to compare themselves with other transport users is suggestive of social creativity – the strategy whereby individuals use whichever value they feel achieves positive distinctiveness for their own social group (Tajfel et al., 1979).

The latter paper again does not apply social identity theory explicitly, sitting as it does within the Transport domain, but it does further demonstrate some of the shared understandings of sociology and social psychology, where we see clear equivalences between notions of “negotiation, disavowal and challenge” (Aldred, 2013a, pp. 252) and ideas of group legitimacy found in the social identity approach . Additionally there is discussion of “disadvantaged social identities” (Aldred, 2013a, pp. 268) which we can equate to power relations between groups, and specifically subordinate groups.

Similarly, other conceptualizations of identity have also considered correlations between identity and transport behaviour (Jones et al., 2012; Murtagh et al., 2012), or how identity can inform questions of interaction between road users (Füssl & Haupt, 2017). Murtagh *et al.,* (2012), draw on role theory, the sociological theory of internalizing particular social roles, for example mother, teacher, person on a bicycle. Their findings find multiple roles are associated with travel mode, and travel mode may be dictated by which of these multiple identities are most important. For Murtagh *et al.,* (2012) driving may provide a way of managing the conflicting identities of worker and parent, and further, that travel mode may be a

household decision drawing on multiple identities of individuals within the household. In relation to promoting more sustainable transport choices the authors suggest appealing to social identities with green credentials, or further exploring the norms and expectations of driver identities that leads to a deeper understanding of what may encourage sustainable behaviours. Again, we are provided with a conceptualization of identity that implies social identity theory, and that the relevance of salience to identity may be a fruitful area of research.

Jones *et al.,* (2012) further considered the behaviour of various groups who self-identify as either pedestrian, person on a bicycle, or motorist, and how they view moving around the city. These subjective experiences and opinions help to build our understanding of how the different groups view movement within a city, and of the dominance and legitimacy of the car. The resultant findings suggest a hierarchy of road users with pedestrians most vociferous about wanting to see change, while drivers not wanting any changes that impinge on their freedom to drive and suggesting that pedestrians and people on bicycles should do more in terms of their safety. The behaviours and expectations here are again dependent on how the individual categorises themselves within the road user community, and most pertinently the salience of their identity as almost all had car access so could feasibly have identified as drivers. I feel it is important to note that a study on discourse chooses its category descriptors in the way it does. Pedestrians are "prioritisers", cyclists are "sanctifiers" and motorists are "adherents" (Jones et al., 2012, pp. 1415). It could be suggested that this nomenclature is indicative of the dominant position of the car in our cities, and that the authors are writing, albeit subconsciously from the position of the dominant group.

Similarly, Hickman's (2018) analysis of discourses describes how the self-identification of transport users relates to their attitudes towards around travel in Manila. For Hickman while all four categories of road users wanted investment in public transport, their motivations for doing so were dependent on how it affected their own transport choices.

In addition to psychological research around the theory of planned behaviour discussed previously, identity has often focused on individuals lived experiences,

see McKenna and Whatling (2007), or subculture (Falcous, 2017). Few studies have explicitly applied the social identity approach in considering how identity from a group perspective contributes to bicycle use as a transport choice and the discourses around it.

2.1.2 Social identity

The social identity approach draws on two complementary pieces of research, Social Identity Theory (Tajfel et al., 1979) and Self-categorisation theory (Turner, 1982). This approach has been used extensively to understand group processes in various domains, such as intergroup conflict (Tajfel et al., 1979), the media (Harwood & Roy, 2005), and sport and exercise (Slater et al., 2014). Throughout this thesis a distinction is made between social identity theory as described by Tajfel et al., (1979) and subsequent research into concepts such as social norms which falls under the broader label of the social identity approach. While conceptually related, social identity theory provided a theoretical base on which further research such as self-categorisation was able to explain some of the theoretical limitations of social identity theory, specifically the cognitive processes that explain how social identity theory functions. While the original study, as described below, is used in parts of this thesis I will more often use the broader term 'social identity approach' to distinguish subsequent developments within the field.

The minimal group experiments that underpinned Tajfel's research into social identity theory involved allocating schoolboys to one of two groups and then testing how they behaved as group members. While the boys believed the group they were allocated to was apparently based on their ability to judge the number of dots flashed onto a screen or a preference for either of the artists Kandinsky or Klee, the allocation was in fact random (Tajfel, 1970). Having allocated the boys to one of two groups, in the second stage they were asked to allocate points to two other boys on a matrix. The matrices that were used in this experiment, and subsequent adaptations (see **Error! Reference source not found.** below) asked the b oys to mark a box, which contained two different points values. The boys did not know who else was in their group, or who they were allocating points to, but they *did* know which row related to their group and therefore which set of points was

being awarded to which group. Tajfel found that the boys tended to favour their own group in terms of points allocation despite their group membership being tenuous. Furthermore, the in-group favouritism maximised the differences between the two groups, the box the boys chose to mark would provide the biggest difference in points allocation between the groups.

-19	-16	-13	-10	-7	-4	-1	0	1	2	3	4	5	6
6	5	4	3	2	1	0	-1	-4	-7	-10	-13	-16	-19

Table 2:1 Example matrix from Tajfel's experiments
(Data from: (Tajfel, 1970))

Based on these seminal experiments, Tajfel developed a theory of intergroup conflict, the central tenet being that we seek positively valued distinctiveness for our in-group compared to a relevant out group. That is, we categorise ourselves and others as belonging to particular social groups, and any group to which we belong (the in-group) are compared to relevant out-groups, and it is this drive for positively valued distinctiveness that determines behaviour.

Postmes and Branscombe's review of the broader social identity approach describes its theoretical constructs as a tripod (Postmes & Branscombe, 2010) of which they consider the first leg to be the social categorization-social identity-social comparison-positive distinctiveness sequence. Within this sequence, according to ideas developed by Turner in self-categorisation theory, we categorise ourselves as more alike, or more different to others and in doing so we accentuate differences between groups and minimize differences within groups. Tajfel and Turner suggested that this was the first stage, followed by an internalization of the categories as social identities, which then become important parts of the self-concept. We compare our group with other groups along values that are subjectively important to us, and because these values are important to us as in-group members, we are motivated to seek positive valued distinctiveness.

The second leg of their tripod describes how we only act based on our group memberships if that group membership is salient, even if it comes at personal cost. This is based on the interpersonal-intergroup continuum. People move along this continuum depending on whether they are acting as an individual or as a group

member, and to act as a group member, the group membership must be internalized and salient.

How people react to members of other groups based on the first and second legs forms the basis of the third leg. To understand this, Turner had to add how groups could be permeable (or not) and relative status of high and low status groups, in addition to how the status quo was perceived. Depending on how group members view the legitimacy and permeability of groups would determine how they go about seeking positive ingroup distinctiveness.

Social identity theory can predict a variety of behavioural responses based on the interaction of four factors, namely status of the group position, acting individually versus collectively, the perceived stability or instability of the group and the perceived legitimacy or illegitimacy of the group. As a result of the interaction of these four factors, individuals or groups can embark on several strategies including individual mobility, social competition, and social creativity. Whereas social competition involves direct competition with an out group on relative dimensions, individual mobility involves leaving the in-group for another group and is potentially the most pertinent strategy to this discussion. Social creativity in contrast involves drawing comparisons on alternative dimensions, reimagining values that may be deemed negative, or by drawing comparisons with a different group, i.e. one that is considered inferior to the in-group rather than a dominant group.

Additionally, the concept of stereotyping was developed as an outcome of group processes (Tajfel, 1981), where stereotypes reflect typical group properties such as norms, values and beliefs. This is thought to be an outcome of categorization, whereas by categorizing items as more or less like each other we stereotype all group members, irrespective of how similar they are to each other. While there is much more to the social identity approach than one could expect to cover here, this outlines the main theoretical concepts.

While the social identity approach has been applied in other domains it has received little attention in relation to modal shift. Within the extant literature, sociologists and transportation researchers have applied notions of identity as

discussed earlier, but from a psychological perspective there remains little research to draw on.

The most relevant studies are in the work of Heinen (2016), Hoekstra, Twisk and Hagenzieker (2018), and Gatersleben & Haddad (2010) where participants self-identify through quantitative surveys as either people on bicycles or car drivers. Hoekstra's paper highlights the importance of saliency within the social identity approach. The participants behave in line with their self-identification as being either a car driver or person on a bicycle. As this is a study from the Netherlands many of the 'car drivers' also ride a bike and yet the in-group/out-group relationship remains depending on how they self-identify. However, this is not research that applies social identity theory and its considerations of group processes to the problem of modal shift, particularly to switching mode to cycling from motorised forms of transport.

More relevant is Heinen's (2016) report that identifying as either car user or person on a bicycle, means the individual is less likely to reduce their use of the corresponding form of transport, that is, as they identify with their group they will maintain the transport choice that is associated with that identity. Similarly, Gatersleben & Haddad (2010) found that intention to cycle is linked to perceptions of the typical person on a bicycle. While not a representative sample, they consider whether stereotyping of people on bicycles is preventing people who cycle less regularly from adopting cycling as a transport choice more often.

Further research has also intimated ideas around group memberships without explicitly articulating the categories using social identity theory, and particularly how they view other transport users due to this identification. Füssl and Haupt (2017) critiqued the insider/outsider perspective of transport identities, and instead suggest that as all people on bicycles are drivers then it is the ability to switch between the perspectives of different identities that is key.

Further research has also considered social identity in relation to other transport related issues including the reallocation of street space (Allert & Reese, 2023), building cycling infrastructure (Becker et al., 2021), and the adoption of electric

vehicles (Barth et al., 2016). Yet there remains a lack of research that has conducted qualitative research into transport choice and cycling through the lens of the social identity approach. In the following chapters I take this gap in the literature and explore it through the three studies conducted as part of this thesis.

2.1.3 Mobility and the environment

The issue of mobility and its impact on the climate is a critical concern given the climate crisis. Global temperatures have risen at such an unprecedented rate that many governments across the globe, including the UK, are now declaring climate emergencies (Gudde et al., 2021). Greenhouse gas emissions from vehicles is the primary contributing factor to global warming in the UK, contributing hugely to the carbon emissions of the transport sector, which as a sector amounts to 26% of all carbon emissions in the UK (Department for Transport, 2023c).

Our choices in terms of mode of transport are therefore hugely important in determining the impact we have on the environment and associated climate change. In contrast to motor vehicle use, active travel produces no tailpipe emissions and therefore does not contribute to issues of air quality or climate change to the same extent, although there does remain some contribution to carbon emissions during the manufacturing process often referred to as a products carbon footprint (Dave, 2010).

A carbon footprint measures the environmental impact of people and products, which for vehicles requires a calculation based on the resources and energy needed in their construction and transport (Franchetti & Apul, 2013). Cars require a multitude of natural resources such as steel in their construction, electrical power to physically create them, in addition to other resources such as petrol, and parts to maintain them over the course of their lifetime. Further, the built infrastructure required to allow them to move about has a contributory factor to calculations of the resources required.

Over the course of its lifetime a bicycle requires a fraction of the resources used to produce and maintain a motor vehicle, meaning they are much better for the environment in terms of their carbon footprint. To determine the carbon footprint during manufacturing, calculations are based on a 'life cycle analysis' or LCA which is "The analysis of the total energy input over the life of a vehicle" (Dave, 2010, pp. 3). While LCAs are well documented in the automotive industries, having their own European and Industry manufacturing standards to follow, bicycles are much harder to quantify in terms of the resources required with no standardised means

of calculating LCA's for a bicycle. Shreya Dave at the Massachusetts Institute of Technology (MIT) in her white paper on "Life Cycle Assessment of Transportation Options for Commuters" (Dave, 2010) applied a hybrid method utilising two different LCA models to compare walking, bicycles, and e-bikes (bicycles with an integrated motor) with other forms of transportation such as planes, trains, and cars. Due to the lack of clarity in the manufacturing process for bicycles and e-bikes, some assumptions and necessary approximations made, although her paper does make these clear and that they are considered reasonable in LCA's.

Dave's analysis estimates that a bicycle through manufacturing and maintenance requires 60 kilojoules per passenger mile travelled (PMT) over the course of its lifetime, compared to a typical American car which requires around 4027 kilojoules per PMT. With regards to emissions, those reported include: Greenhouse gases including "carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and fluorinated gases," (Dave, 2010, pp. 5) in addition to sulphur dioxide, carbon monoxide, nitrogen oxides, volatile organic compounds, lead and particulate matters. The summary of the research reports that in terms of energy production and emissions a bike, or e-bike which is comparable, uses less than 10% of the total energy required by a car per passenger mile travelled and produces 90% fewer pollutants.

Given the problematic nature of private motor vehicles in comparison with bicycles, based on the calculations above, a shift to sustainable transport appears beneficial. Yet personal mobility patterns appear resistant to a shift to active travel at the scale required. Barr (2018) attributes the inherent problems down to the way governments now operate at a distance in a neoliberal marketplace, and are forced to rely on individual behaviour change rather than being able to influence mass behaviour change. In this sense, mobility and its apparent impact on the climate is related to issues of governance, and not simply a moral calculation of the 'right' thing to do. In highlighting the influence of governments and market forces, Barr suggests that the mobilities paradigm offers a greater understanding of how we might understand transport related behaviours.

2.1.4 Mobility and health

Within the mobilities literature, the links between active travel and health are expounded to illustrate how movement, networks, and motility (the three components of mobility), are interconnected with people. The mobilities paradigm elaborates on correlations between active travel and health to interrogate mobility issues that provide a more nuanced view of identity-based issues such as pregnancy, and ageing (Bennett, 2017; Morris et al., 2018). It is also able to consider intersections between diversity, mobility and wellbeing in marginalized communities (Spray et al., 2022).

The relationship between mobility and health is maybe best encapsulated in Gatrell's book Mobilities and health (Gatrell, 2011) where they explore mobility from a number of different perspectives including Active Travel. While consciously avoiding the mobility of sport or micro mobilities such as blood flow, Gatrell explores the relationships between mobilities and health or ill-health through four key concepts, namely travel, migration, diffusion and 'communication and care'. Gatrell's focus is on the movement in "geographical space" (Gatrell, 2011, pp. 22), and the impact of these movements, or mobilities, for our health and wellbeing. Gatrell does however consciously avoid notions of social mobility, social class, and hierarchy, despite the impact these can have on health and wellbeing.

Gatrell's argument that mobility patterns are linked to health is consistently reinforced within the healthcare sector, with stakeholders arguing for greater investment in forms of transport that support physical activity rather than sedentary modes such as the private motor vehicle. The savings are therefore predicated on the notion that active travel has a protective effect on health and an active population would place less of a burden on the NHS.

As outlined in the introduction, the various projections around savings to the NHS suggest that savings could be approximately £319m over 21 years from 2019 (Sustrans, 2019),and have been reported consistently in the UK (Jarrett et al., 2012) and elsewhere (Mizdrak et al., 2019). Writing in the Lancet, Jarrett et al., (2012) suggest the estimated savings to the NHS would be seen through improvements in inactivity related health outcomes such as "type 2 diabetes, dementia,

cerebrovascular disease, breast cancer, colorectal cancer, depression, and ischaemic heart disease" (Jarrett et al., 2012, pp. 2198), in addition to cardiovascular risk factors such as being overweight, or through hypertension (Laverty et al., 2013). These findings are mirrored in Hamer & Chida's meta-analytic study on the protective effect of active travel on "mortality, incident coronary heart disease, stroke, hypertension and diabetes" (Hamer & Chida, 2007, pp. 9) showing a robust effect which is stronger amongst women.

The burden on the NHS is particularly relevant as the UK population is ageing, which in 2023 was reported as increasing from 9.2 million to 11 million over the course of a decade from 2011,and has increased as a proportion of the population (Office for National Statistics, 2023). As Gatrell notes being an active walker into older age is protective of health (Gatrell, 2011) and promoting active mobility for this particular demographic is beneficial to their health, and by extension, the demands on health services.

Public Health England has also produced a briefing for local authorities extolling the benefits of active travel, and the cost of inactivity through their document "Working together to promote Active Travel" (Petrokofsky & Davis, 2016). In this they lay out not only the physical benefits to the individual, but also the financial benefits to government, the inequality that car use produces in society, and the environmental benefits. As they state, promoting active travel so that it is embedded in everyday life would be a "'win-win' for local authorities, the NHS, for individuals and their communities." (Petrokofsky & Davis, 2016, pp. 5). Despite the benefits of developing active travel and enabling people to move more in ways that prevent ill health the UK Government has recently reduced the budget for Active Travel in England (Sustrans, 2023).

Transporting children to and from school by cars is also thought to contribute to increasing levels of childhood obesity. It is estimated that the cost to the NHS of the issue of obesity is £6.5 billion (Department of Health and Social Care Media Centre, 2023). The obesity problem is linked to physical inactivity (Public Health England, 2017) with 70% of adults meeting the recommended activity levels of "at least 150 minutes of moderate physical activity per week". When considering the activity

levels of children, 47% aged between 5 and 18 meet the recommended physical activity levels of 60 minutes per day (NHS England, 2020), a factor in an admittedly complex picture of the underlying causes of obesity. Here we see the benefits of the mobilities paradigm in adding a deeper level of understanding to the quantitative data we see often presented that provides correlates between active travel and health measures. For example, where the school journey is concerned, Gatrell draws together the fact that school children would like to be active and not be transported by car (individual motility), and then outlines structural constraints, individual factors, and environmental designs. So rather than just viewing quantitative data about correlations, the mobilities paradigm explicates the multitude of factors, the social networks of children and the environmental factors, that conspire to determine whether children are likely to travel to school using active travel or not. That is not to say this is just drawing together several factors, but rather the mobilities paradigm is intended to be descriptive of the experience of mobility as much as how it comes about, and Gatrell presents examples of research where children elaborate on their experience of active travel such as "I would really like to walk the whole way, even if it was raining. Nature is beautiful and I love to look at it" (Mitchell et al., 2007, pp. 620).

There is also evidence that air pollution from motor vehicles is resulting in increased numbers of children developing asthma (Burbank & Peden, 2018; Gatrell, 2011) and data from the World Health Organization suggests that ambient air pollution is a factor in lower respiratory infections resulting in nearly 1 million childhood deaths per year worldwide.

While there is a move towards ultra-low emission vehicles (ULEV) in the UK, promoted through ULEV zones in major cities and government scrappage schemes. Statistics from the Department for Transport published in April 2019 show that there were 38.2 million licensed vehicles on UK roads, (Parry, 2018), and yet only two hundred thousand of these are ultra-low emission vehicles (ULEV), such as hybrid and electric cars. Despite the fall in number of diesel cars in 2018, they still represent a significant proportion of total licensed vehicles in the UK (39%), producing the highest CO2 emissions of all vehicles.

Gatrell's discussion of air pollution raises an important point around how it is measured. Often measurements are aggregated over geographical areas, but by providing individuals with devices that measure air pollution as they travel, a much more specific picture of local pollution hotspots can be developed. Hotspots can then potentially be avoided if combined with GPS data, hence the interest from a mobility perspective. Additionally, Gatrell provides a compelling review of US based studies that consider child health in relation proximity to highways. Lung function is worse in children the closer the child lives to a source of air pollution such as a highway and the risk of developing asthma is worse, while there are increased health costs to society and an increase in school absences affecting children's social development. Cognitive and neurological functioning are also damaged due to pollution (Wang, 2009), demonstrating that active travel and air pollution are not only environmental issues, but social justice issues.

2.1.5 Mobility Choices

In view of the health and climate related issues associated with car travel described above, the substitution of active travel for short journeys appears to be a sensible and simple solution. Referred to as modal shift, this is a concept that describes changes in travel behaviour, from one 'mode' such as the car, to another such as cycling or public transport. While modal shift can therefore refer to a shift from any form of transport to another, in the context of this research I am focussed on the shift from single occupancy vehicles (SOV) to bicycle use.

To understand how to shift a population that predominantly contains car drivers to more sustainable modes, a wealth of research in domains such as sociology and transport planning has been undertaken. There is much crossover, and while psychology has predominantly focused on Icek Ajzen's Theory of planned behaviour it also includes ethnographic studies and studies of subcultures or minority groups. To be able to present a cogent justification for exploration of the social identity approach in understanding transport behaviour, the broader transport research will be discussed, and their pertinent findings highlighted before I critically consider the theory of planned behaviour approach to this problem within the psychological

domain. I then consider what the social identity approach can offer to questions of transport choice.

Despite the dominance of quantitative research in this domain, it does not mean that there is an absence of qualitative research. Authors have considered the evident complexity from a number of different perspectives, whether that be culture (Aldred & Jungnickel, 2014), subcultures (Falcous, 2017), household decision making (Pooley et al., 2011), or factors affecting immigrant uptake of cycling (Barajas, 2018). What emerges is a complex picture of the need for an inter-disciplinary approach to transport and modal shift that does not just consider segregated infrastructure or simple demographics, but a societal view of the cultural and systemic barriers to change.

On July 23rd, 2019, the UK parliament's transport select committee published their latest report into active travel, recommending that the UK government prioritize walking and cycling over motoring (House of Commons Transport Committee, 2019). However, cycling across the UK has remained largely static at around 2% (Cycling UK, 2023), possibly indicative of the lack of investment in cycling and walking as an alternative to car use. The low levels of walking and cycling indicated here demonstrate a major theme of this thesis, that the car has become the primary mode of transport in many economically developed countries.

I have primarily used the data presented by the DfT to present a picture of cycling and walking in the UK as part of wider commuting trends, and opportunities for modal shift, and then compare them with the Netherlands where cycling infrastructure is far more developed than the UK and has often been held up as utopian vision of cycling culture. In the 1970's the Dutch government adopted a number of policies including "land development, public transport, and restrictions on car use" along with "legal protection for cyclists, notably Strict Liability" (Wardlaw, 2014, pp. 249) that together have meant that cycling is seen as the first choice for most short journeys. This is in stark contrast the UK where the budget for Active Travel was recently cut (Sustrans, 2023) in order to reverse the 'war on motorist' (Goodall, 2023) and no strict liability law exists.

The policies in Holland are in addition to the proliferation of cycling infrastructure for people on bicycles that adheres to the Crow design standards, a Dutch standard that has become the benchmark for cycling infrastructure around the world. This shift to higher standards of cycling infrastructure, along with the other factors mentioned above necessarily takes time, and the Dutch have willingly embraced this commitment in their desire to reduce road deaths. The catalyst for this programme of change began in the 1970's when, after two decades of growth in motor vehicle ownership and a corresponding rise in road fatalities, "Stop de Kindermoord" (Stop the Child Murder) a campaign by an activist group was launched to reduce road deaths. It had simply become unpalatable to many that there were 400 child deaths due to road accidents in a single year. This resulted in many Dutch towns and cities reclaiming space given over to cars for cycling and walking, building segregated infrastructure and reversing the dominance of the car. As we shall see, the contrast with the UK is striking when we compare metrics like modal share.

While society would benefit from more active travel, and less short car journeys, the UK has been built with a focus on mobility that prioritises the private motor vehicle. Designing for the motor vehicle over other modes of transport is in part a product of political ideology seen in various cultures (Jones & Novo de Azevedo, 2013; Joshi & Joseph, 2015; Wardlaw, 2014; Wild et al., 2018), discussed in terms of power and the cultural dominance of the car.

Enabling mobility through car use has resulted in a culture of hypermobility, which is seen as a sign of a prosperous economy and as a result towns and cities have become places where people spend time buying products and services but not places of dwelling (Barr, 2018). Cookson and Sherriff's (2023) case study conducted in Leigh, a town in Greater Manchester highlights how mobility and the location of social infrastructure are related. Placing supermarkets, sports facilities, and greenspaces out of town means that access to such places often requires access by motor car which excludes many in society and entrenches car-dependency.

There is further evidence of an imbalance in political decision making in the UK governments own calculations of benefit to cost ratios when considering

infrastructure. Highlighted in a UK parliamentary report, it was acknowledged that "WebTAG, the DfT's guidance on pricing the benefit-cost ratios (BCRs)" (House of Commons Transport Committee, 2019, pp. 26) is skewed in favour of motorists, and as a result motor infrastructure is prioritized over walking and cycling.

As a result of this focus on motorised transport as a symbol of prosperity, and skewed calculations of the benefits, many countries reinforce car-dependency through the neglect of active travel. Joshi in particular frames the debate in terms of "inclusion and exclusion in urban policies" (Joshi & Joseph, 2015, pp. 23). Barajas reports individuals framing a lack of cycling facilities as social injustice, that as an immigrant population the need to be able to access cycling is denied through political decisions.

As a result of policy and ideology the mix of transport in the UK is unbalanced, particularly with regards to short journeys. Data around UK transport habits are captured in The National Travel Survey (NTS), a household survey produced by the Department for Transport (DfT) containing data from household surveys that monitors people's long term individual travel habits, and the factors that affect them. This data is used to inform transport policy across the UK and has been referred to extensively here to illustrate the current state of transport that underpins this research. Further, the data is used to focus on the number of journeys made by car that could feasibly be made by walking or cycling.

Whilst there are peak traffic flows around the normal commuting and school travel patterns, considering distance travelled rather than number of trips is arguably more useful in the context of modal shift. There is a generally accepted calculation in considerations of modal shift that considers distances under 5 miles or 8km could potentially be cycled instead of driven, and distances under 1 mile could potentially be walked, and therefore research into modal shift is based around these distances. 5 miles or 8km is used as a rule of thumb as it equates to less than half an hour journey time at a reasonable pace of 10mph on a bicycle (Schepers et al., 2017), while distances under 1 mile (1.5km) could be completed by walking as this equates to around a twenty-minute walk.

In considering how many journeys can be 'swapped' the Department for Transport (DfT) report that 61% of all trips in the UK are completed by car, 27% through walking and only 2% using a bicycle (Parry, 2018). Accordingly, there are nearly forty thousand journeys below 8km that could be completed using active travel. This equates to 68% of all trips. Compare this to the Netherlands where less than half (35%) of all trips are completed by car, 16% through walking, and 28% are cycled (de Haas & Hamersma, 2020).

Additionally, at peak times - between 8am and 9am - the morning school run contributes to 27% of journeys made by motor vehicles in London (Coules, 2022). The average distance travelled to school for children aged between 5-11 is 1.4 miles (2.25km) and 3.1 miles (5km) for children aged 11-16. While in terms of distance this appears a manageable distance the participation levels of 1% cycling aged 5-11 and 3% cycling aged 11-16 may reflect issues beyond just distance from school, with 40% of the younger children and 26% of older children being driven to school (Department for Transport, 2022b). Based on the metric that distances under 8km are manageable, walking and cycling could replace a significant proportion of car use at this time.

Handy, van Wee and Kroesen (2014) have also introduced the idea of non-linear distances, a concept yet to be explored through research. Their logic is that at shorter distances, the relationship between distance and cycling is positive (i.e. as distances increase there is a perceived benefit in terms of exercise). However, at greater distances there is a negative correlation with cycling, due to the physical exertion required. This could be considered an exploration in confidence, or more accurately self-efficacy, although clarification would be required to determine what exactly constitutes short and long distances, and where the tipping points are.

It should be noted that while the distances quoted seem to be generally accepted as reasonable heuristics (Schepers et al., 2017) there is little empirical research as to whether they are accurate, particularly for the novice cyclist on unsegregated routes. Rodríguez-López *et al.,* (2017) suggest that the walkable threshold is closer to 0.54 mile for children, and 0.84 mile for adolescents, and Sener, Lee and Sidharthan (2019) suggest cycling participation is heavily influenced by various

factors including familial income, the built environment, school characteristics, and the influence of parents and parental factors.

In the Netherlands, a country that has spent the last 50 years transforming their reliance on the car to emphasize active travel, of all trips under 7.5km, a third are made by car and a third by bicycle and so modal share is reasonably equitable. It is only at greater distances that modal share diverges as the population rely more heavily on the car. Therefore, in the absence of any research that challenges or supports their validity, in order to be able to draw comparisons with other research, I have based the rest of my discussion on these distances, considering any distance under 8km to be cyclable.

Furthermore, within the literature there is often a distinction made between utility cycling, that of cycling for either commuting purposes or to journeys that are task oriented, and leisure cycling, predominantly undertaken at the weekend in groups. However, unless survey data can explicitly distinguish them it can be difficult to attribute journeys to one function or the other. Often, we see people making utility trips, or commuting using a bicycle precisely because it combines utility with leisure (Goodman & Aldred, 2018). However, in using the less than 8km measure of journeys that could be conducted using active travel, there is less of a need to determine the "where, when, and for what purposes" (Handy et al., 2014, pp. 5), and focus more on modal shift more in terms of motivations and attitudes.

We have also recently seen the increased use of e-bikes, bicycles with some form of motor that assists pedalling. As a relatively new phenomenon there is relatively little research into e-bike use although this is increasing rapidly, considering the potential impact on both health (Fyhri & Fearnley, 2015) and modal share (Cairns et al., 2017). E-bikes may therefore be a factor in overcoming issues of self-efficacy relating to physical capabilities, and feeds into discussions around confidence and motivation (Jones et al., 2016).

Despite the obvious benefits of Active Travel, while not all car journeys could be swapped for Active Travel due to journey distance, encouraging behaviour change in motorists is difficult. This suggests that other factors are influencing the decision

to persist with motor vehicle use. Modal shift can be linked to notions of confidence or self-efficacy (Kaplan et al., 2019; Pooley et al., 2011; Steinbach et al., 2011). Pooley at al. (2011) also note that in considering household decisions note that confidence as a person on a bicycle is only one of many factors that affects transport choice, with confidence linked to considerations of safety.

While there is little debate that high quality segregated infrastructure for cycling can empower those who want to make a change in their transport habits (Clayton, 2013: Sirios, 2017) even to the point of taking longer routes on segregated infrastructure if a shorter route involves mixing with traffic (Kaplan et al., 2019), infrastructure is not necessarily a sufficient condition to encourage modal shift.

While agreeing that safety is a powerful factor in determining cycling participation, Barajas (2018) suggests that there are other social factors that influence an individual's perception of whether they feel they are a person on a bicycle or not, and as discussed Sener, Lee and Sidharthan (2019), noted a range of factors that influence cycling participation in children. Therefore the philosophy of 'build it and they will come' (Wild et al., 2018) may not be sufficient, but may be a necessary one for some (Song et al., 2017).

Without the protection afforded by segregated infrastructure, an increase in cycling participation levels can also offer protection through the normalisation of cycling in car dominated cultures. While an increase in the number of people on bicycles by 32,537 journeys per week, would be expected to result in a relative increase of 41,472 casualties in an unadjusted model, the 'safety in numbers' phenomena, where an increasing number of people on bicycles has been demonstrated to affect a reduction in casualties, would suggest that a 50% uptake of potential journeys by bicycle would result in a casualty increase of 2,205 (Jacobsen, 2015). Therefore, contrary to expectations, the safety in numbers phenomena shows that casualty rates reduce relative to absolute cycling numbers.

Data from the Netherlands suggests these figures may be pessimistic. In the mid 1970's, deaths through road accidents peaked at over 3,000 deaths per year at a rate of 50 fatalities per billion kilometres travelled. Currently this figure is at around

10 fatalities per billion kilometres travelled, a 67% decline in the fatality rate despite the levels of cycling being much higher. The levels of cycling increased by 30% in the late 1970's to around 880km per capita annually, a figure that has remained relatively static. An increase in cycling participation therefore does not necessarily result in an increase in casualty rates, assuming that other extraneous factors such as infrastructure are put in place to facilitate cycling (Jacobsen, 2015).

Safety is therefore not a clearly defined issue, although segregated routes would offer the greatest level of protection. Organisations such as Sustrans (short for sustainable transport) have attempted to create a National Cycling Network (NCN), a network of cycling routes for the general public to develop participation numbers. These are a mix of on and off-road routes, but where they are on road they are not segregated, and off-road routes are intended as leisure routes, not routes that are necessarily designed for commuting or for trips such as the school run. Where the routes are off road, while they offer the protection of being physically removed from motor traffic, these routes are often along isolated canal paths or through parks and therefore introduce issues around personal safety. Downward and Rasciute (2015) in considering access to the NCN and levels of cycling activity found that areas with greater access to the NCN (i.e. there were more miles of cycle paths in any given area), result in more cycling. These findings suggest that modal shift, particularly around commuting and school runs requires segregated cycle lanes alongside rather than off road routes along canals for example.

London has however been able to buck the trend of low cycling participation through the political will of the former Conservative Mayors Ken Livingstone and Boris Johnson. Since 2008 when the first 'cycle superhighways' were announced by the then Mayor of London Ken Livingstone, cycling in London has increased from 300,000 daily trips in 2000 to 900,000 in 2021, showing journeys tripling over the two decades that a pro-cycling vision has been implemented (Hill, 2023). These cycle superhighways, since renamed simply cycleways are cycling lanes that are segregated from motorised traffic, but often run parallel to major routes. This means that commuters can access routes that serve their needs, providing desired

lines of access into the city centre, while increasing safety due to their visibility and segregation. As a result, cycling is now the most common form of road transport in the capital (Macmichael, 2023).

In Greater Manchester the local transport authority Transport for Greater Manchester (TfGM) are attempting to replicate the relative success of London's cycleways. In June 2018, Chris Boardman, in his capacity as the Walking and Cycling Commissioner for Greater Manchester, announced the Beelines project (since renamed the Bee Network), a network of high-quality walking and cycling routes (Pidd, 2018). The intention was for the network to be like the schemes deemed so successful in London, and adhering to the Dutch Crow design standards, to try and increase the percentage of short trips made using active travel.

As the studies that comprise this PhD are conducted in and around Manchester, while I have been discussing cycling patterns across the UK, the development of the Bee Network is of particular interest and will form part of the discussion within this thesis. One of the few pieces of segregated cycling infrastructure in Manchester runs from Didsbury along Wilmslow Road (B5905) onto Oxford Road and into Manchester City Centre. This three-mile route is predominantly segregated from motor traffic and runs through the heavily student inhabited areas of Withington and Fallowfield and through the university sites of both MMU and the University of Manchester (UoM). Following construction cycling levels increased by 85% along this route, and by the end of 2018 stood at just under 1.1 million trips per year (Department for Transport, 2022a). As of January 2024 the Bee Network is projected to include 1,800 miles of safe routes in addition to 2,400 new road crossings (Transport for Greater Manchester, 2023).

From a psychological perspective, the phenomenon of modal shift and behaviour change has primarily been approached through the application of Ajzen's (1985) theory of planned behaviour (TPB) (de Souza et al., 2014; Frater et al., 2017), where attitudes towards a phenomenon form part of the theoretical model. Other models of behaviour change have also been considered such as the stages of change theory (van Bekkum et al., 2011a). These models are used to consider how likely, or possible, it is to achieve modal shift solely through behaviour change in the

individual. Critics of the theory of planned behaviour however suggest that while it may demonstrate correlation between behavioural intention and future behaviour, habit may be a greater predictor (Bird et al., 2018; Lois et al., 2015). Additionally, while the correlates of the TPB may be informative, the theory does not describe the process of behaviour change, and therefore raises questions around its usefulness when considering modal shift. In a similar manner to quantitative research on attitudes, TPB becomes a useful but limited avenue of research. In a unique study Lois, Moriano and Rondinella, (2015) applied social identity theory to extend the theory of planned behaviour to consider whether this adapted model could provide greater predictability of intention to cycle than the individual theories, and in doing so "capture the motivational factors relevant to cycling" (Lois et al., 2015, pp. 1). Lois and colleagues found a strong link between self-identification as a person on a bicycle, and perceived self-efficacy regarding cycling, demonstrating that social identity-based approaches may have some utility.

In conclusion, through the previous sections I have explored how mobility is linked to the environment and health, and how mobility choice impacts these domains. This has drawn on the mobilities literature and considered issues thematically, and how modal shift is currently understood. Furthermore, while we have seen how mobility and some of the meaning associated with it are linked to health and climate-based outcomes, the mobilities literature, and related inter-disciplinary research has allowed me to look beyond simple notions of behaviour change, or modal choice, and begin to consider other influences on modal choice such as household decision making or children enjoying the walk to school. For Spinney the application of the new mobilities paradigm is "is vital if we are to fully understand why and how people move around" (Spinney, 2011, pp. 1).

Considering that Cresswell considers mobility and identity to be interdependent, and given the lack of research in this area, I am led to consider how useful the social identity approach may be in considering modal choice and the meanings it creates for people.

Chapter 3. EMPIRICAL STUDY 1

3.1 Introduction

In the first study in this thesis, I apply thematic analysis to explore representations of people on bicycles within the media. In section 3.2 I review the literature around the influence of the media, before discussing representations of social groups in the media, and how this is relevant to social identity. The rest of chapter three details the method, results, and analysis of the findings from the first study along with a discussion and concluding remarks.

3.2 Literature review

In this literature review I begin with a consideration of how the media operates, how it represents and shapes reality, and how this focus leads to the representation of people on bicycles in their current form.

3.2.1 The Media

"A good communication science is necessary if humanity is to fully understand how communication affects us. Absent good understandings from such a communication science, we will always be at the mercy of unintended, unforeseen consequences" (Riff et al., 2014, pp. 43)

The quote above illustrates the important role cultural studies have in informing our understanding of the media, and how it shapes our understanding of the world. In their discussion on how integral the media are to our lives, Chamberlain and Hodgetts state (the) "media are both pervasive and fascinating; media pervade our everyday lives and captivate our attention in a variety of ways" (Chamberlain & Hodgetts, 2008, pp. 1110). I therefore briefly outline media research more generally, media representations and associated theoretical positions, before focusing on social identity research in the media, and representations of people on bicycles.

Not only do the media reflect what is happening in society, but through content curation they also determine the content an audience receives. Galtung and Ruge's seminal research introduced us to the concept of news values, and which stories

would be newsworthy enough to make the press (Galtung & Ruge, 1965). In their view, twelve factors contributed to a score that determined whether a story was likely to appear in the press or not. While not necessarily a conscious process applied by journalists, or superseded by journalistic experience, Galtung and Ruge evidenced their theory through analysis of international news articles. In addition, they postulated three hypotheses around these factors, including the additive hypothesis, whereby the greater events score on the twelve factors the more likely it will be considered newsworthy. Additionally, the complementarity hypothesis posits that if an article meets a threshold score of say six, then if the article is scored low on one factor it would be scored high on others to reach threshold score as factors exclude each other. These articles would not be as newsworthy as those that meet many more criteria through the additive hypothesis, but more newsworthy than those that met none of the criteria, referred to as the exclusion hypothesis.

The theory of news values has been updated in recent years by Harcup and O'Neill (2017) considering UK newspapers, and the impact of social media, in particular whether social media metrics i.e. how often an article is shared, has an impact on future decisions on newsworthiness. In their (own) admittedly limited findings, they propose a new taxonomy of Exclusivity, Bad news, Conflict, Surprise, Audio-visuals, Shareability, Entertainment, Drama, Follow-up, The power elite, Relevance, Magnitude, Celebrity, Good news, and News organisation's agenda. Notably, reflecting as they do the current trends in news, bad news and conflict rank as the second and third highest news values respectively, hence why accidents and clashes between people on bicycles and motorists feature prominently in discussions around cycling.

Additionally, there has been an abundance of research focused on the effects the content the mass media produce has on its audiences, see Valkengurg et al., (2016) for a meta-analysis of this body of work. This is famously reflected in Albert Bandura's work on social learning theory through his seminal Bobo doll experiments, and how depictions of violence may result in observed behaviours being replicated in society (Bandura et al., 1961; Bandura et al., 1963). Other

notable areas of research such as cultivation theory, uses and gratifications theory and encoding and decoding theory all explore the influence of the media. Cultivation theory is one of the most widely applied theories exploring media content and posits that long term television use results in changes to our perceptions of reality (Gerbner et al., 1979). The greater the television consumption, the more viewers take in ideological messages and images, the more users begin to feel that what they see on television reflects reality. In contrast the uses and gratification framework posits that media consumers seek out messages that provide gratification, or satisfy some need, rather than just being passive recipients of media that then has an effect on its audience (Harwood & Roy, 2005). Stuart Hall's work in cultural studies similarly rejected the linear model of sender/message/receiver and instead proposed that media producers encode meaning structures into meaningful discourses (i.e. programmes), which are then decoded by consumers according to their own meaning structures, or structures of understanding (Hall, 1972). In this sense, while media producers attempt to convey their message to be decoded in the same way by all, consumers can, and often do, resist the dominant discourse.

While this outline of media studies is necessarily brief, it is evident that the media is regarded as influential over the lives of its audience, and specifically in relation to the media representations we are interested in here "media representations mediate people's lived experiences" – that is, the representations seen in the media have an effect on an individual's life and experience (Lyons, 2000, pp. 349). For example the mass media have long been implicated in setting political agendas (McCombs & Shaw, 1972) or as we have seen more recently, in dissemination of fake news in order to influence the result of elections. While the latter may appear to be a problem more commonly associated with social media, and the development of new technologies, fake news may simply be considered a more extreme form of the biases we see in the mass media generally (McGonagle, 2017). Additionally we may consider how the media, and again its content, affect social groups perception of their vitality (Abrams et al., 2003). However, there is a critical voice that suggests a focus within psychology on media effects or how an audience

uses the media relies on simple stimulus-response models and fails to account for the social context (Chamberlain & Hodgetts, 2008). Whilst not true of all the theories and concepts outlined here, it is notable that research should be mindful of socio-cultural influences.

3.2.2 Media representations

Research into how the media portrays specific individuals and social groups often focuses on the most vulnerable in our societies, who may not have the presence or voice within media organizations to influence how their groups are depicted (Abrams & Hogg, 1998), and the media have a long tradition of being selective or biased in their representations of people or groups through portrayals of certain stereotypes (Ross, 2019) which continue to subjugate these social groups.

The extant literature on media representations is diverse in terms of discipline and methodology, often utilizing quantitative methods such as content analysis (Kort-Butler, 2016) to explore the media's portrayal of crime, while various forms of discourse analysis are also used in studies of the media and media representations of particular groups (Khosravinik, 2009). While semiotics feature heavily within discourse analysis, the primary focus is often on language choices made within texts, which allows the media to construct stories in particular ways. As a recent example, the BBC reporter Fergus Walsh, in reporting on the Coronavirus pandemic described his writing in terms of military metaphor to reflect the severity of the crisis. "But when millions of people are affected, the small minority who die becomes a huge number. The tone has had to change…. I have used military metaphors. I do think we are in a war against the virus; the ICUs are the frontline in that war." (Cooke, 2020)

This highlights the construction of meaning within news reporting, and of how representations can be constructed through lexical and grammatical choices. The extant literature on discourse in news reporting, notably concerns depictions of refugees, asylum seekers and immigrants such as Khosravink's corpus analysis of reporting during the Balkan conflict and British General election of 2005 (Khosravinik, 2009). The variability in the reporting is discussed in terms of proximity to the UK, which was more sympathetic during the Balkans conflict, and

reverted to stereotypically negative portrayals during the election coverage. Additionally, we see the use of metaphors to portray large numbers such as “influx”, “swelling” and “tide” (Khosravinik, 2009, pp. 10). Again, this reinforces the notion that representations of particular social groups are subject to the biases and language choices of journalists. Further to this idea of discourse in media being used to create representations of particular social groups and how individuals are categorised is again achieved using particular language. Similarly O’Doherty & Lecouteur (2007), discuss how the representations in the media of “unexpected arrivals” in Australia are variously described as “Asylum seekers’’, ‘‘boat people’’ and ‘‘illegal immigrants’’ (O'Doherty & Lecouteur, 2007, pp. 1) and how these terms “implicitly constitute the legitimisation of oppressive or marginalising practices” (O'Doherty & Lecouteur, 2007, pp. 1).

More relevant to the current discussions are representations of people on bicycles, analysed from a discursive perspective. Partly due to the climate crisis, an issue exacerbated by the coronavirus pandemic, there is an increased focus on active travel within the extant literature. From a discursive perspective this may be on safety features such as planning departments focus on the use of helmets (Culver, 2018), or simply on the word ‘cyclist’ and how viewing a group through the use of a particular term dehumanizes them, which may increase acts of aggression (Delbosc et al., 2019). Culver’s work considers how the issue of wearing a helmet while cycling has become a fixation within the safety literature produced by planning departments within the United States, at the expense of other arguably more worthy strategies such as segregated infrastructure. Culver points to the prominence of helmet safety as one key aspect of the discourse. This is achieved through placement (foregrounding helmet wearing before other safety solutions), emphasis (using exclamation points, tone, capitalization) and visual representation (using pictures of people on bicycles with helmets). In addition to the prominent nature of the messaging four rhetorical strategies were identified, namely “suggestion, enticement, admonishment and threat of violence” (Culver, 2018, pp. 9). Taken together we can see that discursive strategies in choosing how to represent people on bicycles within the media are deliberate, and achieve certain

goals, namely reflecting the view of the journalists and wider media, rather than that of the public.

3.2.3 The relevance of the Social Identity approach to media analysis

I have outlined some of the extant literature and how the media represents certain social groups, but it is pertinent here to outline relevant features of the social identity approach, specifically stereotypes and how they relate to intergroup processes.

The social identity approach was outlined in the introduction (section 2.1.2) but for clarity I focus here on the initial stage of self-categorisation. As discussed people are motivated to maintain positive distinctiveness of the ingroup in relation to relevant outgroups through a process of self-categorization – social identity - social comparison – positive distinctiveness (Postmes & Branscombe, 2010).

At the start of this process, self-categorisation occurs. Through self-categorisation, thought to be a perceptual bias, we emphasise similarities within groups, and differences between groups. By placing ourselves within certain categories we are representing ourselves cognitively as more like others within our group, in theoretical terms we are depersonalising or self-stereotyping, along dimensions including norms, values and beliefs. A similar process occurs when we categorise others resulting in stereotyping. By extension, if we are motivated to seek positive distinctiveness for our own group, self-stereotyping of our in-group would be favourable, and stereotyping of outgroups is likely to be negative (Abrams & Hogg, 1998). It is these stereotypes that have attracted most attention within social identity research in the media, as they represent typical members of particular social groups.

While stereotypical portrayals may be the primary focus of much research to date, Harwood and Roy (2005) posit five theoretical positions on different relationships between the media and social identity. While some of these positions reflect wider discussions around how group identification may influence media use, and likewise how group processes may influence the media environment, their analysis is largely theoretical, drawn from research that implies intergroup processes rather than

empirical testing of these theoretical positions. Additionally, their conclusion proposes a large body of rhetorical questions around media content and intergroup processes where individuals and groups may challenge the accepted group hierarchy. Therefore while the exact nature of media effects on intergroup processes remains unclear (Ross, 2019), there is evidence that they perpetuate ideas around the norms and beliefs of particular groups (Chamberlain & Hodgetts, 2008; Ross, 2019). Accordingly, the representations portrayed within the media are important to social groups, particularly the disadvantaged or marginalised, that is if they are represented at all. Where these representations are negative towards minority groups, they present a challenge to the social identity of group members, providing situational cues about the groups worth to society (Saleem & Ramasubramanian, 2019).

As examples of the types of stereotypes we see portrayed in the media, and the type of research we see around the possible effects, Fryberg (2003) considered representations of Native Americans in American culture. The priming of prevalent stereotypes on Native Americans results in lower reported levels of facets of social identity, specifically "esteem, disidentification and academic underperformance" (Fryberg, 2003, pp. 61) compared with a non-priming control group.

Similarly, Saleem and Ramasubramanian (2019) discuss the effects that negative portrayals of ethnic groups, in this case Muslims, has on their social identity as negative portrayals present a social identity threat. The threats they describe are to an individual's sense of mobility, collective action, or avoidance and importantly they equate the negative representations used here to elicit a reaction to real world acts of discrimination. Their conclusion is that negative portrayals suppress an individual's desire for individual mobility but not for collective action and increased the desire to avoid majority group members. It should be noted there was some nuance within the discussion around combinations of the condition the participants were allocated to (negative or positive video content), and other aspects of the study, such as specific items within the questionnaires, or initial levels of desire for collective action.

While Fryberg (2003) and Saleem and Ramasubramanian (2019) consider negative portrayals, McKinley (2014) looked at positive portrayals of Latino musicians and portrayals of Latino sportsmen, and their effects on intergroup processes. Their findings suggest that positive portrayals of musicians had a positive effect on the Latina members evaluations of the ingroup and the self, as one may expect in line with social identity theory. However, when assessing the result of priming Caucasian participants with positive portrayals of a fictional Latino sportsman, while they did not report an equally positive response to the outgroup from the Caucasian participants, they did report a favourable response to a similar portrayal of a white sportsman. The lack of positive evaluations by the outgroup (Caucasian) to the Latino portrayals is posited to be due to ingroup identification being more significant and should be considered in the context of intergroup relations. As outlined by Ross (2019) taken together these findings demonstrate that media effects require further understanding given some of the unpredictable outcomes, but generally negative portrayals have a detrimental effect on the psychological functioning on individuals within marginalised groups.

Rather than focus on stereotypes within the media, Gatersleben and Haddad (2010), considered the stereotypes of people on bicycles found in everyday discussions. Evident in their data were four stereotypes, namely; “responsible, lifestyle, commuter and hippy-go lucky” (Gatersleben & Haddad, 2010, pp. 1). In line with the concept of self-categorization (Tajfel, 1981), they describe the positive stereotypes described here as most of the participants were people on bicycles. The data suggests that many of the participants (53%) had not cycled relatively recently, which raises questions around saliency, and by invoking the person on bicycle identity the respondents provided favourable representations. As noted, the sample was not representative, with two thirds having an undergraduate degree or postgraduate qualification. However, they discuss perceptions of cycling as something practised by niche groups which may be detrimental to cycling uptake, and as such “intentions to use a bicycle in the future were related to perceptions of the typical bicyclist as a day-today bicyclist.” (Gatersleben & Haddad, 2010, pp.42)

3.2.4 Representations of people on bicycles

Developing the concept of why, and how the media choose to portray certain social groups, the following section details the limited research on representations of cycling in the media. In the introduction to their chapter on cycling safety campaigns in Cycling Futures, Johnson and Bonham (2015) articulate the lack of research in this field, and while additional research has appeared since that publication such as English and Salmon (2016), MacMillan et al., (2016), Rimano et al. (2015) and the Sustrans report detailed below (Sustrans' Research & Monitoring Unit, 2019) there remains a scarcity of research on representations of people on bicycles, and none that explicitly link social identity with such representations. In this sense there is some re-interpretation of the original research presented here so that it fits within a social identity narrative.

How cycling and people on bicycles are represented in the media was recently the subject of a non-academic policy discussion produced by Sustrans (Sustrans' Research & Monitoring Unit, 2019), and many of the considerations are useful for our discussion. The Sustrans study, conducted by Sustrans in conjunction with The Answer, a social insights agency considered representations of Active Travel in the media. As the authors note, there is a lack of research in this domain considering active travel, focussing as it does on cycling, therefore their focus here offers a fresh perspective on representations within the media. Adopting a range of methodologies, including "thematic analysis, discourse analysis, sentiment analysis and visual analysis." (Sustrans' Research & Monitoring Unit, 2019, pp. 3) the authors provide insights into how the media represent active travel, differentiated by mode i.e. whether it is walking or cycling.

With regards to cycling, the authors note that there is a distinction between cycling and cyclist, also discussed by Rissel et al., (2010). Sustrans' thematic analysis focuses on cycling, and the distinction between cycling and cyclist is explored in terms of negative and positive article sentiment, before considering who is portrayed. With regards specifically to cycling, the most common themes as coded were Criminal act, Infrastructure, Safety, and Health Benefits, of which criminal acts and safety were coded as negative, while infrastructure and health benefits were

coded as positive. Further to the distinction around cycling or cyclist, the articles coded as cycling were slightly more negative than positive, whereas 90% of the articles coded as cyclist were negative, in line with Rissel's findings. In the visual analysis of who is portrayed, men are more likely to be represented, particularly in themes such as criminal act and safety, whereas women are portrayed in less widely used themes such as the environment, while infrastructure and health received relatively equitable portrayals of men and women. Additionally, coding suggests that men are more often portrayed as active compared to passive portrayals of women, and more than three quarters of the portrayals featuring in the 18-45 age brackets. Finally, there were no articles that depicted a BAME individual in a UK context, indicative of a wider issue around representation of BAME communities in the media. The differences in how various social groups are notable, and as discussed may reinforce how messages around cycling are received by the audience.

Further work by Rimano et al., (2015) adopted a content analysis approach in determining representations of cycling in the Italian media. Focussed only on news articles and advertisements, their analysis drew together representations under six topics or themes, specifically environmental relevance, social or personal relevance, hedonism, habits, emotions, and well-being. As with Rissel's work, Rimano and colleagues distinguished between cycling and cyclist. They found that the cyclist was most commonly represented as an adult male involved in cultural or leisure activities, or in relation to road accidents. Rimano et al. (2015) saw this analysis of representations as only the first stage of their research, and the second half undertook interviews with residents of Rome to determine their views on cycling. They note that there were distinct positive and negative behavioural beliefs associated with cycling, but most pertinently, in comparing the residents' responses with the media representations there was fertile common ground. The comparison between the two "share the main idea that riding a bike is risky and dangerous, though it could be healthy, fun and sustainable" (Rimano et al., 2015, pp. 42).

3.2.5 Stereotyping

In line with research into media portrayals of minority groups, stereotyping plays a prominent role in the depictions of people on bicycles. This is most often in the form of law breaking as described by Rissel, where three quarters of negative stories showed people on bicycles painted as "'irresponsible lawbreakers', 'pariahs' and 'dangerous to others'" (Rissel et al., 2010, pp.6) despite the overall positive portrayal of cycling. The differentiation between cycling and cyclist is a feature of their work, written as it is against a background of increased numbers of people cycling in Melbourne and Sydney, the two cities from which the newspaper articles were taken for analysis. The positive portrayals here feature ideas of bravery, health, and safety conscious. Additionally, the contradictions of people on bicycles being both "irresponsible lawbreakers" whilst also "safety conscious", while "dangerous to others" and yet "brave" highlights the constructive nature of media representations (Rissel et al., 2010, pp. 6).

This notion of cycling being dangerous, and therefore people on bicycles being brave is a stereotype also noted in English (2016) and implied in Horton's discussion on the 'Fear of Cycling' (Horton, 2007). Horton's discussion draws not on the influence of the media, but on safety campaigns, particularly how their construction of cycling as a dangerous practice means people on bicycles should wear helmets. This construction of cycling as dangerous by the media is expanded by MacMillan et al., (2016). During a ten-year period between 1992 and 2012 in London, newspaper reporting of fatalities related to people on bicycles rose tenfold while cycling participation simply doubled. Notably, during this period, the number of fatalities remained static, reinforcing the idea that not only do the media actively select "carnage and conflict" (Furness, 2010, pp. 122), but that those cycling must therefore fit the stereotype of the brave.

Horton's discussion of fear in cycling raises other issues around stereotypical portrayals. His discussion on fear focuses on fear of people on bicycles themselves by non-people on bicycles, describing them as the strange other with dominant representations of "yob, law breaker and outsider" (Horton, 2007, pp. 146) again implicating the media in this construction. Furness' trawl through American media

adds to this exploration of media representations of the person on a bicycle as the outsider, sexually deviant, childlike or "anarchists, radicals and anti-social freaks" (Furness, 2010, pp. 123). Nowhere is this more evident than in the accounts of bicycle messengers by Fincham (2007), where he cites the media for constructing messenger identities as deviant while another bike messenger (Fincham is a former bike messenger himself), describes them as "post-grads, art students, professionals and immigrants" (Fincham, 2007, pp. 180). The contrast here is stark. The messengers self-stereotype in positive frames, while the media portray them as stereotypically deviant and dangerous, much like the representations described elsewhere. What is notably different about Fincham's work is that it draws on the idea that the messengers use the negative stereotypes to maintain their outsider identity. The irony is that, by attempting to maintain an identity outside the dominant group, they are self-categorising within another group.

Through these explorations we see how the media positions itself as the dominant group, and people on bicycles as the minority group, even deviant in some cases.

3.2.6 Dominance and legitimacy

This concept of dominance is further examined in David Horton's book, and he describes a fear of cycling expressed through the concept of scapegoating. Scapegoating is originally a Freudian psychodynamic construct, specifically an ego defence, perceived as a way of negatively portraying minority groups to displace feelings of guilt, anger or envy etc. In doing so scapegoating "deflects attention away from greater crimes, by in this case sacrificing the person on a bicycle in the ideological pursuit of 'motoring-as-usual'." (Horton, 2007, pp. 143).

We can see that the fact that it is minority groups that are persecuted fits with the social identity narrative, of the dominant group. Through scapegoating a minority group the large dominant group "avoid both the challenge and responsibility of either grappling with the prospects of alternative mobilities or questioning the systemic dangers of car culture" (Furness, 2010, pp. 138).

This implication here is that the media are part of a dominant group that includes the automobile industry which generates advertising revenues for the media. Thus,

they may feel threatened by the perceived illegitimacy of their group compared with the out group, namely people on bicycles, and seek to perpetuate the dominance of the in group (the motorist). Therefore through scapegoating the cycling out-group they avoid any cognitive dissonance that comes with challenges to the legitimacy of the dominant group instead employing what social identity theorists term social creativity strategies to maintain positive distinctiveness for the ingroup (Abrams & Hogg, 1998). This is achieved by comparing the out group on a different dimension, which as we have seen here is by describing people on bicycles in some form of deviancy or law-breaking, and the in-group (motorists) as 'right' in their law-abiding behaviour. Taken further, media coverage even progresses to the point where the motorist is positioned as the victim, requiring protection from people on bicycles (Fincham, 2007; Furness, 2010).

There is also an intriguing point Horton raises towards the end of his piece, that "a fear of the person on a bicycle is related to people's anxieties that they, too, might end up taking to cycling, and becoming a 'cyclist'." (Horton, 2007, pp. 147), suggesting that those in the dominant group feel threatened by the legitimacy of the subordinate group. This threat is not only to their groups dominant position, but to the resultant impact on their social identity. Christensen and Kerper (2013) suggest that a majority group member that interacts with a high identifying minority group member can feel threats to their majority group membership resulting in negative responses. Whilst not entirely equitable with having to join the minority group, we can see that threats to the legitimacy of the majority group members may result in challenges to their social identity.

To exemplify how the media's response reflects the ideas of the dominant group, Nielsen & Bonnam reflect on the lack of cycling safety campaigns compared to the coverage of safety campaigns afforded to driving (Johnson & Bonham, 2015). In line with McMillans work on reporting of London fatalities we have seen this type of disproportionate response in the UK media in relation to the Charlie Alliston case, and Furness makes the point that a similar case in the US attracted a similar response. Charlie Alliston was riding a bicycle in London when he was involved in a fatal collision with pedestrian Kim Briggs. Given the statistics presented earlier on

fatalities involving motor cars, the extensive coverage of the Alliston case was notable. The media's disproportionate response in how they portray people on bicycles is in line with their position as the unofficial voice of the motor body and reflects their own identification with the dominant group. Furthermore, Furness describes how representations of utility cycling in the media are "all but absent from mass media in the United States " (Furness, 2010, pp. 109) reinforcing the idea that it is an outdated mode of transport, reserved for "childish men, eccentrics, sexually odd characters, geeks, and/or financial failures" (Furness, 2010, pp. 110).

Further to the points made about the legitimacy of the dominant group, and the othering of people on bicycles as the subordinate group, people on bicycles are often portrayed as being involved in some form of road war with motorists, often over valuable road space (Furness, 2010a; English, 2016). Media coverage of this form reduces people on bicycles to a representation as the marginalised activist, engaged in disputes, rather than as Furness describes, detailing any number of peaceful journeys or rides undertaken during a day, week or month.

The term the media has been used here as a catch all to denote many forms of media, including newspapers (both print and digital versions), film, TV and online content such as blogs. As explored throughout the literature review, particularly through the work of Furness (2010a), mass media forms such as newspapers and film tend to portray cycling and people on bicycles in marginal terms. Minority groups such as people on bicycles rely on their own communication channels such as blogs, websites and social media channels, in much the same way as minority ethnic communities rely on community radio and TV stations or digital channels to produce and distribute content for their communities (Harwood & Roy, 2005). Without niche media platforms, many minority groups would have no voice, as the dominant group controls access to and content produced by the mainstream media channels. Therefore, the media in its broadest sense conveys the views of the dominant group, and in the case of transport, in newspaper coverage, we are being given the view of the motorist and the motoring industry, while cycling, walking and public transport are marginalised. However, as detailed in the methods section to

follow, I have deliberately focused on newspapers as a representative form of the media.

This institutional bias inherent in the newspaper industry is predicated on the notion that advertising revenues from the automobile industry are hugely important to the finances of newspapers (Furness, 2010). For example, the rate card for the Sunday Times currently (as of 2019) lists a full-page colour to the front of the publication as nearly £100k in advertising cost. In my previous life working in the creative industry these rates can be negotiated, and constantly are, but very rarely does any company other than large car manufacturers such as BMW appear on a double page spread on the inside front cover of the Sunday Times magazine. Accordingly “representation of cyclists in films and television both produce and reproduce the cultural norms of automobility" (Furness, 2010, pp. 109).

While we may assume that while the institutional bias of the newspapers generally is reflective of the reliance on advertising revenues, within the UK newspaper landscape there are journalists who write passionately and positively about cycling and active travel, such as Helen Pidd, Peter Walker and Laura Laker. This point is emphasised by Furness in his coverage of the US media and appears to be consistent with the media landscape in the UK. Walker in particular is cited in the Sustrans article for his commentary on the media landscape in relation to cycling, and while according to the news values many journalists in newspapers follow the surprising or bad news philosophy, the exceptions noted above often write longer pieces considering cycling as transportation, not just as a leisure pursuit, and the implications for society such as Lakers recent piece on infrastructure in Birmingham (Laker, 2020).

The aim here therefore is to explore the dominant portrayals of people on bicycles in UK newspapers, being as inclusive as possible in the analysis, with little or no a priori categories prior to undertaking a thematic analysis.

3.2.7 Research question

Applying thematic analysis to consider the importance of representations of people on bicycles in shaping intergroup attitudes across commuter groups.

3.3 Method

The methodology outlined here defines the decisions taken that provided an illustrative selection of media from which to analyse. The intention was to be as inclusive as possible, in terms of geography, reader demographics, type of article and political ideology to derive as many representations as possible. Overall, the sampling strategy can be described as a probability sampling of UK newspapers, based on a constructed week methodology which is detailed below. The inclusive use of headlines is informative as they are cataphoric, they are a means of describing the contents of articles and guiding the readers interpretation (Ramos et al., 2009). In this sense, where there is little within the body of the article to analyse, the headline can be illustrative of the writers' intentions.

Given the high incidence of crime reporting, in newspapers, content analysis would seem a logical choice of method, given its emphasis on frequency of specific terms. However, content analysis relies on pre-existing codes to which to allocate strings of text. As the aim is to look at all representations available, constructing a priori codes would seem illogical, hence why thematic analysis was adopted instead of content analysis.

Compatible with both essentialist and constructionist paradigms, thematic analysis as a method is used for "identifying, analysing and reporting patterns (themes) within data." (Braun & Clarke, 2006, pp. 79). As a methodology in its own right, it provides a means of describing the data, dependent on the approach and theoretical questions being applied, making clear the particular focus adopted. In that regard, Braun and Clarke suggest that it should be made clear whether the analysis focusses on "A rich description of the data set, or a detailed account of one particular aspect" (Braun & Clarke, 2006, pp. 83). Whilst the thematic aspect of this analysis is in fact intended to describe the selected data, it is not a rich description as such and is focussed on one aspect, specifically representations of cycling and people on bicycles from a social identity perspective. The analysis presented here is more theoretically driven, rather than inductive, concerned as it is with issues of social identity and offers a more manifest level of focus. As such we are interested in what is described literally in the text, and not what can be inferred or interpreted

through deeper analysis of the text such as through discourse analysis, although development of themes requires some interpretation of the codes in line with any theoretical considerations.

The analysis described here follows a three-step approach, specifically developing a sampling frame, coding of the data, and thematic analysis.

3.3.1 Data population

Further to earlier discussions around news values and prevailing ideology, UK newspapers are still relevant in setting national agendas (McCombs & Shaw, 1972; Zhang, 2016) despite the transition to online formats of newspapers, while sales circulations of paper copies also remain "socially significant" (Harcup & O'Neill, 2017, pp. 14). The strategy outlined below offers the advantage(s) of taking data from newspapers whose readerships reflect varied demographics and ideologies, while also having the potential for larger geographical coverage that would be limited if only local or regional media had been selected. Additionally, newspapers are the only media type where archives were complete and readily available, therefore manageable to analyse within the given timeframe and available resources.

3.3.2 Sampling frame

Lexis Nexis, an online database allowing access to most UK daily newspapers, was used to search and define a population of newspaper articles for analysis. This was accessed through the library website of Manchester Metropolitan University, available to the primary researcher free of charge, and provides text versions of all archived material along with search functionality.

3.3.3 Sampling development

To define the search terms, several informal pilots were run within the Lexis newspaper repository. Of the newspapers available through LexisNexis, those with the highest circulation were initially selected, namely The Daily Mail, The Guardian, The Sun, and The Mirror. Two newspapers were excluded at this stage, specifically the Metro as it does not appear in the Lexis database, and the Daly Telegraph, as its format and ideology match the Daily Mail. The top two titles offer contrasting right

wing (Daily Mail) and left wing (The Guardian) political ideologies but to ensure the pilot offered a reasonable reflection of the whole newspaper archive, the two highest circulation tabloid newspapers of competing political ideologies were also included, namely The Sun and The Mirror. This offered a sample of two right wing and two left wing newspapers, two tabloid, one broadsheet and one compact in the Daily Mail.

The searches for the initial pilot were based on subject knowledge of the primary researcher around the Charlie Alliston court case, and date ranges based on announcements around cycling infrastructure. Combinations of terminology, wildcards and a date range were tested to determine the most useful combination of terms. Results are shown below (Table 3:1 below). Once all articles had been located for each title, the articles were manually sorted into those relevant to the study, and those that were irrelevant which were then discarded.

Newspaper title	Search terms used	Date range	No. Of articles found	no. Of articles excluded	No. Of relevant articles
Daily mail	Alliston	1/6/18 - 31/12/18	4	0	4
Daily mail	Alliston	None	42	23	19
Daily mail	Bike or bicycle	1/6/18 - 31/12/18	302	269	33
Guardian	Bike or bicycle	1/6/18 - 31/12/18	745	634	111
Sun	Bike or bicycle	1/6/18 - 31/12/18	1285	1160	125
Mirror	Bike or bicycle	1/6/18 - 31/12/18	894	715	179
Daily mail	Cycl* and (lane or path)	1/6/18 - 31/12/18	56	35	21
Guardian	Cycl* and (lane or path)	1/6/18 - 31/12/18	276	218	58
Sun	Cycl* and (lane or path)	1/6/18 - 31/12/18	77	52	25
Mirror	Cycl* and (lane or path)	1/6/18 - 31/12/18	50	36	14
Daily mail	Cycl* and commut*	1/6/18 - 31/12/18	18	10	8

Guardian	Cycl* and commut*	1/6/18 - 31/12/18	51	19	32
Mirror	Cycl* and commut*	1/6/18 - 31/12/18	18	7	11
Sun	Cycl* and commut*	1/6/18 - 31/12/18	24	8	16

Table 3:1 Result of search terms.

The pilot revealed that by defining a search that was too narrow i.e. by employing specific terms such as Alliston, while it usefully reduces the sample size the sample only reflects a very specific representation of a bicycle user, in this case someone committing a criminal act. Additionally, the judicious use of logic functions i.e. AND is integral. By using AND with search terms, results are limited in the same way as using a very specific term such as Alliston but with greater control. In contrast, when using OR, the results become much broader. From this it was determined that bike OR bicyl* OR cycl* would result in the most comprehensive set of results, and not limit the results to any specific event or discussion around cycling.

3.3.4 Temporality

As a result of the pilot study, a strategy for down sampling was required due to the size of the potential population. Given greater resources to conduct this study, corpus analysis may have revealed peaks around discursive events (Gabrielatos & Baker, 2008), but a cursory analysis suggested this would not be a useful strategy. In the past decade the search terms (bike OR bicycl* OR cycl*) did not reveal any spikes in the data that could be attributed to events on which to conduct an analysis (see Figure 3:1 below). 2016 did show an increase in articles but these results were distorted by the inclusion of articles around the US presidential election in March (which talks about election cycles), and the Rio Olympics in August, where newspaper articles discuss Olympic cycles. As a result, it was determined that using the most recent complete year (2019) would be an appropriate strategy to search for representations that are indicative of current discourses.

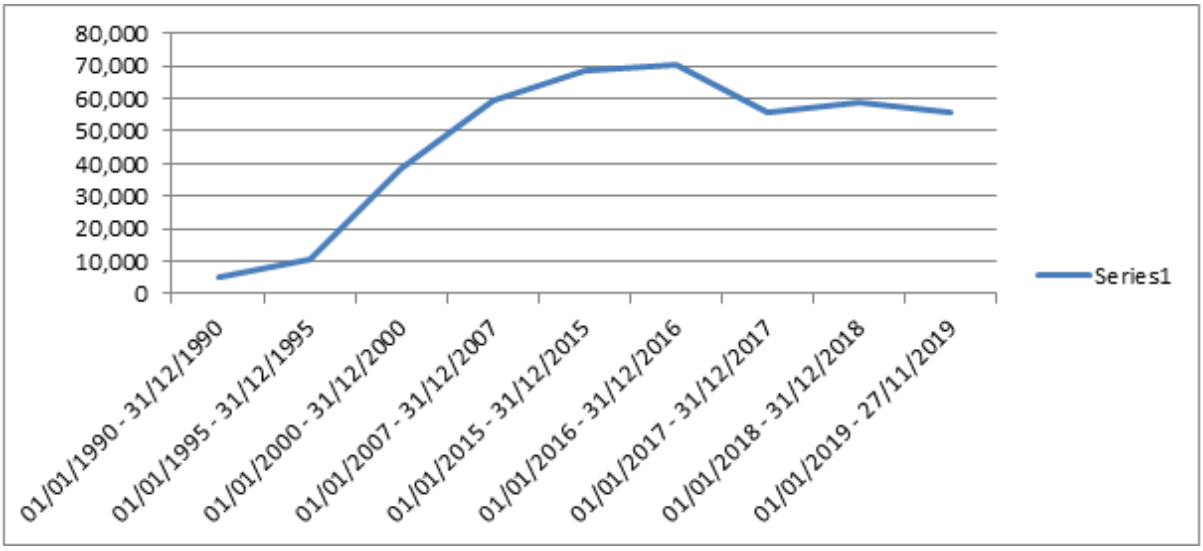

Figure 3:1 Search results by year (All titles)

3.3.5 Pilot results

The sampling strategy therefore was defined as applying search terms (bike OR bicyl* OR cycl*) in 2019. Results are shown below (Table 3:2). For the four titles used in the pilot, there were 8,657 articles.

Title	Search terms	Date range	Total no. of articles
Sun	Bike OR bicycl* OR cycl*	1/1/19 - 31/12/19	2254
Guardian	Bike OR bicycl* OR cycl*	1/1/19 - 31/12/19	3659
Mirror	Bike OR bicycl* OR cycl*	1/1/19 - 31/12/19	1603
Daily Mail	Bike OR bicycl* OR cycl*	1/1/19 - 31/12/19	1141
Total			8657

Table 3:2 Results of pilot study searches

Following the pilot study, it was noted that of the four titles used in the pilot the Daily Mail produced a particularly low frequency of articles around cycling, or people on bicycles. Therefore, to ensure data collection produced a data population that was as inclusive as possible, a matrix was drawn up that included a score for the title's circulation (with 1 being the highest circulation), and for the number of

articles with 1 again being for the highest number of articles (see Table 3:3). To avoid any sampling bias due to a low frequency of articles in a particular title, this scoring matrix was applied to all available national titles, and not solely those in the pilot.

As the Metro does not appear in the Lexis database this was discounted. Similarly, as the Financial Times is a specialist title, focussed on business and financial reporting, it was deemed inappropriate for this study. The lowest scoring titles were therefore included for data collection. The newspapers ideology and format are included as suffixes to the newspaper title i.e. Guardian (LWB) is indicative of the Guardian being a left-wing broadsheet. As the top five titles included a range of formats and political ideology, it was determined they would provide a sufficient population from which to sample.

Title	Circulation score	Articles score	Total score
Metro	3	0	3
Guardian (LWB)	**2**	**2**	**4**
The Sun (RWT)	**4**	**3**	**7**
Times including Sunday Times (RWB)	**7**	**1**	**8**
Daily Mirror (LWT)	**6**	**4**	**10**
Daily Telegraph including Sunday Telegraph (RWB)	**5**	**5**	**10**
Financial Times	12	0	12
Daily Mail (includes Mail on Sunday)	1	12	13
i	10	5	15
London Evening	8	12	20
Daily Star	11	9	20

Daily Express	9	24	33

Table 3:3 Matrix scores including circulation and number of articles.
(N.B. Titles in bold denote those selected for analysis)

3.3.6 Data collection

A search using the aforementioned terms was then run on the five titles selected, with the resulting number of articles shown below in Table 3:4. The list of articles was reviewed by the primary researcher, and any articles not relevant to the current study were removed. The final totals for analysis therefore are noted in the final column in Table 3:4.

Title	Search terms	Date range	No. of articles found	Final total included in analysis
Sun	Bike or bicycl* or cycl*	1/1/19 – 31/12/19	2254	1334
Guardian	Bike or bicycl* or cycl*	1/1/19 – 31/12/19	3659	1455
Mirror	Bike or bicycl* or cycl*	1/1/19 – 31/12/19	1603	983
Telegraph	Bike or bicycl* or cycl*	1/1/19 – 31/12/19	2977	1551
Times	Bike or bicycl* or cycl*	1/1/19 – 31/12/19	5028	3150
Totals			15521	8473

Table 3:4 Total number of articles in main study

3.3.7 Procedure

3.3.8 Constructed week sampling

Further down sampling was required to produce a sample that was manageable. Random sampling would be appropriate from a normally distributed population, but due to the non normal nature of newspaper article distribution this presents a problem (Riffe et al., 1993). Due to advertising requirements newspapers are traditionally designed around ‘newsholes’, specifically, they have a set amount of space per day for news, with the rest devoted to advertising. This varies from day to day resulting in a non-normal distribution. One way to counter this is to use constructed week sampling. For each day of the week within the population, one is

randomly selected, and this is then repeated for each day of the week until a complete week is constructed, with articles selected from those days. For example, one Monday during 2019 is randomly selected, and any articles appearing that day are added to the sample. This is repeated for each day of the week, for each newspaper resulting in samples that are more representative of the population than random sampling (Riffe et al., 1993). As a result of this constructed week sampling, a total of (N=177) of newspaper articles were analysed.

3.3.9 Analysis

The sampled articles were analysed thematically in NVivo. Initially the documents from LexisNexis were downloaded as PDF's, and then the headline and body of the article were copied into word documents, one for each article, labelled with Newspaper title, date in the format DDMMYY, and the start of the headline. These were then loaded into NVivo and coded.

In the absence of a secondary researcher on which to agree coding, the results and discussion that follow are based solely on coding performed by myself, with no inter-rater reliability checks. Codes were allocated to any text string within an article that described a person on a bicycle, or to the headline itself. The coding approach here was to code openly, at a manifest level, with little theoretical interpretation. As coding progressed, any new codes were compared against existing codes. These codes were then organised under super-ordinate themes and refined further along with new codes in an iterative process until Patton's dual criteria of internal homogeneity and external heterogeneity were deemed to have been met. As such the themes should be internally consistent, while there should be "clear and identifiable distinctions between themes." (Braun & Clarke, 2006, pp. 16). The themes were then interpreted in relation to the social identity approach. Through the iterative process of coding, recoding, and writing, it was apparent some of the coding at lower levels could be included at higher levels, or that they sat within the wrong sub theme. Therefore, during the process of writing the results and discussion, some of the themes have been further refined.

3.4 Findings

The findings from this analysis are outlined below, and are structured under six themes with their sub-themes in brackets: Activist (Charitable, Environmentalist, Feminism, Leadership, Politics, Whistleblower); Criminal (Disdain for criminal, Fraudulent, Fugitive, Group of criminals, Law breaking cyclist, Legal advice, Unnamed, Violent crime); Cultural lives (Culture, Travel); Healthy bodies (Fitness, Health, Sport); Outdoorsman (Countryside activities, Environment); Transporters (Active travel, Cargo transport, Commuting, School run, Variables).

The six themes, along with illustrative quotes are set out visually in Table 3:5 below for clarity. Quotes are followed by a reference that denotes the title the quote appeared in and the date, for example Telegraph, 21st April. The reference also denotes whether the quote is the headline (H) or from the body copy (B). As discussed earlier, headlines have been included for their usefulness in describing the contents of the article, especially where there is little further reference to the protagonist.

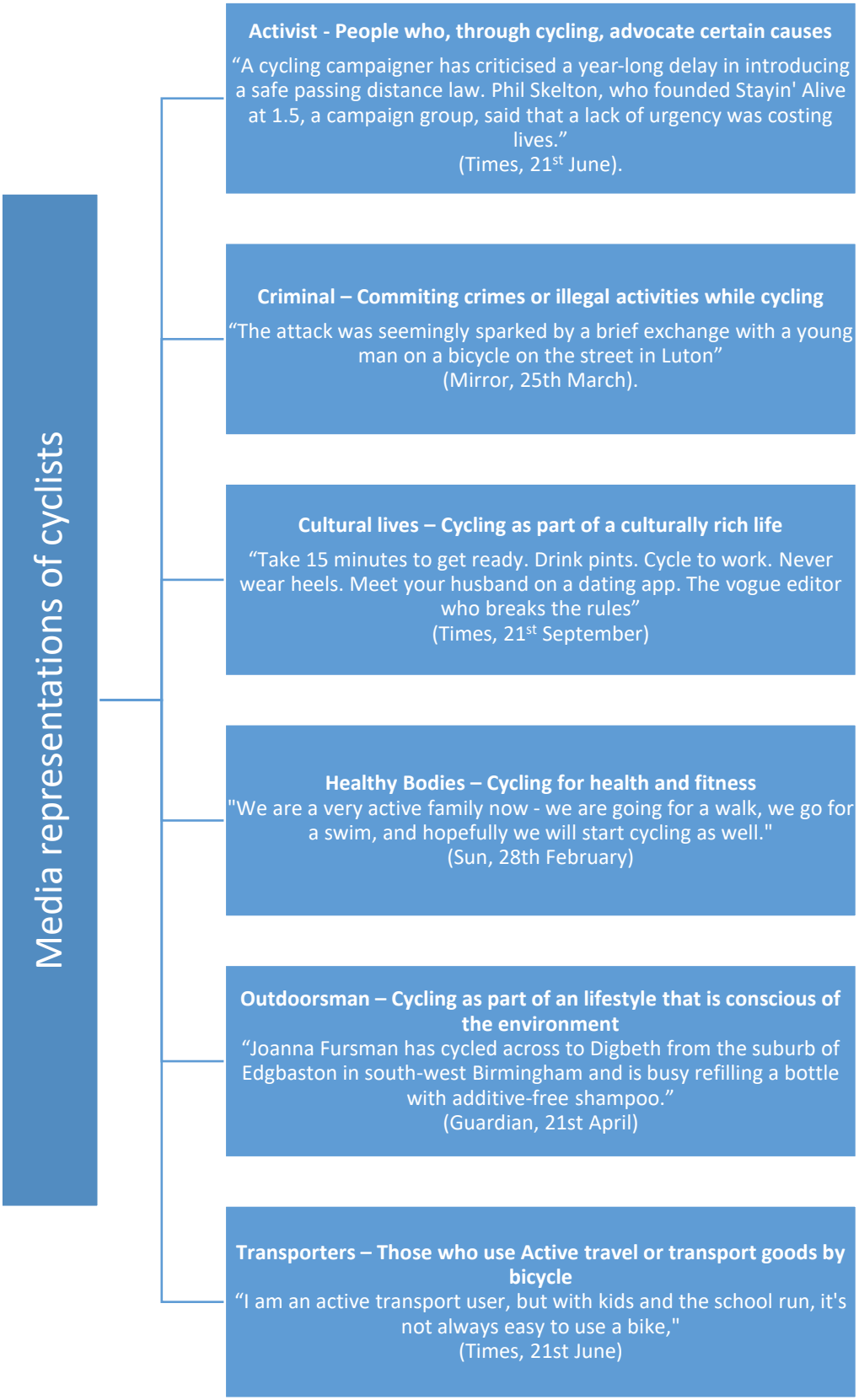

Table 3:5 Visual map of themes

3.4.1 Theme one: Activist

The activist theme is indicative of those that seek to raise awareness for a cause, or protest what they perceive to be injustices. They are often portrayed as lone voices, going to extreme lengths to change society for the better. For example, the following extracts represent the activist as someone pursuing changes to society through the legal system, but it is the person on a bicycle highlighted as the individual challenging the status quo.

> Cork cyclist became one of the first people to secure a conviction against a motorist for a dangerously close pass aided by video he took. (B – Times, 21st June).

> A cycling campaigner has criticised a year-long delay in introducing a safe passing distance law. Phil Skelton, who founded Stayin' Alive at 1.5, a campaign group, said that a lack of urgency was costing lives. (B – Times, 21st June).

Similarly, we see the notion of upholding the 'law' through whistleblowing; *"a French rider called Christophe Bassons raised his voice in protest, one of the few to be heard in a submissive peloton"* (B - Guardian, 18th July). The whistle blowing mentioned here is in relation to doping in professional cycling, and while professional cycling and many of the representations surrounding it are also coded under the Healthy Bodies theme, as extracts can be coded multiple times it also appears here. Whistleblowers are often thought to be individuals who are surreptitiously fighting wrongdoing by large organisations – a point reinforced here by the description of the peloton, the main group of cyclists in a race, as submissive.

On a more altruistic level, we also see acts of charity through individuals completing extreme challenges, raising funds to support charities;

> He wanted to raise money for the anti-bullying charities, Stonewall and Kidscape.
> (B – Mirror, 31st August).

> Ben is now in training for his next challenge - running a marathon in every US state capital and cycling between each one - which starts in March. (B – Mirror, 31st August).

There is also a short story on Lucy Ritchie who was to; *"cycle the 2,150-mile Tour de France route in July to demand a female version."* (B – Sun, 26th June) raising the idea of feminist activism. Again, the individual from the minority or under-represented group is having to take quite extreme action to raise awareness of the lack of equality.

Also under the person on a bicycle as activist theme are issues around politics. One of the articles coded here discusses the upcoming general election, with those that are particularly inclined to vote against Boris Johnson described, amongst other things, as; *"people feverishly working out on exercise bikes."* (B – Times, 21st July).

While this assertion is based on data from a Yougov poll on the trustworthiness of the Prime Minister, it is telling that this group is highlighted by the journalist. A longer extract highlights this curiosity, highlighting this group alongside other small, extreme groups in society.

> The only plus point for Boris is that people who are perpetually rat-arsed trust him a lot - heavy drinkers. Owners of rodents don't trust him at all; nor do people feverishly working out on exercise bikes. Polls are getting very specific these days, aren't they? (B – Times, 21st July

This creates a stereotype of all those who use exercise bikes are not going to vote Conservative, and by extension are members of minority outgroups that are particularly political.

There are also articles relating to budgets for building cycling infrastructure in New York, and the Commonwealth games in Birmingham (UK);

> City council passed legislation to invest $1.7bn in road infrastructure over 10 years in move to improve safety. (B – Guardian, 1st November)

> Locals in host city have concerns any benefits will be short term, while others are optimistic the event will unite everyone. (B – Guardian, 2nd February).

While the first extract could be coded under transport and the environment, the coding here reflects the fact that political will is required to make changes to

transport infrastructure, that people on bicycles require the benevolence of the dominant group to achieve change. The second article is only tenuously related to cycling, discussing as it does the forthcoming Commonwealth games, of which cycling is a large event. However, cycling is only discussed in terms of the fans, and the fact they would have to travel to Lea Valley Velodrome in London, rather than cycling being held in the host city (Birmingham). The ramifications of those decisions are possibly outside the scope of this chapter, but we can infer that there are political elements to discussions around cycling facilities and infrastructure, and therefore political activism has a role to play.

3.4.2 Theme two: Criminal

The Criminal theme in terms of prevalence is a smaller theme that includes criminal acts and behaviour where someone is cycling, or where the use of a bicycle is used to illustrate the nature of the individual in question. Despite the news values espoused by scholars such as Galtung and Ruge (1965) discussed earlier, crime features little within the coding, and even then the cycling aspect is often incidental. It certainly does not appear from the analysis, that there is a persistent demonization of cycling or the person on a bicycle. However, in line with considerations of the newsworthiness of stories, they are often reporting extreme acts of violence or criminality; *"The gang are also seen riding between cars while on the wrong side of the road and being berated by motorists"* (B - Sun, 9th August).

The article is not a tale of motorists versus people on bicycles but is the aftermath of a group of teenagers cycling and causing problems in a supermarket, and then spilling out onto the roads. So, while not about the criminality of people on bicycles per se, it does allude to the fact that cycling is seen as something that young people engage in and that it is the youth, or group of youths, that are problematic. We also see this in the following quote; *"The attack was seemingly sparked by a brief exchange with a young man on a bicycle on the street in Luton"* (B - Mirror, 25th March).

In the second article, the youth element is a key component along with the criminality and the fact that there is a person on a bicycle involved is almost

superfluous. These representations of young people riding bikes while committing crimes, or behaving illegally while cycling also appear through articles such as;

> The Sunday Telegraph has also learnt that an appeal by Mike Briggs, whose wife Kim was killed by courier Charlie Alliston riding a bike with no front brakes in 2016, was rejected by CICA on the grounds that a bike is a vehicle and doesn't fall within the scheme. (B – Telegraph, 4th August)

Again, this extract is taken from an article that was not about the illegality of cycling, or people on bicycles committing crime, but around compensation for victims of crime.

Taken further there are also examples where cycling, or being described as a person on a bicycle, is completely unrelated to the main thrust of the story. In the article titled; *"Firm's € 2.9m bid for Callely loan; Ex-td 'dodged' serve note"* (T – Sun, 5th November), the article is written about a former Irish minister involved in legal proceedings. Cycling is mentioned regarding a bike crash he was allegedly involved in; *"Callely claims he's been in hospital recovering from a bicycle crash"*. (B – Sun, 5th November)

While the focus in this analysis has been manifest representations of people on bicycles, the clear implication here that he had not been involved in a crash, and it is in fact another example of the individual's deceptive behaviour. There is also an extract featuring a professional bicycle rider who, having been caught doping, then becomes a fugitive from the authorities; *"In a new book, The Yellow Jersey, Rasmussen describes the humiliation and desperation of fleeing that Tour under cover of darkness after his lies over his anti-doping whereabouts status caught up with him."* (B – Guardian, 18th July)

This goes beyond just questions about unethical behaviour, as the article is written about the person on a bicycle in question fleeing from the authorities, implying more serious offences. This more explicitly links cycling with criminal behaviour rather than being an incidental feature of the story. There are not large numbers of articles about a problematic population here, but rather within the media people on bicycles warrant little attention unless there is some particularly extreme

behaviour involved such as crime. Again, this feeds into the idea of people on bicycles, like criminals, being on the margins of society, and only extreme or unexpected behaviour brings them to the attention of the press.

3.4.3 Theme three: Cultural lives

The third theme features articles where the bicycle is seen as part of a lifestyle choice, or the article focuses on how the protagonists have a particularly cultural lifestyle, epitomised in an article entitled; *"Cultural vulture Eithne Shortall"* (T – Times, 21st July). Eithne Shortall is an author and journalist with the Irish edition of the Sunday Times, who cycles to work passing a statue that inspired the article in question.

> It's not just the artwork that I love but where it is situated: right there on my daily commute, in a part of Dublin that has moved with the times but retains something of the city Kelly once sung about it. (B – Times, 21st July)

Similarly, an article interviewing the editor of the Dutch edition of Vogue magazine Rinke Tjepkema describes her as; *"Take 15 minutes to get ready. Drink pints. Cycle to work. Never wear heels. Meet your husband on a dating app. The vogue editor who breaks the rules"* (H – Times, 21st September).

While cycling is central to Dutch culture, it is clear from this article written as it is for an English newspaper, that in the UK we still view those who cycle as unusual. Within this piece the protagonist is portrayed as unusually fashionable, yet commuting by bicycle is so common in the Netherlands that it is doubtful that a Dutch writer would portray them in this manner. We see evidence of this being a cultural phenomenon, that what the Dutch consider normalised is very different in the UK, in one of the closing remarks.

> At the end of our interview, Tjepkema reattaches a child's seat to the back of her bike (the youngest, just one, still commutes to nursery in a papoose on her chest), hooks a Vogue-logoed tote full of designer clothes over its handlebars and pedals off. (B – Times, 21st September).

Also included within the culture sub theme are ideas of people on bicycles as those who enjoy culturally rich lives, whether that be around cuisine, exercise classes, music, or literature;

> I didn't get to eat any soupe au pistou while cycling from Marseille to Nice last spring, while researching my new book. (B – Guardian, 12th June)

> I've taken more than 100 classes now and it's made me listen to music different. (B – Sun, 26th December)

> For a radio series, he cycled to Epirus in the footsteps of Byron, Disraeli and Edward Lear. (B – Times, 28th February)

The latter quote is taken from an obituary for Edward Enfield, author and father of the comedian Harry Enfield. The latter quote is also coded within the travel sub theme as representative of those who enjoy holidays different from typical package holidays such as; *"Take part in yoga, meditation and breathing classes, bike through local vineyards, swim in the outdoor pool, play table tennis, boules or work out."* (B – Sun, 6th November).

Cycling also features under this sub-theme where cycling is a feature of the holiday, often either by virtue of it being relaxing or focussing on local culture;

> Cycling haven: Despite riding professionally all over the world Evans says the Great Ocean Road is one of his favourite cycling routes. (B – Guardian, 18th September)

> Do as the Danes do and see Copenhagen by bike. (B – Times, 21st September).

Similarly, one of the more prevalent ideas within the culture theme, is around holidays where cycling is mentioned and portrays the holidaymakers as wealthy; "If you have the time, head out of the city to discover some of Turku's 20,000 islands and islets. They can be explored by car - as well as by bike if you want to take your time" (B - Daily Mirror, 31st August).

The assumption of the holidaymakers being wealthy is due to the article quoted here being about a culinary trip to Finland, and not about package holidays to

holiday destinations favoured by most British holidaymakers such as the Balearic Islands (Mallorca, Menorca and Ibiza). This article appeared in the Mirror, a tabloid newspaper, which one would assume would more naturally favour articles that appealed to the general population. We would not expect to see cycling featured in articles around package holidays, and therefore we can assume that the holidaymakers here are wealthier than the general population. This is not always the case, however. There are articles that are aimed at bargain hunting holidaymakers such as; *"Hire a bike (about £10 a day, www.krakowbiketour.com) to explore the easy-to-navigate paths along the Vistula River"* (B – Times, 21st September). This extract is taken from an article entitled "50 great bargain city breaks". Commonly though, the articles that feature cycling are not typical package holidays, again reinforcing the image of those that choose this type of holiday as unusual, so with more or less wealth than most people. Additionally, the person on a bicycle is a more prominent feature of the article and not incidental as we saw in the criminal theme. It is their choice to cycle, or to include cycling in their culturally rich lives. So again, the people on bicycles here are those outside of the norm and are those who engage in activities that maybe are not considered ones that the majority partake in.

3.4.4 Theme four: Healthy bodies

The Healthy Bodies theme focuses on health, fitness, and sport, although not exclusively on physical health as it includes mental health. The coding here reflects the representations of those who cycle, as either healthy, or striving for health and fitness. Elite sport naturally dominates the selected articles, but there are also articles around amateur sport in addition to those taking up cycling for its protective effects on health.

While the Cultural lives theme featured holidays where there was a cultural focus to travel, in the Healthy Bodies theme we see the holiday as an activity filled break reinforcing the idea that cycling is beneficial to our health, and that holidays can also be healthy; *"Spend four nights in the Croatian countryside trying a different activity each day, from cycling to river rafting."* (B – Guardian, 2nd February).

We also encounter descriptions of cycling as part of being an active lifestyle, whether that is as a family, for health or for fitness where the language strays into the religious in many of the articles.

> We are a very active family now - we are going for a walk, we go for a swim, and hopefully we will start cycling as well. (B - Sun, 28th February)

> When he's not in his office (or the hot tub), Neil is on his Peloton bike in the gym. This bit of kit has become the symbol of the professionalism of home gym and spa equipment, a cult product that streams live workouts and allows users to compete with other riders; by most accounts, it's addictive. (B – Telegraph, 2nd November)

Whilst there is some evidence of normalizing cycling for transport, it remains little mentioned and often only in relation to other aspects of the protagonist's life such as health, hence why it appears under the theme of Healthy Bodies rather than transport. In the second quote below, the mention of commuting is secondary to the focus on health.

> He's a lot older than me but he's very young at heart. He cycles to work and has done the London Marathon twice. (B – Mirror, 10th November)

> German online company Canyon is run by real enthusiasts, and this bike is good for fitness or a daily commute. (B – Times, 21st September)

Similarly, the references to health and fitness are not of a general population that cycle, but of individuals with serious health problems such as heart problems or stroke. Here cycling is seen as conditional to good future health to alleviate those health issues, or of those who have become fanatical about their fitness regime.

> 30 mins exercises can stave off stroke (B – Sun, 26th June)

> I do high-intensity intermittent exercise on my spin bike at home several times a week, as well as a bit of yoga. (B - Times, 21st July)

However, within the coding related to health and fitness there is also a collection of quotes related to the dangers of cycling, whether that be in the sub theme of professional sport or in relation to injuries because of accidents.

> Swift, 31, suffered bleeding from the spleen and facial injuries while he was training in Tenerife. (B – Mirror, 28th February)

> A cyclist who said he suffered a severe and complex injury to his foot after he was struck by a jeep has settled his High Court damages action. (B – Mirror, 28th February)

While we have seen coding relating to the positives of physical health, and the physical dangers of cycling for sport or recreation, there are also extracts that relate to mental health. These can again be related to the intense nature of professional cycling or the endorphin rush of exercise.

> The emotion etched on the 25-year-old's face after he narrowly outsprinted Dylan Groenewegen in a frenetic bunch finish certainly suggested Ewan had proved a point.
> (B – Guardian, 18th July)

> This is SoulCycle, where you come to pedal your way to happiness. (Guardian, 12th June).

But this sub theme also contains representations of people struggling with their mental health for who cycling is therapeutic.

> Gail now cycles every day to help keep herself on track and took part in the Women's Tour of Scotland event this month. She said: "Just getting on my bike makes me feel happy.
> (B – Sun, 27th August)

> His previous expeditions include cycling from Cape Town, South Africa to Cairo, Egypt, climbing Mount Kilimanjaro and hiking 4,500km from Mexico to Canada on the Pacific Crest Trail. He said the walk around Ireland became a way for him to tackle his demons that he never properly addressed. (B – Sun, 1st November)

Additionally, we see cycling presented in articles around quality of life, which could have been included in the culture theme, but in this article appears to be more about having a healthy lifestyle; *"Along the impressively regenerated seafront, you're more likely to see cyclists and inline skaters than stags and hens"* (B – Times, 21st June).

As discussed earlier, obituaries feature within the analysis, not necessarily of people on bicycles, but of people who led interesting lives where cycling was a part

of that lifestyle such as the following which is a quote from an obituary about the pop star Scott Walker. Returning to the news values of celebrity or elite people being seen as more newsworthy, we tend to see obituaries around famous or notable people. Therefore, the mention of cycling can be seen as an extension of that lifestyle that is unusual. *"On my way to work on the first day of recording OK Computer I passed him riding his bike on Chiswick High Street"* (B – Guardian, 25th March).

Within the healthy bodies theme, sport, and specifically professional cycling feature prominently. There are articles focused on amateur sportspeople or the serious hobbyist.

> Electrical fitter who won gold in the 1964 Olympics thanks to his training at a power station (B – Times, 21st June)

> I'm a keen cyclist and have two bikes, once of which I built myself out of components. (B – Guardian, 2nd February)

And quite often we see descriptions of these amateurs participating in extreme events.

> Then, come September, it was also this new-found strength, and the confidence that came with it, that hauled me through seven tortuous days pedalling 400-odd miles from west to east across the Pyrenees, up and down a hatful of Tour de France climbs, an adventure as much about your head being able to take the strain as your legs. (B – Sun, 26th December).

However, many articles focus on the elite professional cyclist and the stories of doping, talent, and inevitably their success.

> Before Rasmussen it was the Tour's bete noire, Lance Armstrong, who faced down his accusers in 2001 in a press conference room in Pau's Palais Beaumont, denying all allegations and scoffing at the suggestion his success was fuelled by doping. (B – Guardian, 18th July),

> It seems odd that doubt persisted over the ability of this prodigious sprinter, who managed almost 30 wins during his first professional contract. (B – Guardian,18th July)

> The six-time grand tour winner had also crashed while riding his time trial bike in practice ahead of last year's Giro d'Italia prologue in Jerusalem, although on that occasion he escaped with cuts and bruises and was able to come back and win the race. (B – Telegraph, 13th June).

'Healthy bodies' is a large theme, partly due to the focus on sport, but also because cycling is incorporated into our lives in different ways. Through sport, fitness, leisure and the impacts on our physical and mental health, people use bikes to maintain and promote health and are generally represented quite positively. But again, the overriding way newspapers represent people using bikes in the health theme is by using quite extreme examples. While we may all strive for good physical and mental health, and we all are therefore part of the same group chasing good health, it is portrayed using extreme examples that marginalise those using bicycles.

3.4.5 Theme five: Outdoorsman

The fifth theme, whilst relatively small in terms of prevalence compared to other themes such as health and fitness, presents a unique collection of coding related to environmentalism and those concerned with impact of their lives on the environment such as; *"Joanna Fursman has cycled across to Digbeth from the suburb of Edgbaston in south-west Birmingham and is busy refilling a bottle with additive-free shampoo."* (B - Guardian, 21st April).

Whilst much of the analysis presented here predominantly focuses on manifest representations of cycling and people on bicycles, within the outdoorsman theme there are more latent representations, where people on bicycles are presented as socially and environmentally aware. We are therefore seeing an assumption of the values of a particular social group.

> It's famous for its bridge and suburban brownstone houses, but now new highrises are sprouting all around the borough. And it's going green too - the Naval Cemetery (www.brooklyngreenway.org/naval-cemetery-landscape) has been turned into a wild-looking oasis as part of the 14- mile Brooklyn Greenway project to add parks and cycle routes to this once intensely industrial area of New York. (B - Telegraph, 2nd November).

The latter quote is taken from an article entitled; *"Where all the cool cats go; This thriving borough of New York is a haven for hipsters and techies."* (H - Telegraph, 2nd November), which again equates certain lifestyles with environmentalist preferences, seen again in the following article; *"Conscious choices: an ethical trip to Ghent, Belgium; A young and principled population supporting socially aware businesses from food to fashion mean Belgium's third-largest city is perfect for an eco-friendly break"* (H – Guardian, 1st November).

People on bicycles in the previous article are described as; *"Like people across Flanders, Ghentians are bike-mad. The streets are stuffed with parked bicycles - often left unlocked."* (B – Guardian, 1st November). This is an interesting quote, and mirrors the extreme positions described in the health and fitness theme where some of the people exercising were described in quasi-religious terms. In this case the Ghentians are *obsessive* about their bikes. Additionally, people on bicycles here are being portrayed as the dominant group, to the point where bikes are almost disposable.

We also see discussions around pollution and environmental changes where cycling and shifting most of the population towards active travel is an integral part of that change. For example, the article; *"What will it take for the UK to reach net zero emissions?"* (H – Guardian, 12th June) features cycling described in the following terms; *"Public transport, walking, cycling and ways of working that avoid travel will also be part of the solution"* (B – Guardian, 12th June).

There are also more subtle presentations of cycling in this sense. In the article; *"The Guatemalans who pay the price for the west's need for nickel"* (H – Guardian, 19th July), written about the issues caused by mining in Guatemala describes cycling as; *"From the choking haze a cyclist emerges, weaving between the lorries. On his back he carries a bundle of firewood. Goggles protect his eyes, a bandana covers his nose and mouth."* (B – Guardian, 19th July).

This is describing the environmental impact caused by the mining of nickel, but is easy to equate to industrialised nations, and the impact of pollution caused by transport. In the Guatemalan article, the lorries are driving along roads that don't

have an asphalt surface, and as a result are throwing up dust from the earth tracks they are transporting goods on. In the UK for example, while we may not be using dirt tracks, the pollution caused by exhaust fumes and microparticles from tyre wear etc. result in the atmosphere carrying pollutants that result in respiratory issues for many. Most pertinently it points to the fact that the motorist is the dominant group, and the representation of the person on a bicycle is of a minority group suffering as a result.

3.4.6 Theme six: Transporters

The final theme presented here and possibly the most pertinent is the transporters theme which describes active travel or portrays those that cycle as a means of transport. Notably, like the criminal and outdoorsman themes, it is quite a small theme in terms of prevalence. We have already discussed within earlier themes that there is some mention of those that cycle for commuting incidental to the main thrust of the articles or using cycling for transport.

> Cycling to work every day I pass tents masquerading as makeshift homes"
> (B – Mirror, 10th November)

> From the choking haze a cyclist emerges, weaving between the lorries. On his back he carries a bundle of firewood.
> (B – Guardian, 19th July)

However, within the articles that fall under this theme there is greater focus on elements such as behaviour change towards active travel; *"Staff are encouraged to walk or cycle to work"* (B – Guardian, 18th September).

We also see references to the vulnerability of those cycling while commuting, echoing the inherent danger of cycling referred to in the healthy bodies theme and therefore the need for people using bicycles for utility purposes to be brave or confident.

> As a player Jim Goodwin dodged opening doors and missiles being hurled from white vans as he cycled to training. (B – Sun, 14th July)

> A cycling group will stage a series of 'die in' protests across Dublin this week after the death of Neeraj Jain last week. (B – Sun, 5th November)

The last quote about vulnerable road users, is included in a sub theme titled variables. As often seen in research around active travel, motivating factors such as the weather, safety, and the built or natural environment, are reflected in the content of articles analysed.

Transport, as in commuting or utility cycling features little in the articles analysed here, and is described as different, problematic, or something that requires more effort than driving. The lack of coverage should possibly not be unexpected given the low participation rates we see across the UK, or the possibly mundane view of commuting, but the lack of coverage is notable and may well reflect one of the key issues, the convenience of motoring; *"I am an active transport user, but with kids and the school run, it's not always easy to use a bike,"* (B – Times, 21st June)

Additionally, it is often coded in relation to issues around climate change and air quality as discussed earlier, although this extract has been dual coded, reflective as it is of the relationship to pollution, and to active travel.

> "Street canyons" lined by tall buildings on both sides trap pollutants and should be discouraged, the guidance states, adding that encouraging people to walk, cycle or take public transport is key to reducing pollution and new buildings should encourage people to travel this way. (B – Times, 28th February)

There are also articles that discuss the school run, also referred to as educational escort, a commonly used phrase used to denote parents taking their children to school. This contributes hugely to congestion during the morning rush hour in the UK, and the following quote is again part of an article around pollution near schools, so is dual coded; *"Transport charity Sustrans' survey also found 34% of teachers believed people should be encouraged to walk, cycle and scoot to school were possible and 26% called for roads to be closed."* (B – Mirror, 25th March).

There are articles where the person on a bicycle, and utility cycling is described in such a way that it becomes normalized.

> Mr McAuliffe said that he planned to use the bike to get around town, notably from the Mansion House to City Hall. (B – Times, 21st June)

> When she got the phone call to say I was out of theatre, she cried, and laughed at herself for crying, and carried on doing both for the next two hours until I was breathing for myself and she was allowed to cycle to the John Radcliffe. (B – Times, 21st July).

The point in coding both these extracts as normalising is that they are particularly prosaic in the way they describe cycling, although the wider context for each article is more dramatic. We therefore begin to see cycling as an everyday activity, even though this approach may not be beneficial in encouraging behaviour change on a mass scale. However, this means that even in the context of commuting where the person on a bicycle should be at the forefront of the conversation, the person on a bicycle is marginalised.

3.5 Limitations and reflection

There are important methodological considerations to note that constitute strengths and weaknesses of this study. Firstly, I am an avid supporter of Active travel, commuting across Manchester regularly by bicycle, and therefore while conscious of bracketing my opinions during analysis it is inevitable that some bias remains. For similar reasons, while a familiarization of the literature was undertaken prior to the analysis presented here, there was a conscious decision not to become embroiled too deeply within the extant literature in case this prejudiced the interpretation of the data. Reading was limited to articles that discussed methods of analysis of the media, rather than any results and discussion, although the Rissel et al. (2010) article provided a useful starting point.

In exploring and defining the representations of people on bicycles seen in the media, the only content excluded were letters to the editor. These represent the views of members of the public, in response to articles appearing in the newspaper, and are therefore not indicative of representations that the media portray. Additionally, this means that many articles and sections of newspapers have been included, such as sport and travel, which have been excluded in previous research.

The decision to include all sections within the newspaper was taken in order to explore all representations and we should be conscious that including these may result in different styles of writing or considerations, compared with news stories, and in particular in line with the news values of Galtung and Ruge (1965) amongst others. An alternative strategy may have been to locate articles that explicitly describe commuting or active travel, limiting the population data that way, and then analyse the representations of cycling within that form of article.

There is an iterative process in considering where codes sit, and then testing the themes in line with Patton's (1990) dual criteria of internal homogeneity and external heterogeneity. They describe the structural integrity in that each theme should be internally consistent (homogenous), and yet themes should be distinct from each other as much as possible (externally heterogenous). There becomes a point where, in line with recommendations of Braun and Clarke (2006) that constant iterations would appear to add little to the analysis. However, having reviewed the themes on multiple occasions, it became apparent that that the initial coding was too literal, simply describing extracts rather than attempting to form themes that presented a narrative around representations of people on bicycles. Subsequently these codes and themes were reviewed and reorganised into the final six themes described previously.

3.6 Discussion

The interpretation of the themes and sub themes presented here is centred around the idea that the descriptions we see in the media of people who cycle, are of people who are different, deviant, or on the margins of society and do not represent the majority. In line with social identity theory, this portrayal of people who cycle as members of various out groups is indicative that the general population are motorists, and therefore the dominant social group. Whilst the use of the phrase different, deviant, on the margins of society is a loose reflection of the findings presented here, the themes of Activist, Criminal, Cultural lives, Healthy Bodies, Outdoorsman and Transporters depict more specific representations of people using bicycles.

When we consider these representations further in terms of social identity and group processes, there are several things to consider bearing in mind that the extant literature has predominantly focussed on representations of the person on a bicycle as an individual or of how cycling is represented. Consistent with previous research considering media representations of people on bicycles, we do find negative stereotyping. Rissel describes stereotypes depicting "'irresponsible lawbreakers', 'danger to others', 'pariahs', 'inconvenient', 'extremists' and 'in the minority'" (Rissel et al., 2010, pp. 6). While some are less evident in this analysis, certainly in terms of extremists or possibly as extreme as a pariah, this does fit the analysis of people on bicycles presented here as a minority.

Furness describes representations as childlike, sexually deviant or "anarchists, radicals, and "anti-social freaks" (Furness, 2010, pp. 123) and Horton's terminology includes "yob, law breaker and outsider" (Horton, 2007, pp. 146). These particularly negative representations of people on bicycles are reflected to some degree within the criminal and activist themes, but as this research encompasses a wider selection of content and not just news features, it therefore avoids the "Carnage and conflict" (Furness, 2010, pp. 122) bias of news reporting.

As we saw in the results where the six themes were outlined, many of them detailed people using bicycles that were outside of what we might consider the norm. While in some themes this intuitively makes sense, in others the examples used are incongruous. For example, there were 675,461 arrests in 2017/2018, roughly 1% of the UK population so the number of articles about crime, and particularly about crimes while on a bike are likely to be rare and therefore attract attention. In the UK, three people died because of a collision with a bicycle, so again, the unexpected nature of this type of incident makes incidents like the Charlie Alliston case particularly newsworthy. If anything, one might expect there to be more reporting of crime involving people on bicycles given the journalistic tendency to focus on conflict and crime.

However, when we consider the larger themes such as 'Healthy bodies' and 'Cultural lives', the representations of people using bikes tend to be extreme versions. Whereas the holidays that feature people who cycle may be the less

popular types of holidays, it is unlikely that they are the only forms of holiday that people use bikes on. But the trips to vineyards, Ghent, or culinary holidays are the type in which journalists make associations with cycling; *"I didn't get to eat any soupe au pistou while cycling from Marseille to Nice last spring, while researching my new book"* (B – Guardian, 12th June)

We are therefore presented with the person on a bicycle as someone who takes exotic and unusual trips. Similarly, the Healthy Bodies theme focuses less on the fact that exercise bikes are ubiquitous in gyms, or that cycling can be a relatively benign activity, but focuses on the spin classes, expensive static bikes (Peloton) or severe injuries, and therefore those choosing to cycle for exercise must be slightly different to most of the population.

> "When he's not in his office (or the hot tub), Neil is on his Peloton bike in the gym. This bit of kit has become the symbol of the professionalism of home gym and spa equipment, a cult product that streams live workouts and allows users to compete with other riders; by most accounts, it's addictive." (B – Telegraph, 2nd November)

Many of the exemplars in each theme echo this idea, that the portrayals of those that cycle are different to the majority, and cycling becomes associated with people who make choices that are different to the majority. This is then contrasted with articles in the transporters theme where Active Travel and a move away from a car centric society is discussed. In these cases, cycling becomes an activity that we will all do, that the majority group must become people on bicycles or walkers in order to reverse climate change, but we don't see the extreme examples in those discussions, if anything it becomes mundane; *"Staff are encouraged to walk or cycle to work"* (B – Guardian, 18th September).

This othering of the person on a bicycle described here is a discursive strategy to marginalise minority groups by the majority group. This is achieved through defining the subordinate groups as problematic, or with inferior characteristics, and in doing so affirming the "legitimacy and superiority of the powerful and condition identity formation among the subordinate" (Jensen, 2011, pp. 65). Therefore, we can see in the writing in many of the articles how the journalists as members of the

majority group perform this othering of people on bicycles and their social group by misrepresenting them, although it is less about the people using bikes being problematic, but rather a more subtle othering, presenting them as extremes.

However, the representations are much more balanced and positive than one would expect. While media representations of minority groups are often negatively stereotypical (Ross, 2019), and with respect to cycling "produce and reproduce the cultural norms of automobility" (Furness, 2010, pp. 109) it would be reasonable to expect therefore that the representations of people on bicycles to be predominantly negative and yet the findings presented here demonstrate a much more balanced view. This is much more in line with Gatersleben's findings of typical people on bicycles being described as "responsible, lifestyle, commuter and hippy-go lucky" (Gatersleben & Uzzell, 2007, pp. 1), where the participants are those that identify as people on bicycles, or Rimano et al., (2015) where comparisons between media representations and public opinion overlap in constructing images of riding a bicycle as "risky and dangerous, though it could be healthy, fun and sustainable" (Rimano et al., 2015, pp. 42).

This idea that the representations of people on bicycles can reflect wider cultural experiences beyond the negative connotations of the deviant person on a bicycle is encapsulated by Horton in his concluding notes stating "such negative representations are easily exceeded by the celebratory and confirmatory evaluations of cycling and the person on a bicycle continually flowing through their specific cultural worlds" (Horton, 2007, pp. 147). We see this in quotes such as that below, where rather than discussing cycling as transport it is conflated with other identities; *"Most mornings, on my cycle to The Sunday Times offices, I pass the two-metre-high sculpture of Luke Kelly's head that has resided on Dublin's Sheriff Street since January."* (B – Times, 21st July).

From a social identity perspective, we can therefore describe the representations as both positive and negative stereotypes, and as such the journalists presenting such portrayals may identify as in-group members in certain cases but not in relation to transport. In this sense the variability in representations can be explained through differing social identities of the journalists becoming salient, or more accurately

that they "negotiate a salience which benefits self" (Abrams & Hogg, 1998, pp. 66). As Furness outlines, journalists traditionally are writing using the narrative of the majority group. Additionally, as can be seen in the UK from journalists such as Helen Pidd, Peter Walker and Laura Laker, journalists are often people on bicycles or public transport users themselves. This is consistent with Fincham's work on bicycle messengers, and while in his elaboration he describes four standpoints of positive-outside, positive-inside, negative-outside and negative-inside, we can equate these to in-group and out-group members who identify more or less with their own and other referential groups (Fincham, 2007).

As Rissel discusses, how cycling and people on bicycles are reported over time changes as the prevalence of cycling increases (Rissel et al., 2010), but while representations of cycling move towards more positive portrayals due to the issues around environment and health, the portrayals of people on bicycles remain predominantly negative. While that negativity is not generally found in the themes depicted here, there does remain the marginalisation of the person on a bicycle, the presentation of those who cycle as smaller groups of strange individuals.

While the media seem to acknowledge the legitimacy of the minority group along such dimensions as environmental benefits and health, there exists a dissonance that they are reflecting the views of the majority group but cannot maintain their position as legitimate once values such as the environment, health and pollution are raised where cycling is demonstrably more environmentally friendly. Therefore, one potential solution in line with social identity theory is that they may have to leave the majority group to join what they perceive to be a minority group (Tajfel et al., 1979). This is evidenced in the representations of people on bicycles as a group they may have to join i.e. *"People will have to walk more, cycle more, meaning more cycle paths and pedestrian-friendly routes."* (B – Telegraph, 13th June) and that currently 'people' do not cycle.

Alternatively in considering these representations regarding transport choice, one of the most notable aspects is the lack of coverage of cycling for transport in and of itself. This exclusion of cycling as a mode of transport from the news is notable and reinforces Furness point that "Representations of utilitarian cycling are now all but

absent from mass media" (Furness, 2010, pp. 109). This is discussed from a social identity perspective further in (Abrams & Hogg, 1998), specifically how the dominant group, through their access to the media, influence the discussion around particular issues. Therefore, the issue here is not that representations of people on bicycles for transport are of a particular form, but that they are absent altogether. This presents a notable challenge for active travel advocates if as discussed, the representations we see in the media represent our understanding of reality, then the absence of a particular social group demonstrates their lack of worth. This echoes one of the findings of Rimano et al., (2015) who note that there is an absence of portrayals of inter-personal relationships such as families cycling in the media. Rimano note that this includes "social identity, social roles and group norms" (Rimano et al., 2015, pp. 42) which they suggest may affect uptake of active travel solutions.

Furthermore, and this is consistent with previous research, within the transporters theme there are descriptions of the person on a bicycle being vulnerable. In this sense the media are employing social creativity strategies, in which they avoid dimensions along which the dominant groups position is threatened such as presenting a danger to the more vulnerable, and instead invoke other values which maintain the positive distinctiveness of their group. The irony is of course that it is the car that makes the environment dangerous for people on bicycles. Therefore, if the dominant group feel the legitimacy of their group is being threatened, they may engage in either of two strategies. Acknowledging the legitimacy of the subordinate group where they cannot contest the values made salient, or through the exclusion of cycling in discussions.

3.7 Conclusion

While I have approached this analysis with a theoretical framework in mind, and not inductively, there is plenty of evidence for the marginalisation of people on bicycles. People on bicycles are represented as people who are slightly different in some way, that they do not represent most of the population and therefore the dominant group. Thus, the media as members of the dominant group engage in various strategies, notably social creativity, and exclusion to maintain the positive

distinctiveness of the in-group, while reinforcing the dominant groups position. Yet there is also evidence of a shift towards cycling as a possible antidote to the issues of climate change, although even then it is discussed begrudgingly, indicative of the intergroup strategies discussed. As climate change becomes increasingly problematic, understanding sustainable travel from a group perspective is an important consideration.

Extending this analysis through more deliberate analysis of the discursive practices of journalists when portraying those who cycle may be a fruitful area for future research, considering the othering and extreme examples described here. As this research was conducted in 2019 before the covid-pandemic, there is also a consideration over replication of this specific study within the overall thesis as attitudes towards sustainable transport may have shifted. Within Greater Manchester an increasing number of cycle lanes may also have shifted the medias perception of cycling as a viable form of transport.

Chapter 4. EMPIRICAL STUDY 2

4.1 Introduction

To complement study one and further explore the usefulness of social identity theory and intergroup processes in transport choices, this study employs a discourse analysis of semi-structured interviews to explore social identities of different transport users.

As discussed in the overarching introduction and literature review in chapter 2, there is a demonstrable gap in the extant literature that examines social identity and transport choice. Additionally, there is a lack of research that applies discourse analysis to this topic. Therefore, in applying discourse analysis to the issue of transport choice, through the lens of social identity, the intention is to address the gap in the literature by bringing together the two approaches.

As much of the literature has been included in the opening chapters, including quantitative approaches, here I focus on the literature that specifically considers discourse analysis of modal choice. I also include discourses of transport generally, and those that draw on the social identity approach before drawing the three together to position the current research within the extant literature. I also briefly outline the form of discourse analysis used here, its philosophical underpinnings and relevance to social identity.

4.2 Literature review

In considering the extant literature of modal choice it is evidently a gap to fill. There are limited discursive analyses of transport more widely, very few that focus solely on modal choice, and none that I am aware of that apply discourse analysis to the question of intergroup processes around modal choice.

It is important to note that when examining the extant literature for research that considers discourses of transport, the very term discourse is contested. While some researchers may seek to explore commonly understood public discourses (Hagman, 2003), others examine the nature of discourse itself. That is, they perform a

discursive analysis, from one of many formulations of the methodology (Jørgensen & Phillips, 2002).

However, there is value in outlining the extant literature around the topic in question to position the current research within the field. Additionally, in previous reviews on the extant literature around modal choice both Lanzini and Khan (2017) and Handy et al., (2014) recognize the importance of, and need for, qualitative research in considering the impact of transport choices. Before considering discourses of transport, transport choice, and social identity I set out the form of discourse analysis, its origins and applicability to this research.

4.2.1 Discourse analysis

While a theoretical discussion is beyond the scope of this chapter, the rationale for choosing to use discursive psychology as conceptualised by Potter and Wetherell (Potter and Wetherell, 1987) is discussed below. For an in depth discussion of the different forms of discourse analysis including their commonalities and differences in approach see Pedersen (2011).

Discourse analysis is a relatively new development in the social sciences, emerging from the 1950's through the work of the renowned linguistic Noam Chomsky, whose work stood in opposition to the behaviourism of Skinner and others (Potter and Wetherell, 1987). Chomsky saw language as a set of rules, which represented what speakers knew and in this sense language is reflective of thought (Cook & Newson, 2007). From Chomsky's early work, various scholars have developed the discursive approach within social psychology including Norman Fairclough and Michel Foucault into various branches of the discipline.

Gee and Hanford's handbook on discourse analysis discusses eleven distinct forms of the discipline, with varying scopes and focus of analysis and as a discipline is varied, finding application in a range of domains including history, politics, sociology amongst others.

Within each discipline there are likely to be differing philosophical assumptions about how language is used, in addition to theoretical and methodological guidelines (Jørgensen and Phillips, 2002). However, all forms of discourse analysis

sit within the social constructionist approach, which assumes that an individual's understanding of themselves and the world is constructed in acts of speech (Pedersen, 2011). In short discourse analysis is concerned with the study of "language in use" (Gee & Handford, 2012, pp. 1), that is, discourse analysis studies language and how it is used in the world to achieve various aims.

As I am interested in the usefulness of the social identity approach, the form of discourse analysis used should be congruent with the theoretical underpinnings of that approach. Namely, that people categorise themselves and others into social groups. The analysis should therefore be appropriate for this aim, in understanding how people construct categories and identities in talk.

Potter and Wetherell posit that categories are not fixed as cognitive psychologists suggest, but instead are actively constructed through discourse, and are drawn on to achieve different actions (Potter & Wetherell, 1987). Therefore, the form of discourse analysis they proposed allows us to interrogate text-in-talk for its action orientation, that is, what the interlocutor is attempting to achieve through discourse. That is to say that people say things to accomplish goals. Jonathan Potter provides an example where on hearing a noise outside their flat, 'Diane' says "Neil, you've got your shoes on" (Potter, 1996, pp. 108). This is not a statement of fact but a request that 'Neil' goes outside to see what caused the noise. Through the action orientation of speech, this particular form of discourse analysis focusses on the "social construction of attitudes, social groups and identities" (Jørgensen & Phillips, 2002, pp. 102), an integral element of this study and congruent with the focus on the social identity approach.

Additionally, as a form of critical research discourse analysis aims to analyse social power relations to consider how society could operate more equitably. From this ideal we can critique the power relations that exist by comparing existing relations, to determine how social change can move existing power relations towards the ideal (Jørgensen & Phillips, 2002).

The application of discursive psychology as employed by Potter and Wetherell is further bound with social identity theory in shared philosophical assumptions,

specifically that they adopt a social constructionist epistemology. While other forms of discourse analysis such as critical discourse analysis or Lacal and Mouffe's discourse analysis share the same epistemological assumptions, Potter and Wetherell's specific approach to discourse analysis is focussed on discourse as a situated social practice. It is therefore less abstract than Lacal and Mouffe's approach, and less focussed on broader power considerations of the critical discourse analysis of Van Dijk, rather it is situated within everyday talk and text. Through interviews with participants, we can therefore explicate how people position themselves relative to others through talk.

In the following exploration of the literature, I explore discursive studies of transport, transport choice, and social identity to consider gaps in the literature into which this study, and the wider thesis create new knowledge.

4.2.2 Discourses of transport

Within the broader academic literature on transport, discourse analysis is often focused on the societal impact of car-centric transportation and how discourses perpetuate this. They may consider the impact car-centric societies have on such social issues as safety, the impacts on health or accident reporting. For example, in their consideration of media reporting of fatal traffic collisions, Feyver and Aldred (2022) highlight how fatal road traffic accidents are framed as either episodic or thematic. Pedestrian fatalities are framed episodically, that is to say as isolated incidents without association to wider societal issues such as driver behaviour. The fatalities of people on bicycles in contrast are reported thematically as being related to cycling generally, rather than being related to infrastructure issues. Reporting in this way negates driver agency and minimizes the role that infrastructure and motorists play in fatalities. Therefore, through discourse analysis we can reveal crucial facets of a topic of importance that may not be revealed by quantitative reporting of say crash statistics.

Further topics that have been the subject of discourse analysis within the wider transport domain demonstrate how systemic biases may affect transport policies. These include representations of disabled people in strategy documents (Andrews et al., 2018), the fixation on helmets in US safety discourse (Culver, 2018), women's

safety on public transport (Mowri & Bailey, 2022), or the impact of the peak oil discourse on transport policy (Leung et al., 2018). As the discourses here may shape transport policy, they are likely to influence transport choice such as in the discourse around helmet use when cycling. Rissel and Wen's cross sectional survey of Sydney residents suggest that repealing mandatory helmet use while cycling in Sydney would result in an increase of 23% in participation level (Rissel & Wen, 2011).

4.2.3 Discourses of transport choice

The small amount of discourse analysis in relation to transport more widely is replicated in the literature around transport choice with only a handful of studies applying discourse analysis. Furthermore, the analysis includes a mixture of studies that elucidate discourses around transport choice, sometimes from the perspective of a single mode. As these studies suggest, discourse analysis is a useful method for exploring important topics. Given the sparse literature on modal choice, exploring transport choice through discourse analysis will help to determine how useful the social identity approach may be as a framework in such a critical area of social policy.

For example while Hagman (2003) and Maxwell (2001) consider the discourses around transport choices, they both focus solely on discourses of car use. While proponents of modal shift often focus on the motivations of individuals, Maxwell explores how car users construct their discourses to assuage feelings of anxiety or guilt over increased car use. In this sense Maxwell describes the plurality of ethics of car use, that while ethically motorists may feel guilt around car use, they are also bound ethically in other ways to continue to use the car such as childcare or getting to work. This proposes an arguably more balanced and positive view of car use, which moves away from the binary of the car being bad while active travel is good. It also demonstrates that the underpinning social constructionism of discourse analysis, that discourses are constructed by speakers.

Hagman (2003) further considers how advantages and disadvantages of car use are constructed differently in discourses, with inconsistent patterns of evidence. Hagman details how advantages and some disadvantages are presented as personal

experience, while some of the wider disadvantages are presented with reference to wider public discourses with both forms of knowledge constructed differently. Based on Ingold's writings on risk (Ingold, 1992), it is posited that this is due to whether the advantage or disadvantage is based on personal experience. Where it is concrete and visible, such as the time savings (advantage) or fuel cost (disadvantage), the motorist is drawing on personal experience. Where the disadvantage is less tangible and invisible such as safety concerns, or the environmental impact, motorists will draw on public discourses relying on scientists and the media to provide expert advice. However, people are reported to be ambivalent towards science and skeptical of the media, and therefore these external discourses have less impact in considering the balance between advantages and disadvantages of car use.

The inconsistent patterns in discourses is replicated in Guiver's work which extends considerations of car use to comparisons between bus and car travel in order to understand how to promote more sustainable transport choices (Guiver, 2007). Guiver points out that for many, modal choice is often driven by preferences and experience, reflected in how users construct their discourses to justify their transport choices. Reliability is only used to judge buses, and costs are only related to bus fares and car parking fees. While cars are viewed as more convenient, this conveniently ignores servicing and repair costs, and time spent cleaning etc.

The constructionism inherent in discourse is further evident in Gossling's discourse analysis of the different strategies that the city of Copenhagen adopts to promote cycling (Gössling et al., 2013). This is not an analysis of modal choice or modal shift per se, but instead of how official channels in Copenhagen communicate their promotion of sustainable modes. There are three lines of discourse outlined; (i) a more desirable urban future, (ii) individual and societal benefits, and (iii) opportunities for participation. These are unswervingly positive in promoting cycling as a viable alternative to the car and reflect the fact that discourses are constructions to achieve certain aims, rather than being a reflection of a fixed, objective reality.

Considering the discourses available in a specific city as Gossling has, Hickman et al., (2018) applies Q methodology in order to understand the prevalent discourses across all forms of transport in Manilla. Hickman presents four 'discourses' including; "The Individualistic Car Driver "The Public Transport" "The Frustrated Traveller" "The Comfort-Seeking Traveller". It should be noted that the choice of Q-methodology, while exploring available discourses, is not as such a discourse analysis. Instead participants are asked to sort statements on a particular topic which researchers interpret to form a presentation of " the range of views on a topic" (Hickman et al., 2018, pp. 3).

The range of views Hickman presents are discussed as 'discourses' as they represent common views on the topic at hand, and Hickman feels that the nuance of discourses needs to be understood to produce transport systems that reflect the desires of communities. As an example, Hickman's findings represent some of the contradictions that are common in studies of discourse, particularly in 'the public transport' theme. Here the participants want greater investment in public transport so more people use it, but they are motivated by the fact that if more people use public transport, then the roads will be clearer for their own private car use.

Taken together the limited literature on the discourse analysis of transport choice provides an insight into the constructed nature of discourses and how they not only reflect inner cognitions but have an action orientation, that is they are constructed in such a way that they achieve the aims of the speaker (Potter, 1996).

4.2.4 Discourses of 'social identity'

Therefore, while there is a small body of work that considers discursive constructions of modal choice, the research question(s) of this thesis are specifically concerned with how the social identity approach relates to modal choice. In her review of the literature Handy alludes to the importance of group identities in exploring modal choice rather than a focus on the individual; "The 'higher level' might be households, neighbourhoods, communities, cities, or countries." (Handy et al., 2014, pp. 10). This not only suggests that social identity may be an important consideration in transport choices, but that they should be considered at various hierarchical levels. By this I mean that not only are social groups considered as in-

group and out-group but that identities are contextual and can “expand and contract according to different levels of inclusiveness” (Chan, 2014, pp.148).

In section 2.1.1 I outlined how research has implied conceptualisations of identity without explicitly drawing on the social identity approach. In their writing Fussl & Haupt conclude that “the often overlooked concept of ‘identity’ can bring new concepts into the debate on traffic safety for cyclists” (Füssl & Haupt, 2017, pp. 1). While these differing explorations of how identity may be linked to modal choice are indicative that the social identity approach may be a useful framework for further developing our understanding of modal choice, they do not apply discourse analysis to the object in question. However, there *is* research that applies a discourse analysis to questions of identity and transport choice.

In a similar manner to Heinen (see above), Jones et al., (2012) applied Q-methodology to consider the behaviour of various groups who self-identify as either ‘pedestrian’, ‘cyclist’ or ‘motorist’, and how they view moving around the city. The resultant findings suggest a hierarchy of road users with pedestrians most vociferous about wanting to see change, while drivers not wanting any changes that impinge on their freedom to drive and suggesting that pedestrians and people on bicycles should do more in terms of their own safety. The behaviours and expectations here are again dependent on how the individual categorises themselves within the road user community, and most pertinently the salience of their identity as almost all had car access so could feasibly have identified as drivers. Additionally, there is a challenge to the accepted hierarchy from pedestrians which is indicative of power being held by dominant social groups, a key tenet of social identity theory.

Hickman et al., (2018) also employs q-methodology to explore the discourses of different transport users, and notably of the four discourses identified, the car driver is described as ‘individualistic’, preferring the comfort and cocooning effect of driving alone and expressing a desire for investment in public transport in order to ease congestion for motorists. That the discourses are aligned with the mode of transport users predominantly use, is again indicative that theories of group identity may be a productive area of research.

In terms of the research that has employed discourse analysis of a form similar to this study, Guiver (2007) presents four repertoires all based on insider and outsider views of different transport modes. That is, that the transport users form differing judgements of transport modes dependant on whether they are users of that form of transport or not. As a result, the discourses suggest that transport users are seeking to maintain a positive distinctiveness of their own group. Maxwell even goes so far as to describe the discourses of car users as being used to maintain social differences and "many constructions of meaning around car use seek to reduce guilt and anxiety experienced in relation to increasing levels of car ownership and use." (Maxwell, 2001, pp. 203), suggesting that the discourse is a creative way of maintaining positive in-group distinctiveness around values that are problematic such as pollution and climate change. Finally, Gossling's exploration of the marketing used in Copenhagen to promote cycling is found to appeal to a super-ordinate group identity, by using collective pronouns such as 'we' or 'our'. This is in line with Handy's appeal to consider higher level explorations of transport choice.

Therefore, there is evidently a gap in the extant literature that this study will address in explicitly considering social identity and transport choices through discourse analysis. As social identity theory is outlined in the introductory chapter of this thesis, there is no need to elaborate further on the theory here. Discourse analysis as a method is outlined in section 4.3 to follow.

4.2.5 Research question

Using semi-structured interviews to explore everyday discourses around the social identities of different transport user groups.

4.3 Method

The data analysed here is derived from a set of nine semi-structured interviews that were conducted online during 2021. Below I set out the theoretical positions of this study, and how the data was collected and analysed.

4.3.1 Theoretical positions

The social identity approach and its theoretical origins are explored in the introductory section 2.1.2. The philosophy of discourse analysis and the particular form used in this study is discussed in the following section.

4.3.1.1 Epistemology

The application of discursive psychology as employed by Potter and Wetherell (1987) is congruent with social identity theory in shared philosophical assumptions, specifically that they adopt a social constructionist epistemology. While other forms of discourse analysis such as the critical discourse analysis of Van Dijk or Lacal and Mouffe's discourse analysis share a social constructionist epistemology (Jørgensen & Phillips, 2002), Potter and Wetherell's specific approach to discourse analysis is focussed on discourse as a situated social practice. It is therefore less abstract than Lacal and Mouffe's approach, and less focussed on broader power considerations of critical discourse analysis.

4.3.2 Conducting the study

4.3.2.1 Ethics

Ethical approval for this study was granted by Manchester Metropolitan University's Faculty of Heath, Psychology and Social Care prior to the recruitment of participants. Participants were asked to sign consent forms (see appendix 3) and asked to confirm this consent at the start of the interview recording when it was also reiterated that they could withdraw from the study at any point until I had begun the analysis process. Once analysis was about to commence, I contacted all participants to confirm they were happy for their details to be retained and used in the study. All data relating to this study has been stored in line with the data storage policies of the University, with data stored within the one drive system, which is password protected. Transcripts have been anonymized with any identifying places or features obscured, and pseudonyms used for participants.

4.3.2.2 Upset/Risk

Given the nature of the study, a discourse analysis of interviews, the risk to participants and myself was relatively low. However, as the focus of the study was

on transport choice, and the implication that motoring is contributing to poor personal health and climate issues, there was a risk that those who drive more than others could become upset if the questions became accusatory. As such my approach was to attempt to be as neutral in my questioning as possible and draw out the views of the participants without appearing to pass judgement.

4.3.2.3 Recruitment

Participants were recruited via convenience sampling, through recruitment material distributed via various communication teams at Manchester Metropolitan University, the University of Manchester, and Salford University. These institutions were selected due to their pro-sustainable transport policies, in addition to their proximity to the primary researcher in anticipation that interviews were required to take place face to face. The recruitment process took place in January and February of 2021. During this time the a third national lockdown was in place in the UK following the Covid-19 pandemic (Baker et al., 2021) which meant that face to face contact with other people was prohibited. As such recruitment, and the interviews that followed, were all conducted online.

4.3.2.4 Sample

In total nine participants were recruited. Of these five identified as female (n=5) while four identified as male (n=4), with a mean age of 40. The participants by gender, age, and primary mode of transport are detailed in Table 4:1. All the participants normally travelled within Greater Manchester, primarily as part of their daily commute. Sample sizes for discourse analysis are often small as the method of transcription and analysis can be a time-consuming task, often with single texts being used. Potter and Wetherell note that more interviews can simply "add to the labour involved without adding further to the analysis" (Potter & Wetherell, 1987, pp. 161). Furthermore, Potter and Wetherell suggest the size of the sample should be determined by the aims of the research and as I intended to explore social identity in transport, I aimed for a sample that represented different modes, genders, and ages of participants. Once I had recruited nine participants, I was comfortable that I had a sample that met these criteria (see Table 4:1).

Table 4:1 Participant details for study 2

Participant	1	2	3	4	5	6	7	8	9
Gender	F	F	M	F	M	M	F	F	M
Age	24	30	47	40	42	50	49	41	37
Mode	Mixed	Mixed	Mixed	Cycle	Cycle	Mixed	Mixed	Car	Car

4.3.2.5 Data collection method

Due to the continuing Covid-19 pandemic in 2021 all interviews took place online using video conferencing software, using either Zoom or MS Teams depending on the preference of the participant. The software was used to record the interview, with the data file being stored within the University data storage system.

4.3.2.6 Semi-structured interviews

The semi-structured interview was based on a funnelled structure, beginning with general questions about transport such as "Can you tell me about how you usually travel when you go to work/education?" (see appendix 7.4) and progressing to questions about the participants preferred modes of transport, and their views on those who use bicycles for transport. This also included questions based on the findings from the first study considering how newspapers represented people using bicycles such as question 11, where the participants were shown the categories along with quotes and images from study one. Prompts and follow ups were also included to probe responses further if required.

While all questions were designed to be asked of all participants, the semi-structured nature of the interview allowed the participants to expand or focus on aspects that appeared important to them. Additionally, there were two different sets of questions for later in the interview depending on whether the participants identified as a person on a bicycle or not. If they were not a person on a bicycle, I asked about the potential for switching to cycling, and if they already cycled, I asked about their cycling experience as it was thought that this might be informative for study three. The final question asked people on bicycles what they thought other people might think of people on bicycles. As this was potentially sensitive given

negative stereotypes of people on bicycles, it was positioned last in case upset was caused and the interview could be terminated.

Following the first interview the structure of the questions was reviewed to determine if the data collected was likely to produce material that would provide fruitful during analysis. While few changes were made to the structure of the questions, the reflection allowed subsequent interviews to be more participant led.

4.3.3 Analysis

Below I outline the process of analysis through transcribing and coding of the interviews, and considerations of upset or risk that may have occurred during the interviews with a further reflection on the experience and any limitations of the study.

4.3.3.1 Transcription and coding

Each interview and related recording lasted an average of an hour and were subsequently transcribed through the following process. The video recordings were played through a TV and the dictation feature in MS word used to convert the recording into a rough transcript. The transcript was then edited by hand to produce an orthographic script (Wiggins, 2017). An orthographic transcript was considered to provide an appropriate level of information given the focus of analysis on what the participants were saying, and not necessarily how they spoke (Potter, 1996).

In line with Potter (1996) I then began a process of coding the transcripts, attempting to be as inclusive as possible. Often analysts will use a selection of data that relates to the research question, however, in this instance I wanted to ensure that there were as few a priori categories as possible. Little of the transcript was excluded, whether that was the content of what the participants said, or specific discursive features of the data. The coding was conducted for all participants individually, rather than using the coding generated by one transcript to code subsequent transcripts.

What followed was a process of analysis that, as Potter states, is not a “mechanical procedure for producing findings” (Potter, 1996, pp. 168). Initially the codes from

all participants were collated into what appeared intuitively to be logical themes. In line with Potter & Wetherell's guidance I was aiming to establish pattern in the data including variability and consistency between accounts, along with a concern for function and consequence, or the effect of speech. The iterative process that followed redefined the initial categories as some discursive features appeared across repertoires with others more closely aligned with single repertoires. This process also included trying to move away from an initially superficial analysis of what participants said based on their mode of transport, and instead focus on *how* the participants talk about transport, and to what end. As I refined the analysis I continued to move between the collection of codes and the transcripts to develop and test interpretive repertoires redefining them and reviewing the evidential quotes from the transcripts.

4.3.4 Limitations and reflection

As with most qualitative research the number of participants within this study was small, and not suitable for generalizing to the general population. Given the request that participants travelled around Greater Manchester, the findings presented here are specific to Manchester and not necessarily representative of transport within other UK towns and cities. Greater Manchester has a well-established tram system in addition to several large rail stations, and an increasing network of cycle lanes, that with the exception of London, make it unique within the UK.

As a keen cyclist there was an inherent danger that my role as the researcher would shape the responses of the participants. Building rapport at the start of the interview and aiming to maintain an air of neutrality appeared to help during the interviews, with participants appearing to be quite open and honest in their responses. I certainly did not feel that anyone was giving responses that they felt they should give. While being aware that the research was focusing on 'social identity' it was not apparent that any of the participants had a deep understanding of the theory and were altering their responses to match the theoretical frame of the study. My reading of their responses was that they were genuine and reflected their thoughts and feelings around transport in Greater Manchester.

4.4 Findings and discussion

In the analysis presented below, I present three interpretive repertoires evident in the data. Interpretive repertoires are commonly understood ways that people talk about topics. They are often centred on a central metaphor, cliché or trope, and have a particular linguistic style (Jørgensen & Phillips, 2002). Within discourse analysis these repertoires are seen to have an action orientation. That is, they are doing something, they are resources on which people draw on to produce social action. In the analysis below I identify the repertoires, drawing on examples from the transcribed interviews, but I also explore their action orientation.

The first repertoire is used to convince the listener that the speaker has choice or conversely has a lack of choice in their mode of transport through a process of argumentation. The second brings to life the abstract concept of power and how the participants understand this using figurative language. Finally, there is a trope referred to as the law-breaking cyclist. This is a commonly held trope, and is used by all participants, but in notably different ways depending on their subject position. The three repertoires are used by all participants throughout their accounts and taken together produce a discourse of transport use.

4.4.1 Rhetorical construction of forced choice in transport choices

In line with the research question, the speakers in this study align themselves with specific modes of transport. They attempt to convince the listener that either they have no choice (forced choice) but to use a particular form of transport, or conversely that they are free to choose their mode of transport (choice). As such, this choice or forced choice is conveyed through a specific repertoire demonstrating how transport choice is partially constructed in discourse. Furthermore, the participants use this rhetorical repertoire to justify not changing their mode of transport, or to demonstrate that other people are able to vary their mode of transport.

This is the dominant repertoire within the accounts in which the speaker constructs a rhetorical account. A rhetorical account is used as a form of persuasion and as a means of eliciting agreement from the listener (Potter, 1996) and is achieved using a number of strategies. As discussed in Potter (1996), rhetorical accounts are public

positions on a topic, usually controversial, and there is commonly a pro and counter position.

To persuade the listener to accept that the mode of transport the speaker uses is an accurate description of reality, the participants seek to reify their dominant form of transport, that is they try to construct a version of their account that is solid and factual. Furthermore, to establish that their own choice or forced choice as factual, the accounts are structured in a particular manner which can then be accepted or refuted. Referred to as the epistemological orientation of the account, the structure and content of the account is designed to establish the facticity of choice or forced choice in the discourse (Potter, 1996). Here we see this through the combination of discursive strategies, specifically categorisation, lengthy descriptions, anecdotes, the hierarchy of modalization and extreme case formulations.

While the repertoire is filled with justifications for a more commonly used mode of transport, in contrast less preferred forms of transport are ironized through the use of minimizing language, hesitancy, false starts and less certain degrees of the hierarchy of modalization (Potter, 1996). This creates an account that in contrast to reification, turns a concrete fact back into an abstract concept, therefore undermining it. The account is therefore constructed to equally "counter potential or actual challenges and to undermine alternative versions" (Jørgensen & Phillips, 2002, pp. 113).

These two competing forms are deployed simultaneously to manage issues of stake. When speakers construct their discourse, they take up positions within the discourse, often in relation to social groups. This positioning is referred to as a "dilemma of stake" (Potter, 1996, pp. 110), and the speaker adopts certain positions due to their stake in the topic. Therefore, within the account the speaker will simultaneously attempt to manage their stake by using a rhetorical account to convince the listener that their choice of transport is valid, while minimizing the choice of others.

Additionally, epistemological orientations can also be seen as a form of action orientation. As the structure and content establish choice or forced choice as a fact it is also doing something, it is providing justifications for their choices to persuade the listener to accept the speakers preferred choice of transport. Below I show some of the discursive features of this repertoire, and how they are used in constructing or undermining accounts around transport choice.

4.4.1.1 Choice and forced choice through categorical norms

To build a description that is solid and factual, the speakers often draw on the norms of social categories to support their position. While to social psychologists categories are a product of the perceptual system, to discourse analysts, categories are constructions that are drawn on in order to achieve different actions (Potter & Wetherell, 1987). Category entitlement is a central feature of building a descriptive account by claiming that as member of a group, the speaker has privileged access to information and should therefore be believed (Potter, 1996). Within this repertoire, various categories are drawn on to convey choice or forced choice, often by using the norms of those categories as a proxy for the group. Norms are what is commonly understood to be typical, or normative, attitudes or behaviour. In the data presented here they are often formulated in terms of what is normal in a particular social group such as the family, or the norms of locations such as London.

Within this repertoire, the categorisations are fluid and used frequently to establish the norms of various social groups. These are often, as Sacks describes, Membership Categorisation Devices (MCD), which group together membership categories in verbal interactions (Martikainen, 2022) compared with the more cognitive focus of social identity theory. For example, invoking a family brings together brother, sister etc. These are everyday understandings of social groups and are used to convey a speaker's preferences as well as powerful resources to explain their social worlds in commonly understood language.

Participants use the norms of these categories to offer explanations for choice or forced choice within transport modes. This is most clearly seen in the discussion of how acceptable it is to arrive at work 'sweaty' with participants seemingly drawing on a categorisation of professionals, and that it is not culturally acceptable in the

UK to arrive at work sweating like a “steamed pudding” (Extract 2). In extracts 1 and 2, Summer and Graham each convey the issue with cycling at such pace that you would need to shower and change before work and therefore this can enforce transport choice.

> The barrier for a lot of people, is just the fact that compared to any other form of transport cycling makes you sweaty. And if you're going into an office, or, erm ( ) you know my, my partner was cycling into station, he's a paramedic, and he was having to go with you know his full set of extra clothes, and allow time to shower before his shift and all the rest of it which is a big hassle. (Extract 1: Summer)

For Summer therefore the norms of a wider social group – being a professional means that her partner has no choice but to use modes of transport that do not result in arriving at work sweaty. In making this statement Summer uses the norms of a membership categorisation device – the professional - to demonstrate why people may be forced to avoid cycling. In contrast, while Graham cycles, he does so at such a pace that he arrives at work with a *“glow”* rather than sweating.

> Yeah, that's something that I think, probably I've become slightly used to is just having that background level of exercise, which has then mood benefits and things associated with that, erm, because even if it is absolutely hammering it down and you arrive, like, in your waterproofs, like some sort of steamed pudding … you have at least had, er, you know that ex., that sort of you, you've got that glow of exercise, and so you're warming up inside … For instance, if I pass a cyclist coming in the other direction, I'll take a look at what they're wearing, whether it looks like they're commuting or, erm, or having a leisure cycle, and then, erm, kind of have an internal monologue about whether I would do that if I was, you know, commuting or not. Erm, I think what I'm trying to say is that, er, if I pass someone in commuting rush hour and they're head to toe vacuum packed Lycra, I'll be thinking ooh that's going to be an effort when you arrive at work. You've either got to shower and change, or maybe like work in that all day. (Extract 2: Graham)

Graham compares himself to other people on bicycles that cycle quicker and therefore must sweat more. He is drawing on the same norms of a category as Summer, but through a sub-category, as a person on a bicycle who does not wear Lycra. Graham is demonstrating there is still choice in using cycling as a mode of

transport, assuming one does so in such a way that fits within the norms of the category as a professional.

There is also common use of the family as a social category and its norms are often presented as an explanation for why the participants use of a particular form of transport. The speaker communicates this as something they have no choice over, as the norms of as a social group such as the family, or community, are internalised and become habitual. In extract 3 Elsie relates the choices her parents made around transport to the primary mode of transport she uses today.

> Well, see, I don't really use public transport, I've never been a public transport user, our parents always drove us places. And I remember it being like a real novelty and it, and it probably is for my kids as well to like take them on a train (Extract 3: Elsie)

There is an acknowledgement from Elsie that the transport choices she experienced within the family as a child are now being repeated in her own family, even to the point that she found using public transport a novelty and her own children now probably feel the same. Elsie is reifying her own forced choice as reality, offering the norms of the family as a reason why their current transport choice is forced.

The family category is also used to convey how values related to family life or parental demands that forces the choice of transport mode. Daniel draws on a slightly different categorisation in extract 4, that of the parent.

> Erm, Do I trust myself not to go into a pothole and fall off, or just other road users not to squash me, not necessarily. And then again, the time that, that would take to do, would add significantly to getting to places, would impact on dropping our son off at nursery, would impact on getting back at a reason, at a reasonable hour to, for dinner and, er, helping out with bedtime and bath time and all of that. Er, and then the cost. I think. Already paying for vehicle and all that ensues, the diesel isn't really the most expensive part of running a car as daft as it sounds anymore. (Extract 4: Daniel)

In extract 4 above we can see how Daniel conflates issues of time, cost, and safety as reasons why they cannot cycle to nursery and on to work, that they have no choice but to drive. As discussed, category entitlement is used as a resource to

build up the speaker's factual account by virtue of their privileged membership of the group. By telling us that a parent has certain responsibilities and demands, Daniel is building up their account of forced choice as factual.

As outlined in section 4.4.1, while making their own description solid and factual through reification, speakers will minimize or ironize other versions. Daniel minimizes cycling as a choice for himself while recognising it as a choice others might make; "*some, I think some people see biking as their first big bit of freedom as well, and it's something they carry with them through their life. Whereas I, never really started cycling apart from that cycling holiday." (Extract 5: Daniel)*. For Daniel cycling is something done by others. He minimizes this as a choice for himself by stating *"some people"* and *"I never really started cycling"* effectively removing cycling as a choice. While not drawing explicitly on the norms of the family, Daniel is referring to patterns of behaviour that started in childhood while also invoking the notion of an out-group, a group to which he does not belong.

In contrast to description of the norms of the family persisting into later life, Richard's account below shows how the norms of the family might be consciously rejected. Here Richard explains that while his father is an avid motorist, Richard has not followed the same pattern of behaviour.

> Yeah for me for sure erm er my father who's actually still alive he's always loved driving … Er and I think he's always found it, he's always been slightly bemused by the fact that I definitely haven't taken after in that respect (Extract 6: Richard)

Richard acknowledges the influence of the family norms in influencing transport choice, but consciously eschews the family norms and chooses a form of transport aligned with their values; *"Erm well I suppose in terms of of erm (but) again one of the things I'm very conscious of and I think that I'd like to see us change as as a society is the one person one car kind of journeys you know" (Extract 7: Richard).* In this case Richard is conscious of the environmental impact of his transport choice, and that single occupancy cars are one of the major factors in climate breakdown. He therefore describes his choices in line with a social category related to the environment. In extracts 6 and 7, while drawing on the categorical norm of the

family, Richard is reifying choice. He can consciously reject the norms of one category – the family – and instead adopt the norms of a different social category – the environmentalist.

A further categorisation commonly drawn on is through the norms of different geographical locations. For example, although the participants are typically describing their experiences of transport in Manchester, there are comparisons with London in most accounts in addition to Amsterdam, holiday locations, or events such as Ride the Lights in Blackpool and BMX festivals as outlined in extract 8. In some cases, this is a simple explanation of the norms of that location, as Elsie states when she explains when she might cycle; "*[We] hired bikes in Amsterdam because that's what people do. [Erm]" (Extract 8: Elsie).* Elsie normally drives but cycled in Amsterdam because that is what "people" do. In this short claim, Elsie is reinforcing her own choice as a motorist in the UK by offering to the listener an explanation of how we choose our modes of transport, that is we do what others around us do.

Daniel also uses geography as a means of convincing the listener that their account is factual, and in a similar manner to Elsie show this through the norms of the location.

> [And] everyone, everyone does it [i.e. use public transport] because there is no alternative, er, people don't really drive, erm, so it's one of those things that when you were saying does your environment impact on how you would travel. (Extract 9: Daniel)

Daniel claims that in London "everyone" uses public transport because there is no alternative. While not factually accurate, this does support his rhetorical construction of transport choice being one linked to the norms of the area. Daniel and Elsie are consistently attempting to convince the listener that they choose the mode of transport that everyone else in that region uses, and hence supports their own choice in Manchester.

The categorisations of different geographical locations highlight the flexibility of categories in constructing a choice or forced choice narrative. Daniel and Elsie will

cycle or use public transport in geographical locations where this is normalised however their current locations do not allow this choice. Group identities as hierarchical, in addition to being comparative, has been explored by Chan in their work on news reporting on regional conflict in Asia (Chan, 2014). While the powerful superordinate identities in Chan's work are national, here they are used at the regional or city level. In their model, identity categories remain but operate under a superordinate identity. Therefore, transport users draw on multiple group identities (parent, family, Manchester) to further build an account that is factual and persuasive to the listener. This use of categories, particularly by geographical location, is used in addition to further discursive resources as discussed in the following sections.

4.4.1.2 Establishing their choice as factual

Further to the categorisations employed as discursive resources in this repertoire, the speakers seek to further establish their account as solid and factual using vivid descriptions, anecdotes, and more certain forms of the hierarchy of modalization. These add detail and evidence from the speaker's point of view to convince the audience of the veracity of their account, turning the concept of choice into reality. These resources are built on each other, in essence providing a body of evidence that the account is to be believed. In extract 10 Erin describes their use of a kick scooter in Manchester, drawing comparisons with their hometown which is to the North of Manchester during which she provides a deeper description of life in Manchester.

> Er, well I love Manchester, and I enjoy seeing all the students in their colourful clothes and personalities, 'cause they make an effort when they're young. Erm, and it's such a mixed diverse community, and so many different areas that I will go to, erm, whether it's in Oxford road or the northern quarter or Hulme or somewhere like that … Erm, and unlike where I live north of Manchester, going around on a kick scooter isn't as unusual in Manchester because there's quite a few other people that are also on scooters, but in my hometown I get weird looks, and I get stuff yelled at me like you're too old for that kind of … Because it's ( ) see that, so it's nice to be in Manchester where I can blend in without yeah seeming too weird. (Extract 10: Erin)

While the interview question asked for a preferred response in elaborating on their view of transport in Manchester, Erin provides an account that is structured to convince you that they have choice in their transport options, but only in Manchester. For Erin Manchester is more diverse and accepting of different transport choices making it a more enjoyable experience compared with the more conservative hometown where alternative transport choices are met with open hostility as she gets “weird looks”. This detailed narrative is a feature of building factual accounts, with the more vivid the detail providing more credence to the account (Potter, 1996).

Similarly, in the lengthy justification Daniel gives for car use they draw a direct comparison with London (Extract 11). Daniel begins with an assertion that in London people “generally” do not have a car, so driving is not an option. That statement would suffice in drawing a comparison with Manchester in line with the exploration of categorical norms, but Daniel elaborates on this comparison, stating that this normalisation is due to the greater level of service availability, the cost, and frequency of services particularly in comparison with the public transport options in Manchester meaning it is not possible to leave the car at home and use public transport in Manchester.

> And buses are incredibly regular, and you've got the tube system and so on. It's very easy to pay, you zap your oyster card or, or your, you use the debit card now can't you? And it's great! But, er, if you own a car there are certain costs that can't be avoided. It's, you have to insure it if it's on your driveway, or is, or if you're using it you have to pay tax. If it's in the garage or if you're using it you have to pay for all these things, servicing, MOT, so the only additional cost really is is your petrol or diesel, and then your consumables from using it. Erm (the problem is) once you've factored all that in, to then say oh actually no, just leave it there and I'll pay five pounds eighty whatever it might be now to get into Manchester every day, and add an additional hour to my commute, you think, oh hang on a minute that doesn't make any sense. If I didn't have a car and wasn't paying X thousand pounds a year to run it then … I'd probably more, er, more willing to, to use public transport. Well I would, you wouldn't have a choice would you, you'd use public transport.
>
> (Extract 11: Daniel)

This lengthy description in Daniel's account reinforces the forced choice narrative while drawing on geographical comparisons. Daniel provides detail for both public transport in London and car use in Manchester, thus establishing both as forced choices in their respective locations. Resources such as category entitlement and narrative are all resources on which speakers draw on and where more of these are used they build the account up so it can be accepted as factual (Potter, 1996).

We also see examples of transport users minimizing how much they use non-preferred transport modes. In extract 12 Rose minimizes her car use in temporal terms, clarifying the point that this is the first time they have commuted by car, but then counting the months to demonstrate the anomalous nature of that journey.

> Erm last commute OK my very last commute, I drove into Manchester for the very first time erm since I've been working in my faculty … [so] that was the er September to Sept. September October November December January February March eighteen months after taking up my job in Manchester I drove for the very first time, because I needed to empty my locker and clear my desk in order to start lockdown. (Extract 12: Rose)

There is a necessity to Rose's use of the car, allied to the nature of the imminent pandemic that reduces her car use to exceptional circumstances. Other speakers apply a similar linguistic style when using the car, reducing how often they use it to necessary trips such as the supermarket or longer distance trips. *"Yeah, erm, I'm probably, er, pre lock down, I would have tried to use the bike where it's convenient. Like obviously not to do a supermarket shop"* (Extract 13: Graham). Not only is Graham implying that we all drive to the supermarket, but in fact that as this is 'obvious' that it is not possible to use another mode, again a forced choice. Obvious is a surely adverbial that is used in discourse to by speakers to encourage the listener to accept their statement without question, as it is built on an assumption of shared knowledge (Biber & Finegan, 1988). Obvious and obviously are commonly used throughout the accounts as another discursive resource that strengthens the facticity of the speaker's account.

These highly detailed justifications behind individuals transport choices are often further embellished through the use of anecdotes, another discursive strategy that speakers deploy to establish the facticity of their accounts through experiencing something first hand (Potter, 1996). In extract 14 Elsie uses an anecdote of a specific journey to illustrate the cost of public transport, in support of their justification for using the car as their primary form of transport.

> And quite a lot of meetings at the university were in central Manchester, so you'd, you'd go through Rusholme, and up Oxford Road … Erm, it was probably about a twenty minute walk if it's not raining, and it's not too busy, so if the weather was nice we'd walk up there, but then sometimes catch a bus back down if you were rushing back for something or other. And first time I caught a bus on that stretch, cos it's only a fifteen-minute walk I was shocked at how much it cost. I think it was three pound fifty or something just for that one bus ride … And I had genuinely got about 50p in my hand thinking it's only gonna be like pence because it's not very far. (Extract 14: Elsie)

Anecdotes are another identifying feature of interpretive repertoires (Goodman, 2017). They are often short stories about a true event, often amusing (Asgher & Ghani, 2016). Elsie conveys this short story conveying her amusement at how out of touch she was about the price of bus fares to further reinforce their position that they have no choice but to use the car. Elsie's anecdote is seven years old, and the cost of public transport has grown exponentially in comparison to the cost of car ownership. Yet Elsie persists with the out-of-date comparison as the anecdote is useful in convincing the listener she has no choice but to drive.

One further discursive resource commonly used is the hierarchy of modalization (Latour, 1987), a continuum of terms from a statement as fact such as 'I know this', to statements which could be understood to be misunderstandings or speculative on the part of the speaker such as 'I think that', 'I guess that', or 'the subject is possible'. Stating that the Preston North End were the first football team to win the league and cup double is a fact known to everyone, an issue separate from the speaker and any potential bias or interpretation. In contrast, if the speaker states that they 'think' Blackpool are the worst team to ever play football then they are

introducing doubt and uncertainty into their claim, and their claim may be interpreted as a product of bias.

Earlier in extract 10 where Erin discussed scooting in Manchester and her hometown, we can clearly see the link between the more factual end of the hierarchy and direct experience. In contrast to Daniel in extract 15 below, there is little hesitation in describing their transport mode, Erin is unhesitant, prefacing sentences with “love” and “it’s not unusual”. Their ability to choose their mode of transport here evidenced as fact. In contrast when Daniel discusses the tram schedule in extract 15 there is a hesitation followed by “I assume”. This is then followed by a disclaimer “but” and a statement that they do not know the details of the tram schedule.

> Er I, I assume the, they run later now, but I don't know. But equally we've not got any childcare so we don't, er there's no way to go to the last year so we, we don't actually know what it's like anymore is part of the problem. (Extract 15: Daniel)

Daniel is attempting to undermine other modes of transport, and reinforce their preferred mode, but the use of “we don’t actually know” only serves to demonstrate that they have limited knowledge of other modes.

Similarly, Erin combines scooting with the train from North of Manchester into the city centre, and while they have cycled in the past they currently do not cycle but she speculates on other people’s motivation for cycling; *“Erm I also tend to assume that they are doing it for financial reasons as well because you save money, and if you can't afford a car then your bikes your next, next [best]” (Extract 16: Erin).* Their assumptions around motivations are speculative rather than rooted in direct experience using the word ‘assume’ as they discuss cycling in Manchester. Erin also adds the importance of cost to people on bicycles, along with the use of “they” to convey their group membership in relation to another group of transport users. There is also the intimation that bikes are below cars through the use of “next best”.

Similarly, Graham who is predominantly a bicycle rider, begins their description of a circular bus route in extract 17 that they know to exist but has limited knowledge

of. Graham cycles and uses the tram and the car for occasional use so their knowledge of the bus routes would be expected to be limited, hence the range of terms from the hierarchy of modalization from I know through to I assume; *"I mean I know there is a bus running sort of in a circular way, … [but] it's very much a minor service, and then certainly doesn't loop you around Manchester or anything as far as I know [so]." (Extract 17: Graham)*. The hierarchy of modalization therefore provides a discursive resource on which the participants can establish the facticity of their own knowledge, while providing speculation on other modes. These contrasting facts and speculations provide counter points to establishing a repertoire of choice or forced choice.

Using vivid description, anecdote, and the hierarchy of modalization, the transport users seek to establish the facticity of their account. These resources build up the account by providing an increasing body of evidence to convince the listener that they have no choice, or choice in their mode of transport.

4.4.1.3 Justification of choice through Extreme Case Formulations

The lengthy detailed accounts littered with anecdotes that attempt to reify choice or forced choice also contain another feature of discursive practice in extreme case formulations. Extreme case formulations are a discursive practice that legitimize claims by presenting examples that are, as the name suggests, extreme versions of a concept and are used to "defend against or to counter challenges to the legitimacy of complaints, accusations, justifications, and defences" (Pomerantz, 1986). For example, a dress is not just new, but may be presented as brand new. In the data presented here there are numerous examples of extreme case formulations that seek to further legitimise the claims of the speaker as a valid transport choice if their justification for their transport choice is challenged. In extract 18 below Elsie has been asked whether they are predominantly car users as a family.

> With, with family, it's being able to get everything in because … you don't travel light when you've got little kids. Wherever you're going, day out, you've got … coats, picnics, you know all the stuff that you need. Changes of clothes, wellies, all that. The boot's always full of stuff… And there's like the emergency, you

> know, towels, and blankets, and beaches, in case you went, tut, beaches, buckets and spades in case you end up at the beach … So yeah, the cars full of all the useful stuff that I wouldn't want to have to lug around with me just on the off chance. (Extract 18: Elsie)

This is essentially a closed question that is initially answered with a yes, but then I followed this up by suggesting that their car use is primarily out of a sense of convenience, and their response contained a series of extreme case formulations to repudiate my claim. These included "get *everything* in", "*all* the stuff" and "The boot's *always full* of stuff." amongst others. The final statement around taking buckets, spades, and towels on the off chance that they might visit a beach compound this series. The use of the series of extreme case formulations demonstrates the speaker's desire to refute the proposition of car use as simply an act of convenience but instead of necessity, of having no choice but to use the car.

4.4.1.4 An example of the rhetorical repertoire

Taken together the discursive resources outlined above are used as a repertoire to illustrate that they have a choice in their mode of transport, or no choice but to use the mode of transport they commonly use. The speakers use the various strategies to reify their account as real, solid, and factual and should be accepted.

Below I draw on a lengthy section of Daniel's interview to illustrate how various strategies are brought together to convince the listener that they have no choice, that choice in transport is for other people.

> Erm, it's [driving around Manchester] fine really. The only, the only pain was when they did the, er, traffic calming measures to increase cycling which was a, in my opinion, a catastrophic failure and, erm, yeah, Manchester council's love of making driving in the city centre very difficult, er, which is, which is fine for me but for people like my dad who's disabled it makes things a lot trickier. He can't use public transport, erm, and they just make it difficult for people to access the city centre. I feel. I understand why they try and do it but, it's, to me it's a bit of a fundamental misunderstanding of the difference in Manchester than say London, where people don't own cars because of the quality of the transport, or because of the prohibitive nature of actually driving in in the city, so yeah I've, if, if where, where we are probably I, I'd walk, walk into town if we were going shopping or into the next village, or whatever, as opposed to driving. But, er,

> yeah in terms of getting into the city centre despite, despite how difficult they make it we still drive. Er because three people getting on the met is, I don't know, last time I got a met at peak time it was something like five pounds eighty for a return to so it might be more than that now. So you're looking at, even if it's off peak, ten pounds for me and my wife and then I don't know if you have to pay for kids or not, but say it's two pounds, er twelve pounds to get in, be a twenty-minute walk to the met stop with a little one. Twelve pounds to get in, er, and then walk back at the other end, and to be honest when you've got a car and you're paying for the tax and insurance you're almost better off paying eight pounds to park in the city centre, and driving in and out, and being comfortable and dry and listening to Peppa pig. [laughs] (Extract 19: Daniel)

Daniel is asked about travelling around Manchester and the response illustrates how justifications for their transport choice using extreme case formulations, detailed descriptions, and the more uncertain degrees of the hierarchy of modalization are used to construct an account that suggests others have choice.

Daniel begins hedging their statement with “it’s fine really”, and then sets out their account that they caveat with “in my opinion”. These disarming opening clauses accentuate the extreme case formulations of the “catastrophic failure” of pop-up cycle lanes, and the councils “love” of making driving “very difficult” which positions themself as a motorist. The initial statements are then followed by a claim that these catastrophic failures are “fine for me” followed by a disclaimer and a short passage offering greater detail around why for others this is not the case, specifically that the category of disabled drivers do not have the option to use public transport. We then move into a section that begins with “I understand why they do it” which again is followed by a disclaimer and then a judgement of the comparative norms of London and Manchester. As the disclaimer negates the preceding clause it appears that they do not necessarily understand, or at least that they do not agree with the decision of the council.

There is hesitation and a less certain degree of the hierarchy of modalization “*if, if where, where we are ( ) probably I, I'd walk”* which as discussed is indicative that the next statement may not be entirely accurate, so in fact they may not walk at all but drive as they have indicated is their preference. This preference is then

emphasised in the next statement around driving into the city centre, and the justification follows the earlier discussion of values as part of a family, that the cost of public transport is prohibitive through detailed description. Note that the section around the tram costs is prefaced with "*I don't know",* again the less certain end of the hierarchy of modalization scale. The further detail here serving to establish this analysis of cost as fact. Daniel's account attempts to build narratives that demonstrate there is choice for others while dismissing choice in their own mode of transport, a forced choice narrative.

4.4.1.5 Summary

To conclude this section, this repertoire has explored the fact making of speaker's accounts in addition to how they position themselves relative to other transport users. This repertoire builds accounts as solid and factual that seeks to convince the listener that there is choice for others but that the speaker has no choice in their transport mode, in effect there is a forced choice. This is achieved through detailed, vivid descriptions, categorical norms, extreme case formulations, and varying degrees of the hierarchy of modalization. The speakers normalise and confirm their own existing mode of transport, while undermining other modes and suggesting other transport users have more choice. The use of category norms, of the norms of different social groups all suggest that the social identity framework is a useful lens through which to view transport discourses. Furthermore, the way the motorists defend the forced choice is indicative of a desire for positive in-group distinctiveness.

4.4.2 Empowerment and disempowerment in transport

The repertoires that follow differ in that they elucidate different themes within the data in relation to how transport users view the power within the transport system. In contrast to the more rhetorical presentation in the first repertoire, built on the apparent choice or forced choice in transport, instead here the speakers use a style of language we might be more likely to see in fictional texts where the author is attempting to create a vivid image in the mind of the reader. This second repertoire that our participants build to talk about their transport choices is built around metaphors. The speakers draw on the conceptually similar extended

metaphors for war, animals, and water to explore power in transport. By power I mean that transport has both an inherent capacity, and that some modes are seen to hold more power than others. The power may be in terms of their relative financial investment for infrastructure, the physical space that they inhabit, or the physical power of the vehicle.

Here I explore the use of figurative language, metaphors and extended metaphors before showing how the particular extended metaphors used when talking about transport are used to convey ideological views and influence social action (Mujagić & Berberović, 2019). There is also the use of laughter that serves to both assuage discomfort, and to emphasise the mutually understood nature of the power imbalances within the transport system.

4.4.2.1 Figurative language

Figurative language is often used to convey complex or abstract concepts (Deignan, 2012), particularly concepts with nuance such as sociopolitical ideas (Flusberg et al., 2018). Creative language also builds commonality between speakers in everyday language as it stimulates enjoyment compared with more formal language (Gee & Handford, 2012). Furthermore, the different forms of figurative language perform differing functions, with specific action orientations attached to each type (Roberts & Kreuz, 1994). Similes clarify while metaphors add clarity and interest to the discourse. Idioms clarify and add humour while personification adds a humanity to the descriptions. Despite being distinct forms of figurative language, metaphors, similes, analogies and personification operate in a similar way to each other in making comparisons between concepts and are therefore often included together in studies of metaphor (Dillard & Pfau, 2002).

In this repertoire, the participants draw on figurative language to convey that the transport system is a system imbued with power, and that there is a power imbalance between modes. As an example, in extract 20 below Richard describes a recent driving experience: *"yeah I mean again that's another I think I do feel a little bit about the stress of driving you know and especially if it's wall to wall traffic"* (Extract 20: Richard). Wall to wall in its literal sense means that a carpet fills the space between two walls, or more informally that something is numerous or

extensive and through using this idiom Richard is demonstrating that transport has a fixed capacity, and that it is currently at its limit.

We also see the personification of various elements of transport to add a humanity to the description of transport making it more relatable, while adding verbs that convey which aspect of the transport is important to its users. Dorst (2011) claims that it is not just the use of personification of the car instead of the motorist that is important, but the choice of verb that accompanies the personification.

In the following examples we see how the personification of various aspects of transport are conceptualised as elements engaged in a struggle. Here Erin uses the personification of the train to draw them into the struggle for power: *"sometimes if the trains are on strike that happened a lot a couple of years ago."* (Extract 21: Erin). Erin's description of the trains taking industrial action suggests they are willing to act against an oppressor by refusing to perform their roles.

Graham also describes transport in mental health terms; *"Yeah it's [transport in Manchester] a bit schizophrenic I think. Erm, because, er, if you're going into or out of the centre then you're very well served"* (Extract 22: Graham). Using mental health terminology suggests that the use of transport is something that people struggle with, and that treatment might be required. Graham uses schizophrenia in its commonly misunderstood form, that someone has multiple personalities, or dissociative identity disorder. However, both are conveying transport as a concept that requires remedial action.

More commonly this personification is seen in relation to cars, where cars are seen to be performing an action rather than as an attribution to the human driving the vehicle. Here in Monkeycycle's quote the car is attributed with such humanity that it has become self-aware, able to think for itself.

> I remember being at a red light once where traffic stopped, it's a red light, bike stop, there's a bike in front me, erm, there's a car, there's obviously, there's a car there as well, the bikes, and then the bike saw it's clear and ran the red light. The car thinking that the traffic light changed just saw the bike go so they, the bike, the car also went and therefore ran a red light. (Extract 23: Monkeycycle)

While the car in Monkeycycle's quote has become self-aware, Elsie imbues them with morals: *"You know the cars have got as much responsibility"* (Extract 24: Elsie). In attributing such deeply human attributes to the motor vehicle, Monkeycycle and Elsie are drawing them into the discussion around transport, seeing them as actors in the transport system while at the same time depersonalising the people in the cars, thus removing them from the transport system.

However, the application of this type of personification varies across and within accounts. Some speakers use personification of the car consistently and in some accounts, we see very little, while some change depending on the context of their speech such as below. In Elsie's account there is only one instance where we see the personification of the car. "*You know the cars have got as much responsibility, but I think it's, you do kind of have to take your own safety. The cars … need to leave a lot of space for the bikes while they're sharing the road, absolutely"* (Extract 25: Elsie). Whereas in most other instances the car remains an object driven by people: *"so if the cars are lit up and big metal things that people are driving in"* (Extract 26: Elsie).

Similarly, Monkeycycle switches between personification of the car, and attributing behaviours to the motorist.

> I have a bit of a bugbear when, when cars park massively on the pavement and just block the pavement, that, you know, that's, there's various reasons why people do that, so I don't want to criticise, but it's, you know, it's just erm, yeah traffic is bad. (Extract 27: Monkeycycle)

The car is personified and is seen to be performing an act that inconveniences people (parking on the pavement), and yet when there may be a justifiable reason for this Monkeycycle refers to the person. In qualifying this distinction Monkeycycle tells us that "traffic is bad", a villain to be challenged and therefore not only are cars an actor in this system, but they are on the wrong side.

In suggesting that transport has a capacity, that it can take industrial action, or that it has struggles with mental health, figurative language is commonly used to depict a system that is power laden, that there is something within transport that needs to

be fought over. This is emphasised through the personification of the car, that this is another actor in this struggle, although the side that the car takes varies depending on the position of the speaker. In the exploration of the metaphors for war, animals, and water to follow, there will be further examples of how transport is seen in this way, as a struggle.

4.4.2.2 Extended metaphors

In considering the use of figurative language it was evident that there was a pattern of commonly used metaphors to portray a struggle for power as I have shown. I have therefore considered this collection of figurative language as an extended metaphor, or more specifically three extended metaphors that can be seen to be conceptually similar.

Extended metaphors are a common literary technique that take a comparison between domains such as water and immigration and extend the initial comparison across a piece of text, speech, or conversation through the persistent use of the central metaphor, although as discussed, they can draw on different forms of figurative language.

In doing so they make complex issues easier to understand, in a similar way to figurative language more generally makes abstract concepts concrete (Flusberg et al., 2018). The use of metaphor can help in discussions of complex issues where there is nuance, as using a metaphor that is commonly understood can help to build a common understanding between participants.

In contrast with extended metaphors created in literary text, extended metaphors in everyday talk are less systematic and consistent, resulting in both regularity and variation (Gee & Handford, 2012). As language is learnt in social groups the conventional metaphors that are used are learnt through membership of such groups (Cameron, 2012). Additionally, the use of particular forms of metaphor are products of the "beliefs, attitudes, values, and emotions of participants" (Deignan, 2012, pp. 674), and in this study can be seen to be reflective of participants attitudes towards transport.

Below I explore each metaphor and what the speaker may be trying to achieve in using them before exploring how the conceptual similarities may explain why they are being used together to explain the issue of power.

4.4.2.3 War metaphor

In its most extreme form, we see an extended metaphor using different types of figurative language to make the struggle for power in using transport analogous to war. As war is a struggle between oppositional forces, in conveying transport as war the speaker's intention in using this repertoire is to encourage the listener to choose a side (Flusberg et al., 2018). War also involves making strategic decisions about how to allocate resources, in a similar manner to how budgets and physical space are allocated to different modes of transport. As a result of these competing resources there are demonstrable winners and losers in both domains. Below Jack uses hyperbole to illustrate how using the transport system is a struggle.

> You know, you would come, you would arrive at the station and find it three deep with people, er, you would you know be elbowing people out the way to get on a train. When you get on the train you would be nose to nose with other members of the public. (Extract 28: Jack)

It is unlikely Jack is literally elbowing people out of the way although may well be nose to nose, and therefore the hyperbolic statement emphasizes and clarifies how difficult it can be to use various forms of transport. The use of hyperbole in the context of transport denotes that the speaker has a strong emotional reaction that they are trying to emphasize or clarify (Roberts & Kreuz, 1994), in this case that it almost a fight to use the train. War metaphors are often hyperbolic to get people's attention, focussing them on the issue at hand, and using the fear that the war metaphor creates to make descriptions memorable and enduring. Drawing on metaphor motivates people to take action, affects their beliefs, and makes them pay attention to "important social issues" (Mujagić & Berberović, 2019). Power within transport can therefore be seen as an important social issue to the speakers as they continuously draw on the war metaphor throughout this repertoire.

Similarly, Graham's personification of roads and traffic uses a similar metaphor for fighting but in relation to cars and their role in the transport system: *"I guess, er, also because the roads are pretty quiet at the moment. Erm… So for the section when I was on the roads there wasn't much traffic to contend with"* (Extract 29: Graham). In extract 29 Graham describes how he has to contend with traffic, demonstrating the personification which is pervasive in this repertoire. The struggle in transport that Jack articulated has now become a fight, and by using the collective 'traffic' Graham implies it is a group he is fighting, or an army. The personification of motor vehicles is therefore extended from one single vehicle to a collective. In Monkeycycle's quote below we see this again as they describe a collection of motorists driving cars as 'traffic': *"I'm wearing it because of the possibility that because of interaction with other traffic, I might fall off the bike [erm]."* (Extract 30: Monkeycycle). However, it is not just a collective term for motor vehicles that is notable, but the fact that they interact with this collective, with the traffic not taking care around the more vulnerable user. This is now a war, with an opposing force, and when the war metaphor is used in discourse it requires people to take action (Flusberg et al., 2018).

As the cars are now actors in this metaphorical war, they move from something opposing the transport user to posing a threat: *"No what I'm saying, other cars driving too close to cyclists."* (Extract 31: Summer). Personification is used to make the narrative of power a human story, and as the cars are perceived as human, the feelings and thoughts we attribute to humans also apply to the motor vehicle (Piller, 1999). Summers personification of the car attributes blame attached to collisions to the car instead of the motorist, absolving the motorist of responsibility. By retaining the person cycling rather than referring to the object in this struggle, Summer also attempts to elicit compassion for the less powerful.

Rose's description of the threat in this war also draws pedestrians into combat: *"Mm hmm yes only coz they're going to launch themselves in front of me and try to kill me"* (Extract 32: Rose). Despite pedestrians being at the top of the hierarchy of road users as the most vulnerable, Rose transforms them figuratively into a weapon attacking her. Figurative language also has an emotional valence, and by drawing on

the metaphor for war the speaker instils “a sense of threat, fear, and panic” (Flusberg et al., 2018, pp. 3) which Rose draws on to illustrate her vulnerability and in doing so attempts to draw you to her side of the issue.

As the transport users are fearful of the threat of cars, their descriptions of transport begin to draw on other elements of the war metaphor. Here Rose uses more defensive terminology*: “I'd like to be able to get off the train put my inline skates on and shoot through Manchester in the way you see er individuals in Paris and Barcelona”* (Extract 33: Rose). Rose is not using the word ‘shoot’ metaphorically to refer to a weapon, but as a metaphor for escaping quickly from a threat while still using the war frame. Similarly, Monkeycycle below uses a war framing in a defensive sense: *“And that was really helpful. Erm, I mean I’m not, I am quite a defensive cyclist, will you know, I won’t just charge gung ho down the street”* (Extract 34: Monkeycycle). While still drawing on the war metaphor through “shoot” and “charge gung ho” there is a sense that both Rose and Monkeycycle are trying to avoid confrontation here, portraying themselves as innocent, and therefore on the ‘good’ side of the war. There are various examples of framing this issue as war throughout the data, and the use of this form of language when discussing transport use is indicative of a desire to “express emotions and to reach a desired self-presentation.” (Nemesi, 2004, pp. 351), that the speakers are on the right side of the war. In doing so they are asking you to take their side in any action to resolve this war.

We also see underhand attacks by various parties. Jack describes how people on bicycles become missiles if you do not pay attention*: “Although that can be a bit tricky if you're walking sometimes. You look the wrong direction you get taken out.”* (Extract 35: Jack). The cyclist is not only a missile, but a sneaky one that waits until you are looking away from them before attacking. In extract 36 below the lorry attacks a cyclist using a verb that denotes an attack from an unexpected angle. As discussed, it is not just the personification that is important, but the verb attached: “*But then he was he was er he was one of these cases where er he was coming through a a junction and I think it was one of these cases where he was blindsided by a lorry”* (Extract 36: Richard). The personified lorry “blindsides”, it waits until you

are not looking in a similar manner to Jacks description of pedestrians as missiles. In describing these underhand tactics, the speaker is demonstrating their villainy, that the cars and people on bicycles are on the 'wrong side'.

The final quote below in extract 37 from Rose neatly encapsulates the degree of power that motorists hold. Not only are they an autonomous agent capable of harm but have ensnared the occupant.

> Erm being in a car is dead time I can't do anything I can't read I can't mark I can't gaze out of the window, I can't reflect on my day erm I just have to focus on driving I am I'm captive and I am at the whim of the traffic on the roads (Extract 37: Rose)

Rose is a "captive", at its "whim". Both use the personification of a collective version of the car through the war metaphor to portray it as an army taking prisoners of war. As a result, we are drawn to sympathise with the prisoner and fight for their release from the oppressive army of motor vehicles.

The war metaphor draws on a range of figurative language to convey that the use of transport is a struggle, that there are opposing sides, and that one must win the battle over resources. In this sense the reason for drawing on this metaphor is for the speakers to attempt to convince you that you should join their side in this struggle. Additionally, the use of the war metaphor is a common way to gain consensus and agreement, as the war frame is commonly understood among the general public (Flusberg et al., 2018).

4.4.2.4 Water metaphor

While the war metaphor dominates this repertoire, there are two conceptually similar repertoires. Metaphors for water are often used to convey a lack of control over social change such as seen when metaphors for 'floods' of immigrants are portrayed in the press (Khosravinik, 2009; Porto, 2022). More specifically liquid metaphors are used to convey a loss of control over historical change. Water can also be used to represent another domain when the essential features are seen to map across domains. Water can be seen as essential to life, without fixed form, naturally occurring and as something that ebbs and flows (Fox, 2015). Drawing on

those qualities we can see similarities with the transport system, and why the participants draw on this metaphor to explain power within the transport system.

Summer draws a metaphor with a container of liquid to draw attention to capacity of her train carriage as an issue: *"Yeah whoever is inside my vessel I would say." (Extract 38:* Summer). As with water, the capacity of the transport system ebbs and flows. In using water Summer is telling the listener that the capacity of the transport system is a scarce resource and should be fought over (Fox, 2015).

In extract 39 below Richard also describes the transport system as something that has a capacity by using the metaphoric 'bunged', which while not a clear metaphor for water, can be related to water in that a bung stops water escaping from its container.

> What does surprise me a little bit coming in in the morning is that the train that I get it's never packed. I was kind of worried when I first did it I thought oh it was going to be really … (absolutely) bunged you know erm and and hard to get a seat and actually that hasn't been the case at all. (Extract 39: Richard)

The hyperbolic "absolutely bunged" emphasizes that the trains are commonly overcrowded. Richard wants us to understand that this is a challenge, that there is a struggle to use this mode of transport and as with other uses of the metaphor for water, that this should be fought over.

While Summer and Richard use the water metaphor to describe transport in terms of objects that carry liquid, Jack here uses water to describe changes to the built environment: *"So it's hard to know whether those have made the improvements that were promised to, you know, widen the motorway, make it a kind of more free flowing."* (Extract 40: Jack). As the use of water can be used to signal a lack of control over historical change, we can see Jack using the metaphor to tell the listener that he is uncomfortable with the changes to the motorways designed to facilitate greater traffic movement.

Similarly, Elsie uses the movement of water to describe how being part of a large crowd of people on bicycles can be fear inducing: *"It's, erm, yeah a lot of people going very fast and quite hard to get out of the crowd, it you kind of just got pushed*

along." (Extract 41: Elsie). Elsie is describing her experience of a cycling event, metaphorically transforming multiple people on bicycles into a wave. This implies that Elsie has a lack of control, that other actors withing the system hold the power and emphasises the fear she feels in using this form of transport. Within this repertoire and its relationship with power in the transport system, we can see water as useful metaphor for the lack of control, and how the power in transport is essential to use the system to access other aspects of life such as jobs.

4.4.2.5 Animal metaphor

The third metaphor drawn on in this repertoire is one that uses a metaphor for animals, drawing on their power and distinctiveness from humans to distinguish different modes from each other. Animal metaphors are often dehumanizing or uncomplimentary, reflecting the differences between humans and non-human animals (Sommer & Sommer, 2011).

Simile's are linked to a similar action orientation as idioms that is they are used to clarify (Roberts & Kreuz, 1994). Here Elsie uses a simile to clarify how they view different transport modes as a struggle between the modes, despite the event she describes being a fun event and not an everyday commute. In this quote she is referring to a cycling event in Blackpool where roads are closed for the event, attracting increasing numbers of people on bicycles as the popularity of the event has increased: *"The last time we went it was like, it was like herds of like stampeding wildebeest."* (Extract 42: Elsie). While the context is not about commuting it does emphasise how this repertoire is used to emphasis the differences between different modes of transport. By using the simile to compare people on bicycles with a herd of stampeding wildebeest, Elsie invokes the threat of a particularly powerful and potentially dangerous animal. Animalistic metaphors are found to be more offensive when they inflame intergroup tensions (Haslam et al., 2011) and despite the fact that Elsie is herself cycling at the event, she constructs the cyclist as something different from herself. Literature on the use of animal metaphors emphasises how the use of such metaphors can be used to emphasise differences between groups (Brandes, 1984), and maintain "social and

moral order" (Brandes, 1984) and Elsie uses the wildebeest metaphor to assert that people on bicycles are aggressive.

In contrast Monkeycycle transforms herself into a bull, something to be feared: *"I'm a little bit bullish about that, because, you know, these things do happen but they're really rare."* (Extract 43: Monkeycycle). Monkeycycle's use of the term 'bullish' in a more positive light contrasts with the negative framing used by Elsie. While animal metaphors are commonly negative this does depend on how the tone of speech, and the gender of the target in addition to their in or out-group status (Haslam et al., 2011) and in this case Monkeycycle's portrayal is positive in line with her in-group identification. However, the metaphor still conveys a sense of aggression, of having to battle with others to protect the speaker when travelling and that they are in a struggle with oppositional forces.

The personification of cars continues this animalistic metaphor as Graham uses images of horse racing. In a similar manner to the 'wall to wall' comment in extract 20, the cars are depicted as fighting for space: *"because the cars are jockeying with each other in the two lanes."* (Extract 44: Graham).

Not only does the metaphor portray horses, but a horse race, where the intention is to win. The word jockey has come to stand for a fight for power. It is notable that the actions attached to the personification of the car, of hitting a cyclist, jockeying with each other, blindsiding people on bicycles, and driving too close to people on bicycles denotes the violence and power of the vehicle. Therefore, the pervasive personification of the car in this repertoire can be seen to be indicative of the power that the motorist holds over other transport users.

In contrast to the figurative language denoting a fight or struggle to use the transport system, there are also metaphors used to denote a calm isolation from the struggle. Jack compares using public transport with the relative calm of driving: *"[so] you become very conscious of who's around you I think on those kind of journeys, er, driving I think is much different. I think you're very cocooned when driving"* (Extract 45: Jack). Jacks use of 'cocoon' portrays driving as something protected from the outer environment. While cocoons are often associated with

change, cocoons also protect vulnerable organisms and here Jack suggest the cocoon of the car protects the motorist from the struggle occurring outside. As someone existing within the cocoon Daniel acknowledges that experiencing transport in this way is preferable: *"I know some people get very angry [about commuting], or feel it's a complete waste of time but, er, yeah if you're just in that little cocoon it's, it's not so bad."* (Extract 46: Daniel). While Daniel hedges with 'not so bad', the fact that other commuters are angry about his choice of transport while they are cossetted within their vehicle suggests the difference between the two groups is more pronounced than he implies. As with the wildebeest and bullish metaphors used earlier, Daniel reverses the comparison between themselves as the non-human animal, and the humans outside his cocoon, indicative that using animal metaphors are not necessarily always negative (Haslam et al., 2011). Yet the use of the metaphor appears to be used deliberately to suggest that their calm and protected experience is preferable to the struggle elsewhere.

4.4.2.6 Mixed metaphors

While the three metaphors above may appear distinct in their frames of reference, they can be seen to be compatible. Gibbs suggests that we only encounter problems in conceptually integrating metaphors from different domains when they are included within a single clause and therefore drawing on metaphors from different domains is unproblematic (Gibbs, 2016). For example in discussions of immigration, metaphors for "floods, plagues, or invading hordes" are commonly used to describe immigration in undesirable terms (Porto, 2022, pp.252).

In fact, the three metaphors can be seen to present quite similar concepts. While war explores ideas around a struggle for resources more explicitly, water is critical for survival and is therefore a valuable resource to be fought over (Fox, 2015). In the quote from Daniel in extract 47 we see how different metaphors may be combined.

> After twenty odd years of driving it's just autopilot when you're in, in certain things, I mean if you're, when you, when you're getting into town it's a different, you gotta' be concentrating. But you can have twenty minutes of free flowing, and it's, er, it can be quite nice really. (Extract 47: Daniel)

Autopilot is specific to flying, the word being a contraction of automatic pilot system designed for aeroplanes, and therefore fits within the war metaphor. However, we also see free flowing being used in the same description of driving and therefore Daniel is also drawing on the water metaphor.

We can see how these different metaphors act in a similar way to diminishing hyperbole, providing metaphors for the calmer experience of the transport system, contrasting with being pushed along or overrun by "stampeding wildebeest". The use of different metaphors to convey this struggle for power within the transport system demonstrates its importance to the speakers, as they draw on different frames to convey the issue.

In other instances, we see how single metaphors can be interpreted as occurring within different domains.

> [Erm] but I would be conscious of sometimes occasionally I'd have been walking down and might have had my headphones and this (cycle) this bike comes flying past me and I go woah that was quite close you know [laugh*]* … [If the] train hasn't opened yet you know when people are sort of hovering around the door. (Extract 48: Richard)

Flying and hovering could equally be attributed to the animal metaphor, drawing on imagery of birds, although equally conjure images of helicopters or aeroplanes from the war metaphor. Both instances offer a feeling of threat, that something is either attacking or waiting to attack. While mixing metaphors is not a conscious act of reproducing ideas in different domains, metaphors are often mixed in order to illustrate different aspects of the source domain (Gibbs, 2016) whether that be fear, struggle, the protected nature of cars or volumes of people. However, all relate to the overall concept of power within transport and that for the marginalised within transport social action is required to redress the imbalances of power.

4.4.2.7 Using laughter to show agreement

As the transport users struggle with the balance of power in the transport system, there is a consistent pattern of laughter at the constant threat to the lives of vulnerable road users, not just against people on bicycles from motorists but by all

transport users. Laughter in discourse can be understood to represent several functions besides humour. As the laughter invariably follows a description of injury or death on the roads, the inherent imbalance of power within the transport system becomes evident. This is consistent across all the speaker's accounts, irrespective of their mode of transport.

The laughter within this repertoire reinforces the use of the war metaphor in particular which also seeks to gain consensus and agreement between parties, a common aim of discourse (Potter, 1996). In the exchange below I respond with laughter when Summer laughs around potential collisions between people on bicycles and motorists.

> Um yeah I'm tryna' think, I think definitely people walking, cycling maybe not so much other than being relatively concerned for cyclists around city centre because they always look like they're going to get hit [laughs]. (Extract 49: Summer)
>
> [laughs] yeah (Ian)

Summer is displaying a concern for the more vulnerable, and the laughter can be seen to indicate concern for their vulnerability. My laughter in return indicates a consensus that I also recognise this imbalance in power. In other instances, we see blaming of the more vulnerable for potential collisions.

> [and] they blame you for turning left with your indicator on … [( )] traffic (and you think) again, it's a tonne of metal and you're in spandex, so [laughs] (Extract 50: Daniel)
>
> [laughs] (Ian)

Daniel blames the cyclist for filtering past motorists who are indicating to turn left, and while he does not explicitly describe a collision, he uses the unequal 'tonne of metal' and 'spandex' to indicate that the cyclist is more likely to be seriously injured due to their lack of protection. Again, my laughter offers consensus that filtering is not a safe strategy if a motorist is indicating left. Elsie similarly criticises people on bicycles who do not have functioning lights, which will result in their death if they attempt to cycle longer distances without lights.

> [if] you haven't got lights on your bike you're not going to be doing really really long journeys because you'll die [laughs] (Extract 51: Elsie)

> [Laughs] (Ian)

Again, I concur that this is not a sensible strategy. As occurrences of laughter here are echoed by myself on each occasion, it suggests that myself and the speaker are engaging in "the collective acknowledgment of common perspectives, as a method of marking or discounting controversy" (Lowe et al., 2012, pp.1807), specifically that we recognise the imbalances of power between different transport users. Rather than disregarding, challenging or remaining silent I laugh along to indicate "mutual understanding and acceptance" (Grønnerød, 2004, pp.37). I confirm to the speaker that the threat is one I recognise, but our laughter dismisses it as an unnecessary distraction. The fact that the laughter centres on death, injury or threat in the transport system conveys a sense that not only is there power in the system, but that speakers recognise this and are accepting of it. The laughter as a mechanism to discount this issue reflects a desire to acknowledge but avoid a difficult conversation about the dangers to all users of the transport system.

However, in the use of laughter in describing road violence, there are occasions where I do not reciprocate with laughter.

> OK, but I think, I guess, yes because when I, erm, it depends on what mode I guess. So when I'm driving, erm, I will, I will keep an eye out for cyclists [laughs] because it will be ironic if I hit a cyclist being a cyclist, (Extract 52: Monkeycycle)

While the laughter here could in fact denote the irony Monkeycycle is describing, the laughter is still centred around road violence. As I do not reciprocate, the one sided laughter can be seen to mitigate statements in "handling ambiguities and tension." (Adelswärd, 1989, pp.107). Monkeycycle sees the potential of injuring another cyclist and laughs to reduce the tension in the statement.

The previous statements around road violence are directed from the more powerful road user towards the less vulnerable, but we also see instances where participants laugh at their own vulnerability as Jack describes: *"Although that can*

be a bit tricky if you're walking sometimes. You look the wrong direction, you get taken out [laughs]." (Extract 53: Jack). In this instance I did not laugh in response to the threat of road violence. As discussed, Jack is attempting to mitigate the statement that a pedestrian offers a threat, which would seem obvious given the relative weight and speed of a pedestrian and a cyclist. There are further examples of a threat to the self from Graham, which relates to how closely other road users pass him*: "Um I do notice cars that are passing me, er, because obviously the distance, the closeness at which they pass is of [laughs] some interest."* (Extract 54: Graham). The laughter following Graham's statement may reflect the ambiguity over the distance the motorist passes Graham, while also seeking to disperse tension over the threat of road violence. Again, I do not laugh, even though elsewhere I do laugh under similar circumstances.

Rose's laughter relates to her own aggressive behaviour. This was in response to my questioning around her admission that she runs red lights: *"okay so [laugh] I think that being a safe cyclist requires you to be an aggressive cyclist and an assertive cyclist"* (Extract 55: Rose). Rose's laughter reduces the severity of the red-light jumping offence, which she then challenges through her assertion that she needs to be an assertive cyclist to keep herself safe. I did not laugh in response, partly because I do not personally believe that red light jumping is an action to be encouraged, and as such confirms previous research that it is only in laughter from both parties that we see consensus being reached.

In these examples the laughter is used in relation to danger in the road system specifically, and not necessarily around the public transport system. The participants have used figurative language and extended metaphors to clarify the issue of an imbalanced power system within transport that we should choose a side over. Laughter to mark discomfort, and in some examples to elicit consensus can be seen as an extension of this intergroup dialogue. There is always an oppositional group to the mentions of road violence and as such fit the war frame. As discussed, laughter is not only used to denote humour, but is used dialogically to achieve specific functions, which in this case appears to be an attempt to draw people to one side of the intergroup conflict.

4.4.2.8 Summary

In conclusion, the second repertoire has discussed the use of figurative language in speech in relation to power within transport. Specifically, I have shown how the participants draw on metaphors for war, water, and animals consistently to explain to the listener how they experience transport. This is common across all accounts and demonstrates how pervasive this type of language in this domain. Furthermore, the inequitable distribution of power appears to be understood by all. The participants demonstrate their understanding of power imbalances but attempt to avoid the discomfort of this imbalance using laughter that I often echo. This exploration of a system imbued with hierarchical power is consistent with the theoretical position of social identity theory (Postmes & Branscombe, 2010), that social groups operate within a hierarchy. The participants in this study understand this hierarchy, and that some groups hold more power than others. However, in drawing on various extended metaphors, especially for war, there is a sense that they feel this hierarchy is illegitimate, and that it should be challenged or defended.

4.4.3 Law-breaking person on a bicycle to construct subject positions

The trope of the law-breaking person on a bicycle is another core feature of the data, which operates in such a way that it allows the speaker to position themselves within the discourse relative to other transport users, in line with a hierarchy of transport groups. While the trope commonly appears in relation to people on bicycles that jump red lights, it also features people on bicycles not wearing lights or hi-vis equipment, not wearing helmets, and pavement cycling. While this trope is used by all transport users, it is deployed in differing ways depending on the speaker.

Put simply, subject positions are positions that speakers adopt within a discourse (Davies & Harré, 1990). Specifically, they include a conceptual repertoire, and a location for people within that repertoire. This is not just a range of positions for the speaker, but also of others. This is often achieved using stories or a narrative where the speaker can create characters and positions, which they can adopt and position others within. In accepting a particular position, the speaker essentially takes a stand against other positions (Törrönen, 2001).

Within the data, the trope of the law-breaking cyclist is a central feature that portrays a marginalised group in a particularly negative light, commonly understood as we see it used by all participants. Davies and Harré state that we must be able to show how people adopt specific subject positions; using this trope and the subsequent positioning, the speakers show us in context their identity in relation to their transport choices, and furthermore they show how the trope can be flexibly deployed to suit the aims of the speakers.

4.4.3.1 Transport user as having higher status

Some of the participants establish a subject position holding a higher status than people on bicycles. They do this by criticising people on bicycles for their errant behaviour. Sometimes this is breaking specific laws, but often it is deployed as breaking advisory rules or of unwritten rules of the road that are commonly understood by transport users.

In extract 57 Summer uses the trope to portray people on bicycles as a homogenous group of lawbreakers. Summer describes the norms of her home location and the behaviour of drivers towards people on bicycles, applies a disclaimer, and then vilifies the cyclist as a law breaker. Note that Summer does not specify which law the people on bicycles break but is clear that she is referring to laws and not guidance or best practice.

> Or braking for them, erm, and a lot of it is also kind of left over habits from the states because people on the west coast don't treat cyclists very nicely on the road either, erm, but yeah watching drivers act terribly to cyclists, but also cyclist not abiding traffic laws is a really big pet peeve for me, it really bothers me. (Extract 56: Summer)

As someone who does not drive in the UK, being a native of the west coast of the US, Summer predominantly uses public transport such as trams and trains to travel around Manchester for work and leisure. During lockdown due to restrictions on public transport their partner bought a car and much of Summer's account reflects how this return to their primary form of transport in the US may be seen to be their preferred choice. In terms of the deployment of the law-breaking cyclist they adopt the same position as the motorists below, in appearing receptive to other forms of

transport but then following a disclaimer with the suggestion that people on bicycles routinely break the law.

In extract 57 below we see Daniel adopt a similar position to Summer. Daniel's response is at first humorous, but he then moves onto his primary focus, his irritation with other transport users. There is a slight hesitation in the description of the motorist that causes him irritation through poor driving habits, but the next section on the behaviours of people on bicycles is enlightening. There is hesitancy and an honesty clause that precede the claims about the unsafe behaviour of people on bicycles when asked about other people travelling.

> OK (laughs) no, well, always entertaining to watch people singing to themselves in the car or…a sneaky pick of the nose or something like that. But. No, I, yeah well only, only when I get annoyed basically if there's a, a driver that does something without indicating, or brakes and … then indicates which is my pet hate. (laughs) Or, er, invary., invariably to be honest with you, er, cyclists that, er, go about in an unsafe manner. Either not having lights on, or or cutting cars up or, mostly the worse one is when they drive up the inside of you when you're trying to turn left with your indicator on. (Extract 57: Daniel)

Therefore, while Daniel is happy with their transport choice, they use the trope to position themselves above the cyclist in terms of status by criticising their behaviour, conflating a number of offences including filtering past standing traffic. Note that this is not breaking a law, but in Daniel's view it is unsafe practice. Daniel uses the common trope of people on bicycles without lights but attempts to add weight to their argument by adding other indiscretions such as, 'drive up the inside' even though filtering is recommended for people on bicycles to improve their safety by positioning themselves at the head of standing traffic. Daniel reveals their frustration using the word 'drive' rather than ride or cycle. By using drive, Daniel is creating the impression that the cyclist and motorist are equitable, and in some way the cyclist is cheating the system.

Elsie again focusses on the illegality of not having lights on a bicycle at night but extends this to the advice to wear hi-vis clothing if riding at night. This is the end of quite a lengthy section, which begins with a question about Elsie's views on people who cycle for transport. Again, in a similar manner to Daniel, Elsie starts with a

statement that appears to be accepting of other modes of transport, and that choice is an important part of an equitable system. However, after extolling the virtues of different modes of transport and that reduction in car use is good, a disclaimer clearly indicates a change in tack.

> yeah, each to their own, I think it's every, every vehicle that you can get off the road is a good thing, so … you know it's awesome if that works for people, and that's what they choose to do, and that's what makes them happy then brilliant. But I, I would really like it if more people that were on the roads were properly brightly dressed. (Extract 58: Elsie)

Elsie then uses a different form of the law-breaking cyclist trope, that you cannot see them because they are wearing dark clothing and have no lights, while paradoxically being able to see that they are wearing dark clothing and have no lights.

> I always like really look hard cos, you know, that they're coming out of the halls, and they're on that road and, yeah, at the traffic lights sometimes they'll come past your car and pull in front of you, and there can be like five or six cyclists and you'll only notice one or two of them because of the lights… [but they] all kind of congregate and set off together, so I just leave them a big space and [check behind me again]. (Extract 59: Elsie)

Elsie positions herself as different to people on bicycles using ‘they’ and ‘them’, reinforced with “more people that were on the roads”. This is then clarified through her assertion that she will ‘only notice two of them’ because of the lights, presumably because the other three or four do not have lights on. This positions them as irresponsible rule breakers, relative to Elsie who ‘always like look really hard’ and ‘check behind me again’. Not only does Elsie position the cyclist as rule breakers but reinforces this with her own position as a careful motorist.

Referencing people on bicycles as law breakers also assuages any discomfort felt around potential imbalances of power. In the second repertoire, the laughter around potential harm to people on bicycles reflected a commonly held understanding that there is a power imbalance within transport, and this trope can also be seen to negate the stake of inequitable power.

We therefore have a group of transport users that apply the trope in a particular manner, apparently receptive to other forms of transport, but that use the trope in recognition that they hold the power in the system. However, the use of this trope is not consistent across all transport users. I have already noted that Summer, a public transport user and car passenger in this country aligns with the more powerful motorist.

4.4.3.2 Transport user as neutral

Other participants, who predominantly use public transport or mixed modes to commute, again deploy the trope, but in a notably different manner to the previous examples. Therefore, the mode of transport seems almost irrelevant and rather than using the trope of the law-breaking cyclist to admonish them and reinforce their position as holding a higher status, they accept the power imbalance and instead use the trope as illustrative of that. In effect they challenge the legitimacy of the motorist, using the trope knowingly, acknowledging that the motorist uses the trope to position themselves with a higher status. For example, here we see Jack discussing the view of people on bicycles from other road users' perspective.

> there's … a certain level of opinion which suggests that cyclists are a pain, you know, they see themselves as being entitled, you know, er, privileged road users that, you know, can run red lights and, you know, I don't have to, you know, pay, there's a certain men, I don't, I don't go out of my way to look for this on social media or newspapers but I get the impression there is a section of the public that believe that, and occasionally you'll come across people or shout that kind of thing at you from [a car]. (Extract 60: Jack)

In essence here Jack is reporting his understanding that those of higher status use these tropes, of people on bicycles jumping red lights, and not paying road tax, in a particular manner. Notably as Jack is a public transport user who also has a lifelong love of cycling, they use the trope to position themselves differently to the previous speakers. In contrast to placing themselves above people on bicycles, Jack positions himself outside this discourse. He illustrates this through "a certain group of people", and "a certain level of opinion" through to "I get the impression". While articulating that this is a commonly held understanding, he attempts to distance himself and claim that he is a neutral observer, relative to those of perceived higher

status and the law-breaking cyclist. As discussed earlier this highlights the flexibility of repertoires, and specifically of this trope.

We see a similar use of the trope in the accounts from Erin and Graham. Erin uses a kick scooter and the train, while Graham is a self-avowed cyclist. Erin references the commonly held myth that motorists believe people on bicycles do not pay road tax. Again, Erin is referring to their understanding of how motorists view people on bicycles behaviour, rather than judging other transport users: *"I found it, it's interesting how I feel like motorists believe that they own the road, and it belongs to them, and cyclists are trespassing on it because they believe they pay this thing called road tax [laughs]]"* (Extract 61: Erin). Erin uses the trope of the non-road tax paying cyclist in relation to trespass, but it is the assertion that it is what motorists believe that is revealing, in so much as they do not present the trope as their own view but as the view of the high-status motorist. However, their use of 'they believe' positions themselves in line with the cyclist rather than those that believe their status is above the law-breaking cyclist.

We see in Graham's account a similar use of this trope. This section follows a question I posed about helmet use, and in Graham's view motorists use a lack of helmet use as 'another stick' with which to beat people on bicycles, which prompted a follow up question about what he meant by "another stick". The MAMIL Graham refers to below is an acronym for Middle Aged Man in Lycra, used in disparaging terms to describe men who take up cycling in later life.

> [We] talked about the MAMIL side of things so there's, [there's], … there's, that is often used as a representation of cyclists, but, erm, there's a characterisation of people that don't stop at red lights, erm, people that cycle at night without lights on, erm, I suppose a general air of anti-social or actively endangering other road users I guess is the other stick that would be used to hit cyclists with…I definitely encounter that when I'm, when we have a discussion about, erm commuting with, with colleagues, or you know when we were able to meet people in pubs and things, erm, then yeah, you do very often get, and on social media, you very often get the well yeah but they're always jumping red lights. And it's, it's so dangerous, and they're going to get someone killed [erm] (Extract 62: Graham)

Through this use of the trope, Graham positions themselves outside of the dichotomy between motorist and cyclist. Graham states there is a “representation”, and a “characterisation” of the misbehaving of people on bicycles. It’s also notable that they are not discussing themselves, instead it is “people” or “cyclists”. Therefore Jack, Erin and Graham position themselves as observers of this potential conflict while drawing on the same conceptual repertoire as Daniel, Elsie and Summer. The flexibility of the trope is evident, being wielded to create different subject positions for the speaker, regardless of their mode of transport.

4.4.3.3 Transport user as police

However, this use of the trope is not consistent across all non-motorists. In the next section we see how Monkeycycle takes the trope and applies it to other people on bicycles, judging the errant behaviour of other people on bicycles.

> So really, I mean, don’t get me wrong, I wish drivers were also, erm, better behaved. I think they, they have a lot to, there's a lot to be desired for a lot of drivers as well, erm, and I know I, I think maybe it's because I see some cyclists have behaviours where I'm like, why? I remember having a bit of an argument with a friend, he's also a cyclist, cycle commuted pretty much the same route, erm, in my old job we, we worked in the same building and he would run red lights. And I remember having a debate, a bit of an argument with him, saying why do you do it? It's like, cos I know what I'm doing, I'll only cross if it’s safe, erm, you know it's not causing any harm. I'm like that is causing harm, like I know you are safe, I know you won't cause, you won't endanger anybody else on purpose (Extract 63: Monkeycycle)

The trope of the law-breaking cyclist is again being deployed, although on this occasion they are passing judgement on a fellow commuter who uses the same mode of transport. Therefore, their use of the trope here is centred on the law breaking of other people on bicycles, and not towards a different transport group i.e. motorists, or pedestrians, or as a neutral observer.

They position themselves within the lower status group of people on bicycles, but distinct in that they are policing the behaviour of other people on bicycles. Within the dialogue they do make comment on the motorists law breaking, but it is the behaviour of the cyclist that attracts their focus, they are ‘frustrated’ with other

people on bicycles jumping red lights, and the reputational damage done to the 'wider community' (Levine et al., 2012). They even go so far as to remonstrate with a colleague about their apparent rule breaking to police the behaviour of in-group members.

Rose similarly uses the trope to police other cyclist's behaviour. However, this is a particular sub-group of people on bicycles, takeaway delivery riders.

> Erm well in Manchester erm there's far more range and there's far more women as well so you know I'm generalising stereotyping a bit I think but lots lots of men erm all ages probably quite a lot of students…and erm and then you've got all your Deliveroo I don't know if I've ever seen a female Deliveroo rider so you've got your Deliveroo's who when you look at erm cycling levels of breaking the the laws of the road among cyclists we all toe the law line in some way but I think Deliveroo's are shockingly bad at erm running the lights and all that so let me come back to question. My hometown run okay my 6 miles into the centre of town which I did for years erm and continue to do I hardly ever ever ever have seen a woman doing that ride. (Extract 64: Rose)

Rose is using this trope in several ways within her own account. In section 4.4.3.4 I will outline how Rose deploys the trope in a different manner, admitting to her own transgressions, but here in a similar manner to Monkeycycle she is positioning herself within the cycling group, distinct from the offending sub-group. By alienating the behaviour of a certain sub-group, Rose protects the positively valued distinctiveness of the in-group generally. The positioning of the Deliveroo riders is conceptualised as the black sheep effect, where in-group members are judged more harshly for transgressions compared with out-group members committing the same offence (Marques & Paez, 1994).

4.4.3.4 Transport user as legitimate law breaker

For some however, they not only position themselves within the cyclist group but as one of the law-breaking people on a bicycle. Here, the use of this trope is centred around Rose's perception that they are vulnerable road users, and the red-light jumping is a way to protect themselves against the hostile nature of motorised traffic. In the previous section, Rose positioned herself within the in-group, but as someone who policed poor behaviour, railing against the 'shockingly bad' law

breaking of Deliveroo riders in the centre of Manchester. Here the trope is used to provide justification for their action. Rose had mentioned jumping red lights, and I asked her to discuss this further.

> okay so [laughs] I think that being a safe cyclist requires you to be an aggressive cyclist and an assertive cyclist…and that links with taking up your position in the road getting ahead of the traffic, and I know the light change patterns on the traffic lights and some of the really big junction's that I cross. So if I take for example the big crossroads by the prison in town … There's two really busy roads intersect … at that point and I know the sequence of the lights because I have ridden those lights for years … and I know I know when that light goes amber that I'm next so I watch for that light turn to turn to amber I checked nobody's jumping that light … and I will start to set off… even though my light is still on red, but that gets me across the junction … before I have the buses and the taxis and everybody else … jostling for position on the three lanes of traffic, so there are various points where I I know the … Now it's breaking the law I firmly believe you have to think ahead and stay ahead to stay safe as a cyclist (Extract 65: Rose)

Rose admits to breaking the law but provides a justification for the behaviour. Rose is clearly aware she is breaking the law, freely admitting her transgressions. However, there is a purpose to her behaviour, of self-preservation. Rose states that to be safe you need to 'aggressive' and 'assertive', and therefore sets off while the traffic light is still red. These are different motivations behind the behaviours of 'safe cyclists' and the delivery riders which Rose criticises. This apparent inconsistency illustrates the contradictory nature of subject positions that can exist within the constructionist nature of discourse, and it is therefore possible to adopt different subject positions within the same narrative and used as a flexible resource.

4.4.3.5 Summary

In summary, the third repertoire presented here shows how a trope is used to adopt different subject positions. The law-breaking cyclist is used by all participants, and yet is used differently depending on their mode of transport, and how they view the transport system. Participants use it to position themselves within higher status groups, as neutral observers, managing in-group reputation, or to legitimize

their own behaviour. This final repertoire also shows how discourses can be deployed flexibly to achieve the aims of the speaker.

4.5 Conclusion

Through the three repertoires discussed here I have shown how participants who use different modes of transport talk about transport in a consistent manner. The participants used category norms, lengthy descriptions, and detail, along with extreme case formulations to evidence why they had choice or no choice in a particular in their transport modes. This aligns with the norms of social groups within the social identity approach, while being protective of in-group distinctiveness. I also demonstrated how extended metaphors are used to convey the issue of power within the transport system, and that we all understand the power and hierarchy in the transport system using consensual laughter. Finally, the trope of the law-breaking cyclist allowed participants to adopt differing subject positions in relation to this hierarchy. The findings presented here, and in studies 1 and 3 will be drawn together in the discussion in chapter 6.

Chapter 5. EMPIRICAL STUDY 3

5.1 Introduction

In the introduction that follows I set out the background and rationale to this study. The rationale expresses why I have chosen a phenomenological study to complete this thesis, and the introduction then continues with an outline of phenomenological theory. I then move into a review of the literature to explore how phenomenology has been applied to explore its key tenets, followed by phenomenological studies of cycling and identity.

5.2 Rationale for study

In the first two studies in this thesis, I applied thematic analysis and discourse analysis to explore media representations of people on bicycles and everyday discourses around transport. In the third study of this thesis, I adopt a phenomenological approach in considering the lived experiences of people on

bicycles, building on the first two studies, and further developing our understanding of intergroup processes and transport choice.

The thematic analysis of study 1, while important in understanding how people on bicycles are portrayed, only provides us with the media's perspective, and how they present people on bicycles in a particular light. In contrast the discourse analysis of study 2 aims to understand how people use language to create and enact identities (Starks & Brown Trinidad, 2007) within discourses. Phenomenology, and the study of lived experiences adds to these two studies by providing us with an understanding of the embodied experience of cycling, as participants describe how their lived experience of a phenomenon and its meaning to them. In doing so as researchers we seek to understand the experience of cycling, and what this can tell us about transport choice, from those engaged in the practice.

Here I draw on the interpretative phenomenological analysis of Smith and Osborn (2008), and use photo-elicitation to provide a deeper insight into the participants worlds. While phenomenology as an approach is used to consider the subjective lived experience of participants, interpretative phenomenological analysis is appropriate in exploring "complex, or previously unexplored phenomena" (Wersig & Wilson-Smith, 2021, pp. 4), particularly issues of identity where the meaning of the experience is interpreted by the researcher. This study therefore not only builds on a gap in the extant literature, but it also offers a complementary perspective to the discourse analysis presented in study 2 in this thesis, which offers a more constructivist approach in comparison to the critical realism of phenomenology and the epistemologically flexible thematic analysis of study 1.

5.3 Literature review

The literature review here includes a summary of the origins of phenomenology before considering the core theoretical elements of the approach, followed by phenomenological studies of cycling and identity that are informative.

Phenomenology is a broad church, "fissured and fragmented" (Lawthom & Tindall, 2011, pp. 9) into eighteen different forms of phenomenologies (Gallagher, 2012), and it is beyond the scope of the introduction presented here to offer an in-depth

exploration of all the myriad forms. However, it is useful to outline its origins, commonalities, and application to research before detailing the specific form of phenomenology adopted here as this provides a rationale for adopting this method.

Phenomenology's origins begin with Edmund Husserl's philosophical works in which he described intentionality, the view that we all experience the world through our consciousness (Van Manen, 1990). Husserl took a descriptive approach to phenomenology as he was concerned with describing the 'essences' of phenomena, by finding commonalities across accounts (Lawthom & Tindall, 2011).

That is not to say that phenomenology is concerned with how things are in reality, but that our subjective experience of phenomena will differ between individuals. We may all encounter a floor that is slippery when wet, and while the reality is that the floor is wet the experience of the slippery floor to the individual will differ.

It is through the first person accounts containing the richness and texture of the individual that researchers attempt to understand the lifeworld of the participants (Lawthom & Tindall, 2011), and through this gain a deep understanding of the phenomena in question, while not accepting it as 'truth'. In that sense phenomenology adopts a realist ontology, the world is real, and yet it is experienced and understood differently by individuals.

The original approach of Husserl has since been extended and challenged, particularly through the work of Heidegger, Sartre, Merleau-Ponty and Giorgi (Gallagher, 2012). Whereas Husserl's original form of phenomenology was descriptive of phenomena, Heidegger's interpretive form developed the philosophical origins towards a more method-based approach. Husserl believed in the bracketing of ideas, beliefs, and theories in a form of enquiry he referred to as epoché in order to focus on the description of the phenomena (Gallagher, 2012; Lawthom & Tindall, 2011). In his view, bracketing of all presuppositions meant that knowledge is derived solely from our conscious experience of the phenomena.

In contrast Heidegger adopted an interpretative approach, considering the "meanings of participants' accounts of everyday experiences" (Lawthom & Tindall, 2011, pp. 13). Social sciences that adopt an interpretivist view such as Heidegger's

approach privilege subjectivity, and therefore the firsthand account of the individual is key in understanding their subjective world. In adopting an interpretivist approach, the phenomenological approach of Heidegger allows for researchers to consider the phenomena using presuppositions as resources. The interpretivist sees theory as a means of shaping and guiding the process of conducting research and analysis in the phenomenological tradition.

The interpretivist approach of Interpretative phenomenological analysis as proposed by Smith and Osborn also draws on symbolic interactionism with "its concern for how meanings are constructed by individuals within both a social and a personal world." (Smith & Osborn, 2008, pp. 54). It is therefore an appropriate approach as by adopting an interpretivist approach to phenomenology we can consider the experiences of people on bicycles through the lens of social identity theory.

5.3.1 Core elements of Phenomenology

Despite slightly different approaches, all forms of phenomenology share common features including embodiment, spatiality, intersubjectivity and temporality and often form part of the analysis of the participants accounts. In the literature review that follows I explore core features, and how these aspects may be relevant to an exploration of cycling.

For phenomenologists, embodiment relates to how an individual experiences the world through their lived body, including movement and sensations. In adopting a phenomenological approach to sport, Hockey and Collinson's (2007) sought to explore the 'embodied sporting mind'. Hockey and Collinson view the 'corporeal schema' as integral to sporting performance and yet claim it is often overlooked. Given cycling can be a sport in addition to a functional and leisure activity, it seems highly relevant to consider the embodied experience of cycling.

As people on bicycles move through distinct locations, considering how cycling is affected by space is a further core aspect given focus in phenomenological enquiry. Lived space affects our experiences, and the nature of that space through other people, natural and cultural objects, institutions, and our bodily capabilities affects

our spatial experience. Tim Cresswell's work on space position the origins of thought on place alongside notable phenomenologists such as Martin Heidegger and Maurice Merleau-Ponty (Cresswell, 2015). For Cresswell, a place is a space that is imbued with meaning by people as they use that space.

The movement through space is of course inherently related to time, and our lived experience in phenomenological terms relates to time and how our experience of time relates both to awareness of the lifespan, and to the self-project as it changes over time. This is most notable in healthcare settings where illness brings time to the forefront of awareness (Nilsen & Elstad, 2009).

As we move our embodied selves through space and time we encounter others, and intersubjectivity represents the final core element of phenomenological enquiry. Intersubjectivity relates to our experience in relation to others, through connection and interaction, at both an individual and collective level. As Gallagher notes, the lifeworld is never a "lonely consciousness" but is "populated with others" from birth (Gallagher, 2012, pp. 3). All phenomenological study therefore has intersubjectivity at the core of human experience.

5.3.2 Phenomenology of cycling

While I have attempted to outline the core components of phenomenological studies above, as phenomenology is the study of lived experience, the separation of common features within our experiences is not possible (Lawthom & Tindall, 2011). We see this sentiment echoed in studies of cycling where despite the fact that these studies explore cycling through a phenomenological lens in different contexts including leisure cycling, urban cycling, and commuting, they highlight the benefit in employing a phenomenological approach to; "the complex nature of cycle commuting and the high level of effort needed to take part in this behaviour." (van Bekkum et al., 2011b, pp. 209). Indeed, McKenna states that all four aspects of time, space, embodiment and intersubjectivity feature in accounts, especially when we consider the complexity of engaging in commuter cycling (McKenna & Whatling, 2007). In the limited phenomenological research on cycling below I outline how these core concepts manifest in accounts of cycling.

Research on the phenomenology of cycling is in essence split into research into leisure cycling (Glackin & Beale, 2018; Minello & Nixon, 2017) or urban and commuter cycling (McKenna & Whatling, 2007). As a result, the phenomenological experience is quite distinctively different, in line with the differing research aims.

For example, Glackin aimed to explore the lived experiences of club cyclists, people who cycle relatively longer distances as a hobby while Minello considered a similar group, looking at older men and their relationship with cycling as they aged. McKenna in contrast sought to explore the complexity of urban cycling, with its threats and competition for space.

These quite distinct target groups and aims create a diverse set of experiences, particularly in their embodied experiences. While Glackin's findings pointed to feelings of "uncomplicated joys" (Glackin & Beale, 2018, pp. 32), Minello describes how the people on bicycles in their study are "enjoying the bike" and "the ride" in addition to experiences of pleasure, pain and exhilaration (Minello & Nixon, 2017, pp. 82). Minello's study is particularly enlightening given the description of visceral feelings and emotions generated through cycling.

While these may appear to be sensations and an experience unique to green-cycling, unrelated to cycling in busy urban environments, Mann outlines how journey-based affect may be an integral element of modal choice for those who commute by car (Mann & Abraham, 2006). Therefore, we can consider whether the same affect-based decisions are factors in the decision to choose cycling over other modes, specifically the stress and enjoyment components which may be beneficial for the people on bicycles physical and mental health in both rural and urban settings (McKenna & Whatling, 2007; Minello & Nixon, 2017).

In contrast, McKenna's study showed how embodiment in urban settings manifests differently compared to rural cycling. Participants describe the dread of cycling in heavy traffic and having to "take quick evasive action to avoid being knocked-off" (McKenna & Whatling, 2007, pp. 456). Not only does high quality infrastructure provide a motivation to cycle, but in McKenna's account the lack of protection can result in those that currently cycle considering stopping. The participants in

McKenna's study also describe how they "embody citizenship" (McKenna & Whatling, 2007, pp. 457) through cycling, enacting public policy on sustainable transport.

McKenna also highlights the issue of space that Mann outlines in their study, but from a more pragmatic position. In their findings, the space that people on bicycles desire is a result of poor driving behaviour, rather than a desire for solitude. We can therefore draw parallels between the lived experience of people on bicycles in rural and urban settings, and other commuters to consider how the experience of contested space may drive modal choice.

McKenna further describes space as social space, noting the attitude of other road users to people on bicycles, raising the concept of intersubjectivity that as discussed is central to the phenomenological method. The intersubjective experience appears throughout the studies in different forms, with some people on bicycles preferring being alone, while remaining connected by technology (Glackin & Beale, 2018), and the feelings of camaraderie, and feeling the social support, sense of community and connection with other people on bicycles (Minello & Nixon, 2017).

The solitude Glackin describes allows people on bicycles the time for self-reflection and deep thinking that is not possible when sharing rides with others. McKenna's exploration of urban commuting sees time as a more practical consideration, with more time needed at the start of the journey to work compared with days when the participants used the car, and yet on the way home they could choose more leisurely routes due to the lack of time pressures.

The lived experiences of cycling described above, through embodiment and their experiences of space and time appear to have an impact on their attitude to cycling. Van Bekkum et al., (2011b) adopted a phenomenological approach to explore the potentially differing attitudes between current cycling commuters and potential cycling commuters. Nine themes emerged showing both the "beneficial challenging and facilitating aspects of cycle commuting behaviour" (van Bekkum et al., 2011b:202), with one focused on environmental barriers such as roads and paths. Van Bekkum et al considered their findings and how they mapped to psychological

theories of behaviour such as the theory of planned behaviour and the transtheoretical model of behaviour change.

Van Bekkum's follow up study conducted a quantitative exploration of how environmental factors may be the biggest perceived barrier to cycle commuting (van Bekkum et al., 2011a) by applying the transtheoretical model of behaviour change that they outlined in the phenomenological study. In their view the benefit of the inductive approach of the phenomenological study provided a direction for future research that explored cycling commuting through a model of behaviour change, and therefore which underpinning attitudes may be worthy of consideration in shifting behaviour towards cycling as a form of transport.

Therefore, phenomenological studies provide a deeper understanding of issues such as motivations, attitude, experience, and identity may shape transport choices. Through many of the studies, the issue of motivation to cycle is a consistent finding and important in considering modal choice. While some of these factors may be recognizable such as the "weather, daily tasks, cycling infrastructure" (McKenna & Whatling, 2007, pp. 448), the value in phenomenological enquiry is found in the narrative that the participant account provides. For example, segregated infrastructure is often considered a necessary requirement for people to start cycling given the protection it offers, particularly for novice people on bicycles and yet for many it is the embodied experience and sense of time and place that are important.

Glackin's consideration of leisure cycling also provides insights into green-cycling, and how it "may influence self-determined behaviours towards exercise regulation, suggesting more satisfying and enduring exercise experiences." (Glackin & Beale, 2018, pp. 32), in other words a self-determination model of motivation. While active travel may focus on designing for utility cycling such as commuting, the insights provided by studies such as this may be a key component in developing modal shift. If green cycling provides people on bicycles with experiences that induce motivation, designing infrastructure that can replicate such experiences may be beneficial.

In addition to the theoretical approach, and the findings detailed above, there are other methodological considerations I can take from the phenomenological literature including the nature of the participants. Many of the studies on cycling, and leisure cycling, focus on males on bicycles given they dominant statistics on cycling use. It would be useful therefore to include the experiences of other genders in conducting this research.

While the studies above commonly used semi-structured interviews in exploring the lifeworld's of participants (Glackin & Beale, 2018; McKenna & Whatling, 2007; Minello & Nixon, 2017; van Bekkum et al., 2011b) there are other creative methods that seek to create deeper insights in phenomenological enquiry. For example, Hockey and Collinson's research on the sporting body provides a novel methodological framework using co-production to explore the embodied experiences of cycling (Hockey & Collinson, 2007). The researchers captured a sequence of actions executed by the participating athlete, they then showed the sequence to the participant who emphasized key points and in doing so the narrative became a co-production. This joint narrative was then viewed by the participant who added meanings and sensory experiences that phenomenology aims to explicate. Similarly, Orr and Phoenix used photo-elicitation to explore the embodied experiences of older people engaging in physical activity (Orr & Phoenix, 2015) which they describe as being able to reveal "additional, and at times more nuanced insights into the embodied nature of physicality in older age" (Orr & Phoenix, 2015, pp. 468). To my knowledge there are no studies within the phenomenological approach that consider social identity and transport choice by applying visual methods.

It is also important to consider the number of participants required in qualitative studies that adopt a phenomenological approach. While for many of the studies described here there are small numbers of participants there is also value in considering single case studies. Smith contends that a single case study can "illuminate a dimension of a shared commonality, as the very detail of the individual also brings us closer to significant aspects of a shared humanity" (Smith, 2004, pp. 43), while Walsh's study of traumatic brain injury suggests that single

case studies “permits an increased understanding of how an individual with brain injury experiences the world” (Walsh et al., 2020, pp. 1).

5.3.3 Phenomenology and Identity

We can therefore see how phenomenology may provide insights into issues such as motivation and attitude, or provide detailed accounts of the experience that may help us understand issues of safety or the therapeutic effects of cycling. Within this study we are particularly interested in identity-based factors, and therefore what phenomenology can provide to explore identity processes that may affect modal choice.

In the studies outlined above there are considerations of identity that are not necessarily related to a specific theory of identity but may be informative. Glackin’s commentary on green-cyclists intersubjective feelings of being “alone but connected” (Glackin & Beale, 2018, pp. 32) and Minello’s “enjoying … the self; experiencing camaraderie;” (Minello & Nixon, 2017, pp. 85) imply that both personal and social identity are in dynamic interplay when people cycle. Minello’s exploration of older people on bicycles is especially enlightening with regards to identity. For many of their participants cycling is a way to fight the threats to identity that occur as they age, while developing social connections with others. They also note that people on bicycles have internalized particular group norms such as the subculture of certain gear, and behaviours such as acknowledging other people on bicycles (Minello & Nixon, 2017). While these discussions of identity are not formulated from a social identity perspective, there are studies that adopt a phenomenological approach to consider social identity in other domains.

5.3.4 IPA and social identity

Interpretative phenomenological analysis has been predominantly used within the health industry as a means of exploring the lived experience of patients in relation to identity due to the "subjective and idiosyncratic" nature of identity (Teh, 2013, pp. 8). Teh’s study on the impact of head injuries on social identity found three superordinate themes including “doing as normality, HI as separate from the individual and being a child and an adult.” (Teh, 2013, pp. 29). While Walsh’s single case study of traumatic brain injury describes how the threat to social identity of

traumatic brain injury creates uncertainty for the participant, resulting in them engaging with projects that reduced this uncertainty (Walsh et al., 2020).

These themes relate to social identity processes such as identity loss, acquisition of new social identities post head injury, and in relation to being a resident in a care home. Further intergroup processes such as the stigmatising interactions that are as a result of head injury patients being treated as a homogenous group are explored through phenomenological analysis and provide healthcare professionals with insights into how they may change their approach that better caters for the needs of patients.

Whilst this review is not exhaustive, it provides illustrative examples of how phenomenology may be used to explore social identity and intergroup processes in different contexts, a central consideration in the dynamic nature of social identity. These include issues of identity and intergroup processes which are further explored in other domains where the centrality of identity, loss or change in identity including identity transition and identity maintenance are explored. They also explore intergroup processes that are either a direct consequence of these shifts in identity or are mediators in these processes.

The centrality of identity and the impact of any changes are explored in several studies. Miron et al describe the centrality of identity during retirement for academics, and the related identity transition processes namely identity continuity, identity change, and identity conservation (Miron et al., 2022). Similarly, Wersig & Wilson-Smith (2021) outline identity maintenance and redefining belonging and identity in their work with humanitarian aid workers, while Aresti explores how a shift to a pro-social identity for prisoners may be a primary factor in desistance from reoffending, and further that this was a positive experience (Aresti et al., 2010).

However, the changes in identity for these groups have important repercussions for their lived experience. While Miron describes how the shift in identity can result in "awareness of negative aspects in academia and perceived lack of fit between self and academia; social disidentification with academic identity; identity discovery"

(Miron et al., 2022, pp. 82), Aresti notes that the persistence of labelling men as ex-offenders provoked a challenge to the men's sense of self in light of their newfound pro-social identity (Aresti et al., 2010). Similarly, Kennedy's study of riotous behaviour in prisons found that prisoners feelings of being treated as a homogenous group rather than individuals created a desire to challenge this through riotous behaviour (Kennedy, 2014). They also note that there is a shifting in identity between the personal and social during the riots. For Kennedy, the relationship between staff and prisoners was central leading up to the riots. The prisoners' lived experience shaped their world view, and subsequent actions.

There is an evident tension in these studies between phenomenology as method and theory. For Wersig, Kennedy, and Miron IPA provides a methodological framework for researching the phenomena at hand, and their discussions are framed around social identity and not to the phenomenological concepts that underpin IPA. In contrast, Aresti's discussion of the shifting nature of identity in prisons focusses heavily on the temporal nature of incarceration.

While these studies outline how phenomenology may be a fruitful approach in exploring issues of social identity, to my knowledge there are no phenomenological studies that have considered cycling from a social identity perspective. Additionally, there are none that adopt visual methods as a means of exploring the participants lifeworld. We therefore present a gap in the extant literature that this study attempts to fill by using phenomenology to explore the complex nature of identity, while using photo-elicitation to allow the participants to provide an insight into their world in the manner of their choosing, reducing the influence of the researcher.

5.4 Research question

Through interpretative phenomenological analysis, how do we understand intergroup processes and individual experiences of cycling?

5.5 Methods

This study incorporates participatory photo-elicitation as a means of data collection. The photographs and videos form the basis for semi-structured interviews that explore intergroup processes in cycling through interpretative phenomenological analysis.

5.5.1 Theoretical positions

The social identity approach and its theoretical origins are explored in the introduction (section 2.1.2). The philosophy of social identity theory, interpretive phenomenological analysis and photo-elicitation are explored in the sections to follow.

5.5.1.1 Interpretative phenomenological analysis

As explored in the introduction, phenomenology is an umbrella under which we find a range of approaches. Here I have used Smith and Osborn's IPA, popular in qualitative research in the UK for its "idiographic and inductive method" (Finlay, 2012, pp. 8)

Smith and Osborn's interpretive phenomenological analysis (IPA), aligns with Heidegger's work, and in their writings, they provide a methodological framework for analysis within the interpretivist tradition. Furthermore, within IPA a double hermeneutic is adopted, whereby the participant interpreting their world is further interpreted by the researcher. This contrasts with the more descriptive forms of phenomenology in which the presuppositions and a priori theories are bracketed in a process known as epoché. Smith contends that presuppositions and theory can be used as resources in the interpretation and reflexivity of these can help guide the researcher in their analysis. As the two approaches differ somewhat, they also tend to favour different sources of information, with descriptive phenomenologists drawing on written accounts, while interpretive phenomenologists favour interviews.

Smith and Osborn set out recommendations for how to conduct IPA, beginning with designing a research question and deciding on a sample, using semi-structured interviews as an exemplary method, analysis, and the writing up phase. Each phase

is outlined below, although I start with clarification of the epistemological positions of phenomenology, photo-elicitation, and social identity theory.

5.5.1.2 Epistemology

Participatory photo-elicitation shares a constructivist epistemology with social identity theory, as the participants who provide photographs or video as part of the research have taken an active role in the taking of the media. As such the media has been actively chosen to represent a particular meaning by the participant, reflecting their subjective lived experience (Bedi & Webb, 2017).

Phenomenology as a discipline stands apart from epistemology, focussing as it does on the phenomena of interest. Phenomenology describes the experience of the lifeworld through which we can make claims about knowledge. As intersubjectivity is one of the core concepts of phenomenology, the individual experience is rooted in the relationship between the social worlds of the individual actor and others. Therefore, the theoretical position of social identity theory is explored through the phenomenology of the individual.

5.5.1.3 Role of researcher

Within the phenomenological approach the researcher aims to understand the participants lifeworld by interpreting their responses. As the participants have already interpreted their experience by providing photos or videos that they feel reflect their lifeworld, we are creating a double hermeneutic – interpreting the participants interpretation of their world.

5.5.2 Conducting the study

5.5.2.1 Ethics

Ethical approval for this study was granted by Manchester Metropolitan University's Faculty of Heath, Psychology and Social Care prior to recruitment of participants. Participants were asked to sign consent forms (see appendix 7) and asked to confirm their consent at the start of the interview recording. Additionally, participants were advised of their right to withdraw at any point until I had begun the analysis process. I contacted all participants prior to this stage to confirm they were still happy to be involved in the research. All data relating to this study has

been stored in line with the data storage policies of the University, with data stored within the OneDrive system, which is password protected. Transcripts have been anonymized with any identifying places or features obscured, and pseudonyms used for participants. Anonymity could not be assured while the participants were taking photographs or filming as these were likely to be in public places.

5.5.2.2 Upset/Risk

In designing a phenomenological study of people on bicycles, the primary consideration was to the safety of the participants taking photos and filming while cycling. Partly due to the safety considerations, ride-along interviews where the researcher conducts the interview while they cycle with the participant, was deemed too high a risk. Furthermore, the participants were explicitly told not to film or photograph while cycling, but instead they should stop and take photographs or video while stationary.

5.5.2.3 Recruitment

Recruitment for study 3 was started in May 2021 during the easing of restrictions following the final UK lockdown of the Covid-19 pandemic (Baker et al., 2021). Given the severity of the pandemic, and a phased return to no restrictions on mixing with other people in public spaces, it was considered appropriate to conduct recruitment and data collection using remote methods to reduce the chances of transmitting the Covid-19 virus. As such recruitment was conducted online through snowball sampling, and via social media channels including the personal Facebook and Twitter accounts of the researcher. Inclusion for the study was based on the participants being over 18, have access to a bicycle, and have access to a computer so they could participate in the interview.

5.5.2.4 Sample

Participants were 2 female and 2 male (N = 4) recruited via convenience sample who agreed to record either photographs or videos of their favourite journey, which they would share with the myself prior to a semi-structured interview where they would discuss their experience. All four regularly used a bicycle, cycling more than once a week, and often daily. The idiographic nature of phenomenological analysis allows for small sample sizes that reflect the individual subjective

experience. This contrasts with nomothetic research that uses larger sample sizes to produce theories that are able to be extrapolated to the general population. Small sample sizes can be sufficient on which to investigate a research question in relation to the extant literature. Smith and Osborn suggest a sample size of three is adequate enough to examine "similarity and difference, convergence and divergence." between accounts (Smith & Osborn, 2008, pp. 57), particularly in research conducted by students.

Of the four participants, three lived in Greater Manchester and one lived in London. The participant from London lived within a low traffic neighbourhood (LTN) while the three in Greater Manchester did not. A low traffic neighbourhood is a small urban area where motorised traffic is prevented from passing through due to the use of bollards or planters, reducing 'rat runs' and encouraging walking and cycling because of reduced traffic volumes.

5.5.2.5 Photo-elicitation

To explore the subjective experience of participants through the key features, interpretivist traditions of phenomenology often lean toward the interview as its source of material. However, more creative forms of source material can provide a deeper insight into the experience on which to base the interview itself. Participant generated visual imagery such as photo and video data offer the opportunity for the participant to convey their experience in the manner that they wish (O'Toole, 2013). Additional benefits to this approach include the fact that the material can operate as a conversation starter, offering a more neutral, less confrontational stimulus that addresses issues of power imbalance between researcher and participant (Pauwels, 2015). Finally the visual method as form of enquiry can provide a voice to "silent voices" who may otherwise be neglected (Bartoli, 2019, pp. 2).

These techniques can be used as alternative methods of data collection to more traditional forms of phenomenological inquiry used in research on cycling such as the ride along. While the ride-along does offer the experiential benefit of the sights, smells and sounds of the participants world (Wegerif, 2019) novice participants may feel uncomfortable in the presence of the researcher. Additional considerations

around the safety of both researcher and participant make the ride-along less than desirable when cycling in busy motorised environments, and visual methods therefore potentially offer a safer form of data collection as an alternative method of enquiry (Spinney, 2015).

After gaining consent the participants were asked to provide around six images or ten minutes of video that represented their favourite journey. The video or photographic material supplied to the PI was viewed prior to the interview to ensure they were usable and could form part of the interview process. One (P4) was asked to resupply their video due to the low quality of their initial submission.

5.5.2.6 Semi-structured interviews

The interviews were semi-structured in nature (See appendix 8 for questions) that aimed to explore their experiences based on the photo or video material supplied. The interview schedule of questions was designed to allow the participant to describe their cycling experience to me, initially with why they chose a particular photograph or video, and why that point of their journey was meaningful to them. As I was interested in the individual experience and how that related to intergroup processes, the following questions set out to explore key phenomenological concepts including embodiment, intersubjectivity, lived experience, and spatiality. It was expected that some of these concepts may draw on related concepts from the social identity approach, specifically how different social groups influence the experience of cycling in urban settings. The questions therefore funnelled from the rapport building and inductive questioning at the start to more pointed exploration of identity later in the interview.

While all questions were designed to be asked of all participants, the semi-structured nature of the interview allowed the participants to expand or focus on detail that appeared important to them, and to guide the researcher through their journey. All interviews were recorded, and the audio transcribed verbatim before being coded and analysed in line with Smith and Osborn's recommendations (see analysis 5.5.3.1).

5.5.2.7 Interview process

Interviews lasted 45 minutes to 1 hour and were conducted online using either Zoom or Teams video conferencing software. While the media produced provided an important part of the interviews that followed, they are not considered as data to be analysed. Instead, they are used as material, that in addition to the interview questions, allowed myself and the participant to explore the participants lived experience without me needing to be present in person.

5.5.3 Analysis

5.5.3.1 Transcription and coding

Based on Smith and Osborn's recommendations (2008) the transcripts were coded and analysed by the researcher alone. The interviews were imported into transcription software (the FTW transcriber), and manually transcribed into Microsoft word. The transcriptions were written as orthographic transcripts, that is they were transcribed as reflections of what the participants said (Wiggins, 2017), rather than using additional coding for various features of speech as used in Jeffersonian transcription. Jefferson's coding system is used to analyse in detail how people talk (Hepburn & Bolden, 2017). In contrast my intention here is to consider the whole account of the individual and look for patterns within and between accounts. I am therefore focussed on what people say rather than at the minutiae of how they say it, and as such an orthographic or play script is appropriately detailed enough for the analysis required.

As described by Smith and Osborn, the transcripts were read more than once to familiarize the researcher with the account. As the primary researcher I had conducted the interviews, and subsequently transcribed the interviews and therefore it was deemed unnecessary to re-read the transcripts several times. Analysis began with any interesting or notable points being noted in the left-hand column. Smith and Osborn recommend noting as much as possible to capture as widely as possible the participants experience. From these initial notes, higher order themes or psychological theories were noted in the right-hand column.

As there were only four participants, theoretical saturation was unlikely to be reached before all four were transcribed and analysed and therefore a full analysis was conducted on all interviews. Each case was considered on its own merits i.e. they were coded individually, and the codes from one case were not used as a framework for subsequent cases. Initially the coding was open in line with Smith and Osborn's recommendations, coding anything to note within the data. From this initial manifest level coding, codes were organised into higher order codes that drew on the theoretical concepts in both the social identity approach, and phenomenology. As the themes and ideas were drawn together the number of themes were rationalised into a smaller number of super-ordinate themes that sought to connect phenomenological concepts such as place and embodiment with conceptualisations of identity. This process was iterative as I attempted to find consistency across and within accounts that made sense from both the phenomenological and identity approaches. While connections between cases were sought, there was a focus on preserving the idiosyncratic nature of the individual cases.

5.6 Limitations and reflection

The limitations of this study were, as with much qualitative research, that the findings cannot be generalised to the wider population. Additionally, the participants were all avid people on bicycles, with three of them being involved in advocacy work, working in the cycling industry or in academia. As such in social identity terms they classed as identifying highly with their group, and it may have been beneficial to recruit participants who had a more casual relationship with cycling. By this I mean people who cycle out of necessity and how their experience may contrast with the experiences described in the study.

On reflection the combination of participatory photo-elicitation, interviews, and subsequent analysis provided a rich and detailed understanding of cycling and the participants life world. I did feel that once I had viewed the participants collection of photographs and videos the audio-visual equipment used in the study could have been improved. The first two the participants were clearly cycling while filming, despite the explicit instruction not to. The third participant noted they felt some

discomfort in while stopping to take photographs, while the fourth participant created a makeshift solution to attach their phone to the handlebars of their bicycle. As a result of these issues, providing the participants with audio-visual equipment that was of sufficient quality, inconspicuous that recorded the whole journey may have been a better solution than asking participants to use their own devices.

Finally, I found it challenging in considering the idiosyncratic nature of the participants experiences and providing an account that could link to group theories of identity. I often found myself considering everything as 'social identity' and categorising people as being a member of one group or another, rather than following their narrative to explore their experiences. While this was a challenging endeavour, the experience provided me with rich research experience of the distinction between descriptive and interpretive phenomenological enquiry.

5.7 Findings and discussion

5.7.1 Introduction

In this chapter I present the findings from the semi-structured interviews in this study. As I described in the methods section 5.5.2.5, the participants provided photographs and video of their experiences while cycling that informed the interviews. Being able to explore the participant's world through these participatory methods provided me with a rich and engaging view of their worlds. The photographs, videos and interviews revealed how the participants experienced identity as a phenomenon that changed as they cycled through different spaces. Specifically their identity moved along the personal to social identity continuum as posited by John Turner (1982). To illustrate these findings some of the photographs, or screenshots of the videos provided, are used to support the quotes from participants.

This overarching idea is explored below through three interrelated themes. The first theme explores the joy that the participants felt when cycling alone in particular spaces. This is described as a flow state and relates to the individual's personal identity. This flow state is inevitably disrupted, and I explore this interruption to

experience in the second theme. The interruption indicates a transition between a flow state and the participants personal identity, and how their experiences are shaped by both changes in the environment or due to the presence of others which makes social identities salient. This leads to the third theme, in which I explore how the built environment and presence of others makes social identities salient, with an awareness of different identities and of intergroup relations.

Across all three themes the relationship between place and identity as described by Hauge (2007) is evident as the people on bikes describe how their identities shift as they travel through different spaces, and how the interaction with the changing built environment and other users of those spaces brings forth different identities. Hauge describes how an interaction between spatiality, intersubjectivity, embodiment, and temporality, shapes the phenomenological experience of cycling which in turn shapes identity (Hauge, 2007). This is evident throughout this analysis, particularly through the phenomenological concept of intersubjectivity which is seen to be central here. When alone (i.e. an absence of the intersubjective), the intra-subjective experience of cycling results in feelings of flow as described by Csíkszentmihályi (1991). In contrast, in other spaces the physical and cognitive interactions with other people creates meaning for the participant with regards to their identity. Put simply, in spaces where the people on bikes have intersubjective experiences, social identities are made salient.

Within the following sections I draw on the subjective experience of the participants to describe the identity-based outcomes of their experiences.

5.7.2 Flow experiences in cycling

5.7.2.1 Flow and personal identity

In this first theme I explore the participants descriptions of the joy they experience while cycling. Colin describes cycling as intrinsically rewarding, that the action of riding a bike is enjoyable; *"literally it's just like just being in the being in the moment riding the bike enjoying the ride"* (Extract 66: Colin).

Colin is articulating how the intrinsic joy of the activity is motivating for people on bikes (Te Brömmelstroet et al., 2021). Activities that are intrinsically rewarding (or

'autotelic') are one of the key components of Csíkszentmihályi's original conceptualisation of a flow state. While Csíkszentmihályi emphasised the cognitive nature of flow and stated that movement is not enough to create flow, Spinelli argues that repetitive movements and increased focus on the actions of movement mean that the sense of the individual self diminishes to the point that there is no 'I' (Spinelli, 2005). In line with Spinelli's argument, we can infer that the repetitive action of cycling can contribute to a sense of flow as the cyclist loses their sense of existing as an individual in the world.

Csíkszentmihályi's conceptualisation of flow describes a mental state where an individual is fully immersed in an activity which generates intense enjoyment and intrinsic interest. Csíkszentmihályi conceptualised flow as being comprised of nine components, many of which are evidenced in the participants accounts. Specifically, intense and focused concentration in the present moment, merging of action and awareness, loss of reflective self-consciousness, a sense of personal control or agency over the situation or activity, time distortion, a challenge to skills balance, a clear purpose or goal, unambiguous feedback and the task itself being intrinsically rewarding (Csikszentmihalyi, 1991). Flow is often seen in sport as an optimal state of functioning (Swann, 2016) where elite athletes are performing at the peak of their ability in crucial moments, but here is explored as part of the participants experience of cycling and identity formation.

While it is posited that flow can also be achieved within group activities (Mao, Roberts, Pagliaro, et al., 2016) within solo activities such as cycling alone, the flow state is generally consistent with "being undisturbed/being on their own" (Te Brömmelstroet et al., 2021, pp. 12). Mao's work on the links between flow and identity are informative here. Mao posited a link between a flow state in specific activities and personal identity based on Eudaimonistic identity theory (Mao, Roberts, & Bonaiuto, 2016). Within Eudaimonistic identity theory it is proposed that activities that individuals choose to participate in contribute to the sense of self. As we are intrinsically motivated to engage in such activities we can experience, amongst other things, a sense of flow (Waterman, 2011). Mao posits that individual activities where a flow state is achieved are linked to the individuals personal

identity, whereas a flow state in social activities is linked to social identities (Mao, Roberts, Pagliaro, et al., 2016). As the participants primarily engage in cycling as a solo pursuit, a flow state would therefore relate to their personal identity.

5.7.2.2 Participant experiences of flow

The participants often report a sense of flow when cycling on their own, primarily along green open spaces that allow them to enjoy the activity without having to be mindful of potential conflict. For the participants flow is therefore experienced as a combination of the self and movement that excludes intersubjectivity and instead is rooted in the intra-subjective. Distraction acts as a mediator to achieving a flow state (Snyder & Lopez, 2005), and this notion that it the absence of others that is at the root of the flow experience for people cycling is captured here by Graham.

> Whether is where it should be like that not people do and and there are parts of the greenway where I I don't see someone for a minute or two at a time and I yeah I find that very restful and nice (Extract 66: Graham)

Graham in extract 66 describes explicitly that the absence of other people leads to the experience being “restful and nice”. At other points this interpretation is drawn out through my own observations and interpretations, particularly of the supplied photographs or video, as seen in extract 67 below.

> so the last question is about erm other people and I think what was noticeable in your clips is there’s very few of the people around you was that is that deliberate or in not not as you were filming but is that a deliberate choice of that that that route isn't there aren't constantly people around (Ian)
>
> Er truth yeah there there aren’t there aren’t often don’t know if its the time of day that that I go but (Extract 67: Colin)

Colin supplied a collection of videos, and yet seemed unaware of the lack of other people in his clips. This emphasises the value in the double hermeneutic approach, in the researcher being active in the interpretation of the experience of the participant. My observation and interpretation that there is no-one else in the videos prompting further introspection and discussion with Colin about the nature of flow.

The absence of others is primarily when we find our participants cycling along a greenway that engenders a flow state. The greenway in question is a disused railway line, two to three metres wide, and while used by walkers, runners, dog walkers and people on bikes, has plenty of space in which to negotiate other users (Figure 5:1).

Figure 5:1 Image of the greenway supplied by Graham

As a result, the participants describe a space that is therapeutic, their experience while cycling becoming almost meditative.

> A Japanese concept of forest bathing where people go for a walk in the forest and erm er attain a sort of kind of Zen state of calm, just by being surrounded by nature, and you know to a very small extent I do feel that that does apply here just because you are surrounded by greenery. (Extract 68: Graham)

While not explicitly framing this experience as a flow experience, the mediative "zen" state Graham describes can be seen as being synonymous with a flow state

and related to the action-awareness component of Csíkszentmihályi's conceptualisation of flow, where the individual is completely immersed in the task and actions feel automatic.

While cycling alone in a particular space is clearly a common aspect of achieving a flow state, the absence of motor vehicles is also important in attaining a flow state; *"from that point on for the next 10 minutes I know that I really don't have to watch out for cars just other pedestrians and dog walkers and things erm and yes it's a relief"* (Extract 69: Graham).

In Te Brömmelstroet et al.'s exploration of flow and cycling, taking a longer trip to avoid conflict with people driving motor vehicles is a strategy used to trigger "desirable mental states" (Te Brömmelstroet et al., 2021, pp. 13). There is therefore a tension between the inherent joy of a flow state and the more pragmatic desire for personal safety. While flow is a state of intrinsic motivation, safety from motor vehicles is an extrinsic motivation with the two states appearing to be diametrically opposed. The flow state can therefore be seen to be related with personal identity given its relationship to the self-image, and in section 5.7.4.1 I outline how social identities are made salient in relation to safety in contested spaces.

Flow states may also be drawn from our sensory experiences. Theories of embodiment propose that our cognitions including thoughts and emotions can be shaped by our sensory experiences, and cognitions may emerge from the interplay between the organism and environment (Flusberg, 2011).

Figure 5:2 Wide tree lined avenue with falling leaves

> Erm like these beautiful wide roads and particularly this time of year like the trees are turning …For all that I live in London this to me feels like a luxurious route …Erm and I think one of the other stills that I sent you it was a shame because it was from my ride back as I wasn't recording but it was coming up along a road and the kids were going into the school … and coming the other way so here are a couple of people on bikes but I missed like a person in a cargo bike and a dad with his little kiddies bike and the leaves were swirling around it just felt really wholesome (Extract 70: Laura)

Laura provided me with an Autumnal image of one of the streets through her neighbourhood (Figure 5:2), with people cycling and walking as the leaves start to change colour in an evocative illustration of her almost spiritual experience in this space. Laura lives directly within an LTN and captures the freedom this space engenders, again away from high volumes of motor traffic. LTN is an acronym for low traffic neighbourhoods, urban areas where motorised traffic is prevented from driving through the area, in effect preventing rat running in residential areas.

Cycling and walking is therefore encouraged in these areas due to the reduced threat from vehicles. As Laura lives in London, her experience of cycling within an LTN contrasts with the participants from Manchester where LTN's are less common.

Laura's experience illustrates how the construction of flow may be constructed in nature (Banfield & Burgess, 2013). Banfield suggests that rather than solely being a cognitive construction, flow may be an embodied state. In their exploration of artistic experiences, Banfield and Burgess found sensory experiences contribute to feelings of flow (Banfield & Burgess, 2013). In a different conceptualisation of flow, Lipscombe (1999) describes components which align with the peak experience of Maslow's hierarchy of needs, specifically the elements of great awe and bliss which can be seen in Laura's description of her experience being 'wholesome'.

We also see further aspects of a flow state within the participants accounts. The embodiment of the experience of flow is articulated in extract 71 below by Graham who encapsulates how cycling with physical freedom in particular spaces create an embodied sense of relaxation, reflected in his posture, focus and mood.

> yeah also my erm my stance changes when I cycle through this bit erm because I like to cycle this bit without my hands on the handlebars you know which is not you know probably not the the best idea I do like doing it just because it adds to that sense of freedom, but to balance then you have to sit really upright on the saddle and so you have this feeling of height as well as you're kind of flying through the greenery erm so it really does all of those things combined to make a sort of a bit of almost a dreamlike experience of it. (Extract 71: Graham)

Graham's quote in extract 71 can be related to the sense of control aspect of flow, describing how a sense of personal control exists while in flow, and that we feel able to do what we wish. In Graham's case this is to raise your hands off the handlebars and while in a flow state he feels he has the control to be able to do so. This leads to a loss of self-consciousness, a lack of concern for bodily needs as our self-consciousness disappears.

The relaxed and lack of self-consciousness in flow, can result in an experience of time distortion as seen in extract 72 from SianAnni below.

> It’s one of those kind of it's almost like erm a marker post on the way you kind of because sometimes you know when you’re cycling along erm a trail and it's just trees and shrubbery on either side sometimes you actually forget where you are. (Extract 72: SianAnni)

Cycling on the greenway the space has such a therapeutic effect on SianAnni that she relies on graffiti on disused railway hoardings to remind her that she needs to leave the greenway. Time distortion is seen as a change in the subjective perception of time, where time is seen to pass quicker, with longer periods of time feeling to have passed quickly than they had in reality (Te Brömmelstroet et al., 2021). As such, SianAnni needs certain landmarks to remind her that she has should leave the greenway, that she might otherwise forget to as her sense of the time taken to travel her journey distance has been disrupted by the flow state. Figure 5:3 below was supplied by SianAnni to show me the creative graffiti that marks many of the bridges that line the greenway.

Figure 5:3 Graffiti daubed railway bridges

As SianAnni describes in extract 72 she has become totally absorbed in the act of cycling. Her complete immersion in the activity means that it is only the distraction

of the remarkable graffiti that captures her attention and draws her focus away from the task and to external stimuli.

While Graham did not provide a picture of the graffiti, he also provided a commentary on it as an example of how the freedom this type of space allows means that people on bikes have the attentional capacity to note objects of interest, or humour.

> there's a couple of interesting things that you see along on the way as well like some some sewage works kind of filtery thing for the water system that you go past erm and various bridges with er interesting or humorous graffiti so …some of them are are proper murals [erm] … other than are just people talking about the sizes of other people's genitalia but …-depends on your cultural background but they both have a cultural value I think (Extract 73: Graham)

Graham's description of the graffiti on the bridges, complete with paintings of genitalia, demonstrate how when in flow the subject is focussed on the task in hand, only noticing what is relevant to the activity (Csikszentmihalyi, 1991). Graham is not discussing his thoughts on anything other than the act of cycling and the space that the activity takes place in.

Until now I have assumed that the participants skills matched the demands of the environment, referred to as mastery in Csíkszentmihályi's writing. At times though this balance appears to change as the demands of the environment shift. Here Colin describes how while cycling on off road trails this forces him to concentrate on the technical aspects of cycling due to the specifics of the route.

> yeah technical challenge in in traffic free areas so you know I've erm I don't know I when I'm on my mountain bike I don't want to be on a flat kind of fire track you know for too long it's kind of I want to get to the top or something take a view and then hammer it down a you know a nice technical single track (Extract 74: Colin)

Colin is describing the adrenaline rush of cycling down a route that provides a challenge to their skills, being conducted at pace on a descent. The freedom of these spaces allows the person on a bike to explore the limits of their ability and to develop their skills. Te Brömmelstroet contends that desirable mental states for

cycling can include seeking thrills or changing speed (Te Brömmelstroet et al., 2021) and are not necessarily limited to experiences where skills match demands.

5.7.2.3 The bicycle as an extension of the self

Colin's discussion of cycling in traffic-free areas (extract 74) also displays an emotional component, the thrill of "hammering" down a technical section of a route. Extended emotions such as this, alongside theories of extended cognition also provide a useful framework for exploring flow. The emotions experienced by the people on bikes can be seen as extended emotions as the bicycle provides a way for the mind and body to extend into the environment (Krueger, 2014) and together generate a flow state. Viewed as theoretically compatible with the extended cognition hypothesis, Krueger suggests that the coupling between person and object into a "functionally integrated, gainful system" (Krueger, 2014, pp. 209) enables the subject to elicit emotions that would not be attainable as separate entities. Krueger provides an example of how a musician and their musical instrument creates such as system in much the same way that Colin and his mountain bike create an extended system that generates particular emotions.

This notion that the individual and bicycle form a symbiotic relationship that shapes the experience is explored by Thrift (2005) in his work on extended cognition. Thrift explores how everyday technology is increasingly being integrated with a range of organisms, and as a result extends the cognition of the organism. People on bikes can be considered as one example of an organism and technology affecting embodiment, and relatedly spatiality (Thrift, 2005). Similarly Banfield refers to a "mutual merging of body and tool" (Banfield & Burgess, 2013, pp. 83).

Figure 5:4 A distorted shot of Laura's experience with speed bumps

Laura's makeshift solution to filming her journey provides a further example of extended cognition, where she attached her phone wrapped in bubble wrap to the handlebars of her bicycle. This mimicked an in-person ride-along interview that is often used by researchers to capture the journeys of people walking and cycling (van Duppen & Spierings, 2013). Laura's description of the physical feelings of the speedbumps on people on bikes are clearly demonstrated through the shaky and noisy footage Laura supplied to me (Figure 5:4); *"Yeah erm and so oh gosh I think I could hear myself back erm I think you might have got from the video I fricking hate speedbumps"* (Extract 75: Laura). In their discussion of extended cognition Sprevak compares the use of a notebook as a substitute for memory (Sprevak, 2019). In this instance, the phone wrapped in bubble wrap provides a functional substitute for the sights and sensations of riding a bike on uneven surfaces, and additionally provides a functional alternative to language in describing the experience of the participant.

In extract 70 I outlined how Laura described flow as embodied through her sensory experience of Autumn in London. In the previous paragraphs I have outlined Laura's shifting experiences on different bicycles as expressions of extended cognition.

While these may appear theoretically distinct, Atkinson describes how embodied and extended cognition might be "treated as a single unifying perspective" (Atkinson, 2010). Therefore, as embodied cognition can be contributory to a flow state, then so would extended cognition as part of the same unified system.

To further illustrate this relationship between the cultural object and the person, in an extended extract below (extract 76) Laura colourfully describes how her experience of cycling is shaped through the physical interaction of her body and the bicycle. I have included the extended section to illustrate how this interaction differs on different bicycles. In this extended quote Laura contrasts bikes with different riding positions, demonstrating how the extended cognition of individual and bicycle can contribute to the sense of flow.

> Erm and it was interesting, so I had for few months one of the Pendleton Somerby Somersby's …which is a very popular cheap Halfords ladies bikes erm that I bought for two hundred quid because I was having neck and shoulder pain and my physio said try a more upright riding position and it was beautiful it was like riding an ocean liner … just kind of it sweeps round and sweeps round …
>
> [So] was that was that comfort was it because you're upright or is or are they built in such a way that they they provide a bit more comfort? (Ian)
>
> I mean they're wider tyres … erm and and the saddle wasn't actually that comfortable saddle that looked like it should be more comfortable big wide padded saddle erm and there was just something about you couldn't take yourself seriously riding this bike you just like you felt you're a Princess and you should be waving at people [laugh] … and you know in terms of the kind of physicality … on the old Pendleton you could try and work hard and you'd be spinning your legs … but you'd never actually be going that fast and on my tourer I think there is more of this like oneness with the machine again partly because I've had Diana this bike for years that when I need her to go fast I do feel like we're going fast.
>
> So two things there is that partly because you are lower? (Ian)
>
> I think partly it's because you can get a further extension on your leg … so it feels like again the ped. And again, I'm not riding clipped on this one and I wouldn't normally right clipped to the pool but I do right clipped into work and so again that oneness because your foot

> is attached to the pedal that you are getting that more complete power transfer and feeling more in synergy because you're literally connected (Extract 76: Laura)

Laura currently rides 'Diana', a touring bike, which provides a very different experience between her and the traffic calming measures of a low traffic neighbourhood. Touring bikes are similar to racing bikes but have a slightly different geometry to make them suitable for long distance journeys. Laura has a sense of union with the bike, feels the road surface reverberating through her in a different way to the other bike which she previously described as an "ocean liner", whereas here the lower position means she rides faster. Laura's previous bike, the Pendleton is a Dutch style bike, also referred to as a step through bike which forces a slow upright riding style, forcing the person on a bike to take note of their environment. It is evident from Laura's rich description that the extended embodiment of the two bikes is markedly different, and the Pashley allows a sense of freedom and joy that removes her self-consciousness contributing to a sense of flow.

As discussed at the beginning of this section, while flow can be experienced in group activities, when experienced in individual activities the flow state is seen to relate to personal identity. From several different perspectives, the participants have described how they experience flow, and therefore I propose are experiencing the self as an individual as opposed to a social self.

5.7.3 The interruption

5.7.3.1 Boundaries, interruptions and presencing

In the previous section I explored how particular spaces, and often the extended cognition of person and bicycle, produce a range of different meanings, emotions, and feelings. This confluence is manifested in a flow state and a sense of personal identity. In section 5.7.4.1I explore clear differences between the experiences of the person on a bike as they move from the relaxed aspect of the greenway to the focussed anxiety of contested space, and how this links to social identity.

However, there is an awareness from the participants that there are places where they experience a transition between the different types of space and a less conscious but inferred transition between personal and salient social identities. Additionally, there is evidently a range of emotions and meanings associated specifically with the transitions. What became apparent in the participants narratives as they explored these spaces was that they often knew these changes were occurring. That is, at the point of transition between spaces, and sometimes in the moments leading up to them, the person on a bike notes a change in their emotional or physiological state. In addition to the discussions of the transition between spaces, many of the participants commented on their destination as a phenomenon of interest. Rather than being points that distinguish the end of the journey, they are included here as another form of transition.

These transitions can be considered as interruptions, as the person on a bike experiences the boundary or transition as marking a temporal interruption in experience in which the subject experiences a disruption to the flow of experiences (Dawney, 2013). In this sense these transitional spaces represent a disruption to the relaxing experience of the greenway.

Rather than something being experienced at the exact moment of change, for some there is a sense that the transition is impending.

Figure 5:5 Segregation disappearing as person on a bike approaches a junction

> Erm so yeah and it's just the yeah the segregation disappears at the junction so whenever you're approaching the junction like here just a little bit on edge erm you know because I've been sideswiped several times like you know cars turning with no warning no indication or anything like that so. (Extract 77: Colin)

Colin describes how the experience of the transition between a segregated section and the busier section alongside urban traffic is focussed more on a sense of foreboding rather than the transition itself (Figure 5:5 Segregation disappearing as person on a bike approaches a junction). It is notable in the accounts of the participants that there is often a sense of foreboding as they approach transitions or boundaries of spaces, embodying the space beyond or horizmos rather than the boundary itself (Malpas, 2012). In line with self-categorization theory, changes in context can make different social identities salient (Abrams & Hogg, 1998), and here the mental context appears to change before the physical context does, resulting in a shift in identity before the physical space changes.

Heidegger conceptualised boundaries as not only something which bounds a space, but also as a place where we begin to sense the space beyond, we being to experience a presencing (Malpas, 2012). Therefore, if the space beyond is a contested space, then it follows that at this point of interruption the participants are experiencing an embodied shift from a space where personal identity is salient to a space where social identities are made salient.

5.7.3.2 Places for transitions

There are further experiences that frame the transition as a point where the flow of experience is disrupted. For example, as participants anticipate changes in the built environment at the transition point it brings about an awareness of their skill on a bicycle, from negotiating a tight junction to a steep climb.

Figure 5:6 Descent along segregated cycleway

Figure 5:7 Incline away from "bottleneck"

See you know you kind of get that like I said that view is quite nicely segregated away from traffic but then you go into this almost like this bottleneck where there's the potential collisions erm you know

> and then you're almost starting from no speed going into that 7% climb er and they previously used to be cobbles as well (Extract 78: Colin)

Colin is describing a relaxing and calming point on a segregated cycle path with a view of his local town, to a steep climb in a different section. The two images above show this transition from two different sides. In the first image (Figure 5:6) Colin is on the segregated cycle path, about to descend. In the second (Figure 5:7) he has negotiated the transition, climbed the short hill, and turned back to record the experience. As can be seen in the second image, the "bottleneck" is at the bottom of the hill marked by several bollards, where Colins speed is reduced to almost stationary, and he must navigate the turn into the climb.

Similarly, SianAnni notes in the transitional spaces where she leaves the greenway to join a local road, that the exit requires both skill and physical effort to negotiate (Figure 5:8).

Figure 5:8 Challenge to skill during transition

> And unfortunately to leave the trail there there's there's quite a sharp upward bend and the cambers makes it impossible for me to cycle up so [laugh] every time I think will I get to the top … [this] time or will I end up having to push my bike and I've not managed to

> make it through top to the top yet, so there's a bit of a personal challenge going on there (Extract 79: SianAnni)

SianAnni is conscious of the short uphill section, and how this interruption to her journey along the greenway is “unfortunate”. Colin and SianAnni both describe how in the transitional spaces they are required to draw on a greater set of skills as a cyclist due to the design of these transitions. The people on bikes become aware of their self-efficacy during these transitions, as the skill required to transition from one space to another often requires more skill than riding normally does.

This demand in skill due to barriers, other people, or changes in the built environment presents another facet of the shift from personal to social identity, whereby the person on a bicycle experiences a disruption to the sense of flow. While in the conceptualisation of flow there is assumed to be a balance between the perceived challenge of the task and the perceived skill of the individual, this definition is ambiguous. Csíkszentmihályi suggests that if the task is too difficult there is a loss of confidence and anxiety ensues and there are distinctly different responses from the two participants. For Colin this challenge is met, whereas for SianAnni it appears slightly beyond her capabilities. Irrespective of how the participant feels about the relative levels of challenge, we can see from these quotes that at the point of transition the person on a bike is cognisant of the change in their emotional and physiological state. This shift supports the earlier assertion that different spaces result in different embodied feelings and that the transitions precede the space to follow.

As a contrast to the experience of transitions as described by Colin, SianAnni describes one of the transitions that is characterised by intrigue or expectation.

Figure 5:9 Excitement at prospect of the unknown

SianAnni provided an image showing a curve in the path (Figure 5:9), into an area that is out of sight to the person on a bike which she describes as; *"it's another nice bit there's a bit of excitement cos' you know you can't see what's around the corner erm"* (Extract 80: SianAnni). As SianAnni rarely mixes with traffic her emotions during these transitions are not linked to the threat of motor vehicles beyond the transition, or of a move away from the solitude of the greenway. Instead, the transition is of movement between different sections of the greenway. Psycho-geographers have described how the feeling of exploration in urban spaces has been lost, particularly in urban environments, with tools for navigation such as maps, and car-dependency meaning that journeys are reduced to a movement from one place to another (Kim, 2021). SianAnni's experience of the transition is one of intrigue, rather than the sense of trepidation seen earlier from Colin in extract 77, and there is not the sense of a shift in identity in the same way that Colin experiences.

As I have explored here, the transitions between different spaces have meaning attached to them as much as the spaces before and after the transition. The

transition or interruption disrupts the flow of experience and shifts the individual from one set of experiences and meanings to another.

There is also a sense that destinations may act as transitions between experiences and identities. Graham and Colin discuss the destination as a point that demarcates the journey from other activities. In one sense it is a transition from one part of the day to another, although as Graham alludes to it is not just the physical space that marks that transition, but the act of cycling that separates different parts of the day.

Figure 5:10 Graham's destination

> But I do like that it erm it has divided the day between work and leisure in not just a way of now I turn away from my computer and I'm sat in front of the TV instead erm but not only have I changed scene but erm I've had a bit of an exercise my heart rates gone up

and erm yeah my I've been out in the world and I've seen new things (Extract 81: Graham)

Graham sent me a photograph of their workplace (Figure 5:10), which is informative as they were asked to provide video of photographs of the elements of their journey that were important to them. Graham sees the commute, and by implication the destination, not as end points but as places that mark transitions within the day. In a similar manner to the transitions between different spaces, Graham notes that commuting by bike "divides" the day.

5.7.3.3 Changes in the embodied experience

Within this transitional space, not only is the physical space changing, but the embodied experience of the participant is changing as well. For Graham the arrival at work provides a separation of different parts of the day. For Colin, the arrival at work provides a new and discrete experience (Figure 5:11), marked by relief that the journey is over without incident.

Figure 5:11 Colins destination

This is where you just have that big big breath again and relief gen/ genuinely like when I get to work I just feel relief and you will I think it's probably more relaxing because you've done it you're at work made the journey like I I don't want to make out like I'm massively

> stressed about my journey, but there are some elements of it that just you know you're never sure what's gonna happen. (Extract 82: Colin)

Colin experiences the transition as a shift in experience, but rather than experiencing a change from relaxed to an alert state, here the experience moves from alert to relaxed and even joyous. This idea that as Colin arrives at the destination, he feels safe, grateful, or relieved for arriving there is in line with the descriptions of threat that they feel cycling in motorised spaces. As Colin arrives at his destination this release of emotion reminds us that emotion, place and person are inextricably linked, with emotions being attached to places. Additionally, these places which we attach emotions to are embodied within the individual (Boudreau et al., 2022).

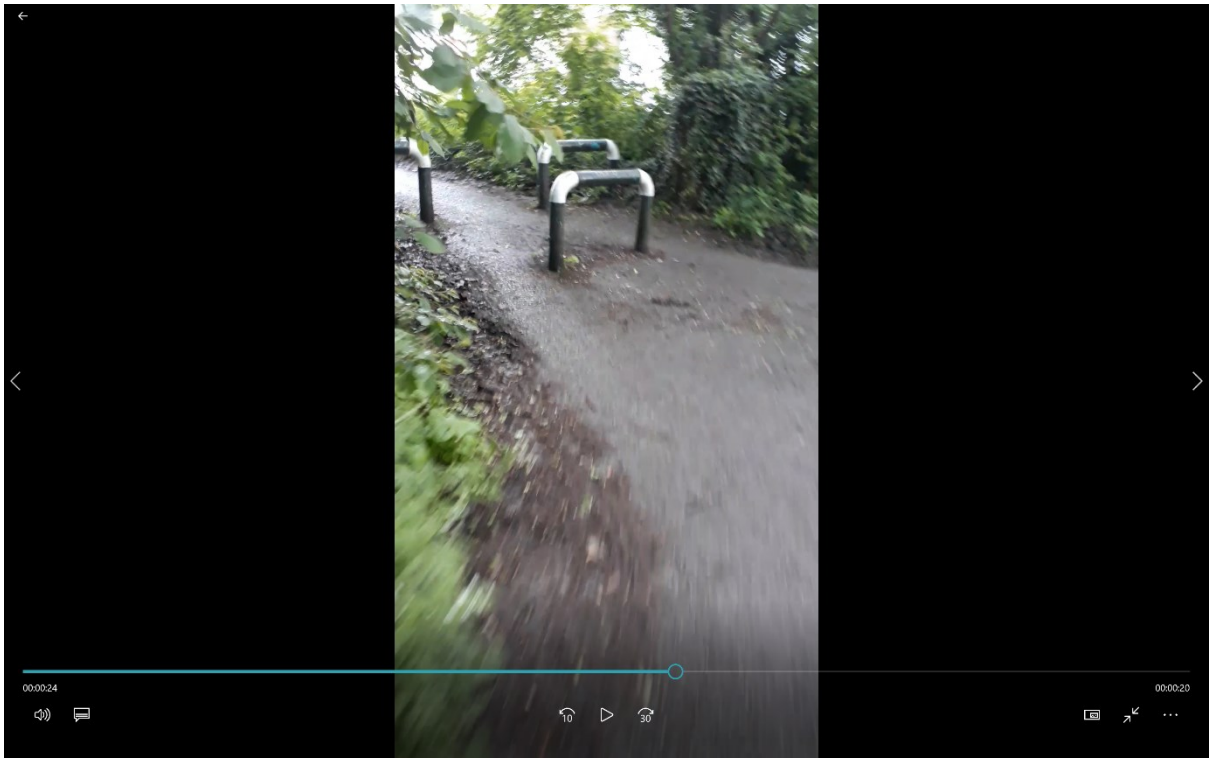

Figure 5:12 Transition between spaces

> Erm I suppose it was the transition from nice to not nice … [I'm not] saying that about these peoples homes or anything like that but it's just a different environment it's not protected it's not erm off the beaten track as it were erm very often well in the past there's been a car parked right where the right where we're looking at the moment

> right where the path joins the road … [erm] so immediately you're snapping back to that higher alert level (Extract 83: Graham)

Graham's video of the transition (Figure 5:12) between the greenway and the local urban roads described here is used to explore how he feels at the exact point of transition. Graham verbalises that it is the transition that is the point of interest here where he moves from the greenway into an area that is "not nice", with badly parked vehicles and a resultant shift in affect to an "alert" level. Graham is describing an embodiment of the transition, or at least an embodied sense of the before and after.

5.7.3.4 The intersubjective transition; from personal to social

These transitions may not be solely about shifts in experience, but in relation to identity, particularly from personal to social. Below SianAnni focusses on the intersubjective element of the transitional space as much as what comes before and after.

Figure 5:13 Transition space with others

> But there's also an awareness that there's a tricky bit of negotiation before actually getting onto the trail so there's it's this kind of in between place and I like it because it's erm almost like an interchange with public transport there are bike lockers and things down there for people to use. (Extract 84: SianAnni)

The place SianAnni is describing is a place where she leaves local roads and goes down a short track before negotiating some barriers to join the greenway (Figure 5:13). This is therefore a different type of transitional space, and rather than something to be feared or representing a shift in affect, instead is a place to be celebrated. This sense of community in the transitional space shows us how the person on a bicycle experiences a shift in identity at these junctures from personal to social and then personal again. Dawney's (2013) exploration of the interruption, and the related shift in identity, demonstrates how an interruption in experience is realised in affect and subjectification. In Dawney's view the interruption of

experience produces an affective and subjective response, which shapes experience and identity (Dawney, 2013) here from personal to a community based identity.

5.7.4 Cycling as a social identity process

5.7.4.1 Making social identity salient

The transitional spaces therefore provoke a shift in both experience and identity through the interruption. As detailed earlier Hauge's description outlines how interactions of spatiality, intersubjectivity, embodiment, and temporality form the phenomenological experience of cycling that shapes identity processes (Hauge, 2007) and these facets are drawn on further in this analysis. Additionally, Tajfel states that in order for social identities to become salient "the social situation must be such as to allow for intergroup comparisons that enable the selection and evaluation of the relevant relational attributes." (Tajfel et al., 1979, pp. 60). In the changes we see through the phenomenological experience of the participants different social identities appear to be being made salient. In contrast to the flow state and personal identity in isolated spaces away from others, social identities are made salient in places primarily through an interaction between the participant, space and the presence of others (Cresswell, 2006).

This is often in contested spaces, which can take different forms depending on the nature of the built environment. Contested spaces ostensibly sit within the public realm, where there is an "intersection of conflicting interests from different social actors." (Stutts et al., 2020, pp. 159). In other words, what we consider public space is in fact contested between competing groups with different needs. Within the transport domain we can see this within space where the needs of pedestrians, people on bikes, and people in cars are competing. As such different groups socially construct the space in different ways, with people on bicycles in particular seeing roads as being ideologically and physically dominated by cars (Stutts et al., 2020). As these spaces are social constructions, group identities are similarly "constructed and reconstructable over time and place", and not fixed to a particular place (Murtagh, 2018, pp. 440).

Contested spaces exist in different forms and are commonly experienced by the participants as shared space where the intersubjective experience contributes to different cognitions. Specifically, the participants are now less focussed on the individual experience, and instead on how their identity as cyclists is disrupted through the presence of others. The flow state and solitude of the greenway has evaporated, and instead they are aware of the presence of others.

> There were families out there were dogs wandering across the paths, there were other people on bikes kind of bombing through ringing their bells and it the whole experience was just really erm it wasn't stressful but just not very nice at all. (Extract 85: SianAnni)

SianAnni in extract 85 above outlines how shared space is "stressful" and Colin also describes shared spaces as a "nightmare".

Shared spaces are pavements and paths that councils designate to be used by both pedestrians and people on bikes. This mixed use makes active travel solutions affordable for councils, but for people on bikes they represent an obstacle to being able to progress along their route unhindered. While the greenway is a shared space, the width and length mean that conflict with other users is rare. While shared space provides similar space away from people driving motor vehicles, it can be a double-edged sword, in that it can lead to potential conflict with pedestrians and other people on bikes. For our participants, while the physical space of shared space is away from traffic, the more compressed space and presence of others makes the experience stressful. This intersubjectivity on a physical level has created a different embodied experience, related to their identity as a person on a bike, relative to the other users of that space.

We also see social identities being made salient in Quietways and Low Traffic Neighbourhoods (LTNs). Quietways are suburban routes for people on bikes designed to include quieter streets, avoiding busier roads that naturally carry greater numbers of motorised vehicles. LTN's are areas that through the judicious use of traffic filters, cul-de-sacs, traffic calming or layout changes, prevents areas being used for through traffic. While technically differentiated both Quietways and LTNs are on carriageway routes that carry less traffic but do not rely on segregated

infrastructure. In extract 76 Laura described her flow state while cycling along a Quietway, demonstrating that these spaces can be conducive to flow states although they remain contested spaces.

Colin arguably cycles on more major roads than any of the other participants, and therefore his experience of these spaces highlights how anxiety inducing they can be. To minimize his exposure to busy roads, Colin often opts for Quietways and in extract 86 below describes the experience of moving from Quietways onto busy roads.

> Yeah even when you even when you come off that that quiet estate from the previous section you do have a bus lane down to this roundabout, sorry roundabout traffic lights and this is where you where where it changed and there's a erm you know a real feeling okay now now I need to protect myself, now I'm in danger you know I don't I don't I never feel it in the bus lane bus drivers aren't you know the bus drivers aren't aggressive erm cars well if you ride you're in there at the right time of day that that you know they're not coming in hasn't always been the case like it you know on the main road further down close to the town centre I've had I've had some issues in the bus lane before but generally you feel okay you're carrying a bit of speed you're still feeling alright but now yeah this is where it all protection ends erm I've just had so many close passes on this er stretch going down to the next town centre erm (Extract 86: Colin)

Colin explains how when leaving the Quietway he now feels he needs to adopt strategies that protect himself against the risk of collision due to the lack of protected infrastructure. There is a similar description of feeling an increased threat in this space and the need to protect himself as we saw from Graham, but here Colin uses the adjective "dread". It is in spaces such as this that create jeopardy for people on bikes, and they clearly articulate that anxiety in their accounts.

Therefore, I suggest that in these contexts the participants have shifted along the personal-social identity continuum, away from the flow state that reflects personal identity to a social identity. The social context provides actors with information as to which social identity is most relevant at any given point (Ellemers et al., 2002), and the feelings of threat makes the participant's group identities salient in these spaces.

When people on bikes move into areas where there is no protection from motor traffic, the experience shifts distinctly. Rather than enjoying the experience, the embodied world of the person on a bike becomes much more tense, stressed by the inherent danger of this space. This sense of threat results in a different embodied experience between the motorised space and the more upright cycling posture adopted on the greenway and is captured by many participants who describe the need to protect oneself in motorised spaces against the behaviour of people driving motor vehicles. Graham explains how he has feelings of dread, and that everything has changed. In these spaces epitomised by this threat the participants adopt different riding positions as Graham describes.

> My bike has straight handlebars rather than racing handlebars but in a on a previous bike I use for many years they had racing style drop down handlebars and erm my posture was a complete sort of C shape with my back bent and you know hands quite low and I think I probably gave myself a shoulder injury over the years by carrying the weight of my body in my forearms like that [erm] …So now I have a more upright bike in general but still obviously you have your hands on the handlebars and you're holding some weight in your hands erm and generally the worse the weather conditions are or the busier the road is then the closer you go to the handlebars, you sort of hunch down so you have the most power available to you if you need to get out of the way you you there's no question that you'll be able to change direction really fast erm and sometimes just to reduce the wind resistance if the the winds really against you erm and so to go from that to a sheltered section of cycling where you can sit completely upright like that is erm is a massive physical relief on the body (Extract 87: Graham)

In a similar manner to the exploration of extended cognition in extract 76, Graham here describes the embodied experience of different bikes, but he elaborates how this is defined by the space, and the interaction with environmental elements such as motor traffic. Graham's experience is therefore rooted in the intersubjective, relative to others in contrast to Laura's intrasubjective experience. The threat from motor vehicles makes Graham change his position on the bicycle, getting closer to the handlebars making it easier to manoeuvre and generate power. This change in the embodied experience is a further reflection of how in urban spaces where there is a greater threat to the self, the individual has left behind the sense of flow in

safer spaces and rather the embodiment of the space is related to their social identity.

5.7.4.2 Not just a cyclist

In previous sections I outlined how individuals experience different spaces, and how from flow to intersubjective experiences the individual moves along the personal to social identity continuum. The participants in this study are people who identify strongly as people on bicycles, and by virtue of volunteering for this study may reinforce the perception of people on bikes as a homogenous group. Here I discuss how the participants not only outlined a shift to a social identity, but how their experience of cycling leads to different social identities being made salient in different places and therefore the heterogenous nature of social groups.

Being a member of the community was noted as one identity relevant to both Graham and Laura in their accounts. Graham's articulation of this identity leans heavily on the intersubjective experience. Graham suggests that cycle lanes that run through places are a good way to integrate cycling within the community. There is a contradiction in that Graham enjoys being away from others while cycling on the greenway but does not subscribe to the view that cycle lanes away from communities are necessarily an optimal solution.

> it feels like there's a ( ) sense of community … And it feels human (Graham)

> Yeah so you're not being you're not dissuaded by other people being around when you cycle you don't choose routes that are away from people is what I'm getting at? (Ian)

> No, I mean I guess the ideal is you have a segregated cycle way alongside a you know busy thriving community erm but er that goes that doesn't sort of rule out the attraction of the Fallowfield loop which there are fewer people on but erm you're getting something else from that you're getting this er sense of nature (Extract 88: Graham)

This is in line with the personal-social identity continuum discussed previously. Graham enjoys the flow of the greenway, while his identity as a person on a bike in

mixed environments is one of a community member, of someone who values the intersubjective experience.

Concepts of how community and sociality are formed have been contested within phenomenology since Husserl's original conceptualisation of phenomenology (Zahavi, 2018). However, post Husserlian phenomenologists commonly see the individual as intersubjective. While beyond the scope of this discussion, Heidegger saw the lifeworld as being inherently social. He argued that the concept of Dasein, our existence and experience, is not simply of being individuals that reach out of our subjective experience to others, but that we are inherently part of an experience of different communities within which we "encounter and converse with one another" (Peperzak, 2000, pp. 55).

Similarly, how intersubjective experiences constitute social groups has been discussed throughout phenomenology's history. Chang and Jetten (2015) extend the idea that intersubjectivity constructs communities and consider how intersubjectivity relates specifically to social identity theory. Their view is that both frameworks share the idea that "it is shared representations (or consensual views that constitute social reality) that shape psychological processes." (Chang & Jetten, 2015, pp. 1293) and therefore their view is that the two theoretical frameworks are complementary. This particular work from Chang and Jetten is in cultural identity and not social identity theory, and they note important distinctions, specifically in the conceptualisation of prototypes within the two frameworks which depends on whether they are the result of intergroup comparisons or not. In social identity theory they are and are therefore highly context dependent, while in cultural identity they are not and are therefore more stable. However, Jolanda Jetten's wider work is around social identity theory, and they suggest that recent theoretical developments have drawn the two frameworks closer together. Therefore, intersubjective experiences can be seen to inform identities as part of the lifeworld, particularly the social identities made salient through interactions with others.

While this may explain how communities form through the intersubjective experience, meaning is also attached to a place as somewhere 'community' occurs. For example, in some areas the participants have a greater sense of identity linked

to the area where a sense of community and belonging prevails. In Laura's rich description of the LTN that surrounds her home she describes how the norms and historical elements are reflected in her identity as a member of the community.

Figure 5:14 Community feelings generated by the LTN

> and I think I said on one of the narrations it's been an LTN since 1979 1980 it's one of the longest standing of LTN in the country put in these big black traffic barriers because it was a red light district and there was loads of kerb crawling … so it was never er removed well it was a remove cars but never a there's too much traffic it was a stop kerb crawling intervention erm and I've lived I cycled past the old flat and the new flat is kind of 150 metres up the road so I've lived here for getting on ten years this is my (ends) like I belong here and I know most of my neighbours don't drive, most of my neighbours walk and cycle it's a bit like, so I kind of think my kind of formative identity as a cyclist probably came from the fact that I studied in Oxford and I lived in Oxford for a few years after I studied and Oxford is a type of place where so many people cycle that you get a meeting invite and it would tell you where the bike parking was… Cos it was assumed that you'd be coming on a bike and that kind of vibe I think is similar for the middle class white person bubble that I live in in my village like I used to erm be a school governor for a long

> time and half of the governing body would turn up on bikes and we'd bring our bikes into school again I kind of idea that cycling is normalised (Extract 89: Laura)

Laura provided a photograph of parents and children walking to school and described the normalisation of cycling within her community (Figure 5:14), beyond just those who are advocates for cycling. The LTN that Laura lives in has a rather unique history, with barriers being erected in the 1970's to prevent prostitution. Laura's description of this place therefore has various meanings attached to it, and these emplaced meanings relate to her identity as a member of the community, as someone with a knowledge of the history and practices of the place. As Laura rides through this space her identity as a community member is made salient. Theories of emplacement have discussed the reciprocal relationship between body, mind, and environment and as such our interaction with place shapes identity as much as we ascribe meaning to places (Seamon, 2017).

This is not to say that the place, its meanings, and Laura's identity are fixed relative to each other. Cresswell suggests that places aren't static, rather they are constructions over time through the "repetition of seemingly mundane activities on a daily basis" (Cresswell, 2015, pp. 109). The repetition of cycling as a means of transport allows Laura to reflect on the place, its norms, and its history, and how the place has changed over time. If places are not static in their meanings to us, then identity as a product of an interaction between subject and actor would not be static either. Additionally, if people on bikes are able to interact with the environment and others to a greater degree than motorists (Gatersleben et al., 2013) and these interactions shape identity, then it follows that identity salience will shift to a greater degree for a cyclist than it would for a motorist.

This is evident through the accounts of Colin and Laura who demonstrate that they both have an expertise in cycling through their work – that cycling is not just an activity.

However, their identification as a person on a bike manifests in different ways. Laura told me that; *"[they] are expensive houses and I know that you know in my village less than fifty percent of households have a car"* (Extract 90: Laura). Laura's

work as transport researcher makes her aware of the shifting demographics of the area, the relationship to levels of car ownership, and transport habits. This then is a different identity to that of the community member Laura was describing earlier, despite the environment not changing dramatically. Laura also made me aware of the risks associated with cycling in this quote; *"again I think partly because of my transport head looking at it from a risk based approach if I die on the streets of London I am far more likely to die from a driver on a mobile phone than being murdered by a random stranger in a park [laugh]"* (Extract 91: Laura). Laura clearly knows the statistical risks associated with cycling and being murdered which reflects her knowledge of both cycling as an activity, and of being female living in a busy city. Within the short 20-minute journey Laura is therefore shifting through various salient social identities such as community member, transport expert, and female. Antaki et al. (1996) have explored how social identities are made salient in talk, and are not just cognitive constructions. They note that identities change in response to the current point in the conversation, and within Laura's account she draws on several different social identities in the interview that are being made salient through the interaction.

While Laura adopts a more sociological perspective of the area she was cycling through, Colin below reflects on the nature of the built environment from a technical perspective.

Figure 5:15 Poorly designed infrastructure

> I wouldn't say it's yeah I'm not very you know very uncomfortable but it's a weird sensation going round to the left and then and then looking over your right shoulder you know just it just it just it doesn't feel right you look at it, why have they done that, they've made it worse they redesigned this junction they made it worse than it was before. (Extract 92: Colin)

The image of the junction that Colin describes is a wide sweeping junction (Figure 5:15). It does have a segregated cycle lane, but the design still allows people in cars to negotiate the junction at speed while the cyclist is taken away from the junction. Notably Colin is describing how the sensations associated with this junction are leading to thoughts about the built environment. Colin's embodiment of the built environment makes salient an identity as someone with a relative level of expertise in this domain.

For both Laura and Colin, there is more technical language about cycling infrastructure, and a greater awareness of the marginalisation and dangers of cycling on roads, partly due to their occupations. This is not a reflective account of what they think about cycling, rather these are identities made salient as they cycle through different places.

For other participants the identity made salient is one of activism, such as SianAnni who is part of a local advocacy group and campaigns for better walking and cycling infrastructure and described this aspect of her life; *"I've actually been involved in erm a local local walk ride group and we've met with TFGM and erm they agree that something needs doing about them because they just mean it's not accessible to all users"* (Extract 93: SianAnni). SianAnni is reflecting on the barriers that are placed at the entrance and exits to cycle routes that can be prohibitive for anyone on non-standard bicycles, or for wheelchair users. In this space SianAnni is reminded of campaigning work she has been involved in to have the barriers removed to make the routes more inclusive. As such, the presence of these barriers makes the activist identity salient, giving it meaning in attaching it to this specific place.

While SianAnni's identity as an activist is made salient when she moves through a particular space, Laura describes how the idea of the destination results in feelings of joy and physical sensations as they cycle towards it. Laura experiences an embodied identity as a swimmer, related to her destination, the lido where her swimming lessons would take place (Figure 5:16).

Figure 5:16 Laura's destination – open air pool

> Erm so there was that and I remember like in lockdown when the pool was closed I had some reason to go to near the pool and I could almost feel like my legs and my bike pulling and being that we're going to the pool we're going to the pool and being like no guys we're not going to the pool we're not going to the pool today [laugh] (Extract 94: Laura)

Laura and Colin are engaged in work and leisure activities that are important facets of the self and therefore the destinations have particular meanings linked to specific identities. Destination and identity are often linked in literature on pilgrimage, as the journey to the destination is seen to be valuistic, that is the journey is not for recreation or cognitive purposes but is linked to the values of the individuals personal or social identity (Liutikas, 2017).

Identity salience is not however limited to perceptions of the space, others, or the built environment. The route and associated space has additional meaning for Colin when he describes passing the abattoir; *"Erm you know it's cos its quite quite bland it smells like you know I'm a vegetarian so the big er lung full of dead animal er [laugh]"* (Extract 96: Colin). Colin continues to use it despite his aversion to the smell from the abattoir that this route passes. Olfactory embodiment as discussed by Hockey and Collinson (2007) can provide evidence for a salient identity. In this case the identity is as a vegetarian, with a further attribution to their identity as an environmentalist rather than a personal identity.

We also see additional identities being made salient in the space of a few hundred meters. Following the transition point on Colins route from a bottleneck to a climb, we can see how their identity as a sporting person on a bike translates into intimate knowledge of the gradient of the hill; *"there's the potential collisions erm you know and then you're almost starting from no speed going into that 7% climb"* (Extract 97: Colin).

In the image where Colin had cycled past the bottleneck (Figure 5:7) he provided me with an image of a relatively steep hill. In his exploration of embodiment in social psychology, Meier outlines how older people in declining health perceive a hill to be steeper than they are, indicative of their physical capabilities (Meier et al., 2012). Colins knowledge of the gradient of the hill may not be common

terminology, and therefore his identity as a competitive cyclist is reflected in his embodiment of the physical capabilities required to cycle up this hill.

We have seen several identities being made salient for our participants, and throughout these accounts there is a sense that the participants share overarching values as an environmentalist. Sometimes this is explicitly stated such as this quote from Colin; *"so even as an environmentalist I've still got that childlike fascination with planes"* (Extract 98: Colin). Colin states that he is an environmentalist, related to his choice of bicycle as his means of transport, and his vegetarianism. Graham implies this idea through his sympathetic understanding of the greenway, not wanting to see this space urbanised and lose its inherent appeal; *"which would make people feel safer without destroying the feeling of the of the place entirely"* (Extract 99: Graham). While Graham is not explicitly stating that he is an environmentalist by stating that he is aware of how lighting may affect the environment of the greenway he is displaying a sensitivity to the natural environment. It is perhaps notable that Graham is reflecting on the greenway as a space, a place where he often experiences a flow state related to personal identity. However, as this interview was conducted online during the pandemic from his workplace, Graham is not engaged in the activity that invokes a flow state, and the personal identity. Instead, through our conversation his values relating to the environment are being made salient, in line with the previous discussion around identities in conversation (Antaki et al., 1996).

Therefore, through cycling in different spaces and interactions with others the person on a bike experiences a shifting of various social identities. As Colin alluded to, the cocooned person driving a motor vehicle may experience only one identity during their journey due to the lack of interaction with the environment and other people. The participants are therefore moving effortlessly from personal to social identity, and through various salient social identities, including superordinate social identities such as an environmentalist, all in relation to the interaction with others in place.

5.7.4.3 *Intergroup behaviours*

Through the exploration of the personal to social identity continuum, and the saliency of various social identities, I have shown how people on bikes view themselves as in-group members relative to people driving motor vehicles. This is particularly acute when they encounter threats, such as poor infrastructure, or inconsiderate driving. Here I explore how the experiences manifest as intergroup behaviours.

Central to social identity theory is the concept of group membership, of membership of an in-group, and of a referent out-group. These are the groups that are drawn on to make comparisons. In describing the vulnerability of pedestrians and people on bikes in contested spaces the participants are clearly aware that the road system is primarily built for motor vehicles, and further, is built by people who are motor vehicle drivers themselves. In extract 100 Colin makes clear that motorists are the referent out-group for people on bikes.

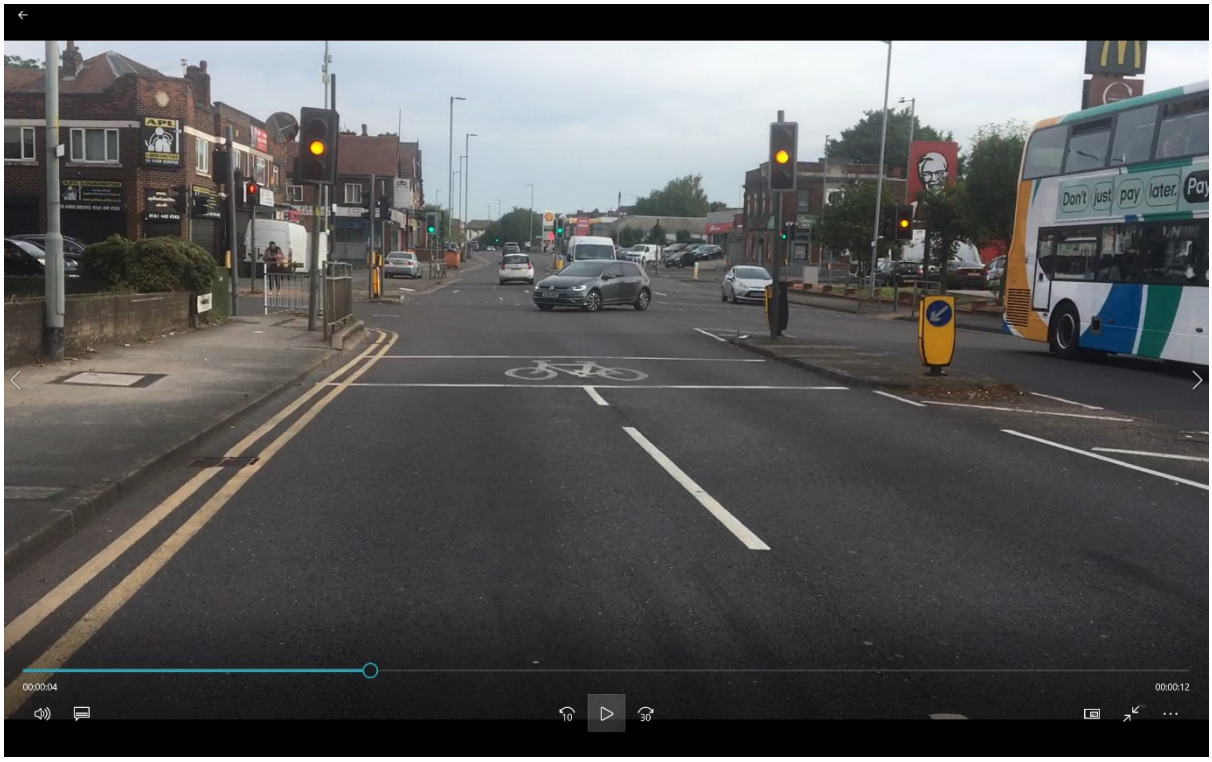

Figure 5:17 Busy junction along Colin's route

> this is where you where where it changed and there's a erm you know a real feeling okay now now I need to protect myself, now I'm

> in danger you know I don't I don't I never feel it in the bus lane bus drivers aren't you know the bus drivers aren't aggressive erm cars well if you ride you're in there at the right time of day that that you know they're not coming in hasn't always been the case like it you know on the main road further down close to the town centre I've had I've had some issues in the bus lane before but generally you feel okay you're carrying a bit of speed you're still feeling alright but now yeah this is where it all protection ends (Extract 100: Colin)

Figure 5:17 is a still from the video Colin provided that shows the first busy section of road. In the accompanying quote (extract 100), he describes the change in the built environment, that he is now no longer offered any protection. The use of the term 'protection' highlights the vulnerability of people on bikes in this space. Colin can clearly identify the threat as coming from cars and not from buses. As discussed, social identity theory posits that in-group members draw comparisons with a referent out-group (Turner, 1982). Colin is making a comparison along the dimension of vulnerability between his in-group, people on bicycles, with people driving cars. This suggests that for a person on a bicycle the referent out-group is people driving cars, rather than a homogenous group of people driving motor vehicles. Drivers of cars and bus drivers are categorised differently, and because of this categorisation Colin is anxious about the behaviour of people driving cars yet sees the "professional" bus drivers as not being aggressive.

Colin has articulated the group that he consciously views as the out-group, and his recognition of the out-group is further reflected in the effect the out-group is having on his cycling experience. For Colin, the embodied experience makes it evident that different considerations are being afforded to different groups of transport users. In extract 92 I described how Colin's embodiment of the built environment reflected a particular social identity. Colin described the poor infrastructure design where we clearly see the priority for people driving motor vehicles and the effect this has on the experience of people on bikes. Colin detailed how as he approaches the junction along a segregated section of cycle lane, rather than carry on directly and require the person driving a motor vehicle to give way to people on bikes, the cycle lane takes a sharp left turn and crosses the side road four or five meters away from the main road. As a result of this design the person on a

bike feels a strange physical disquiet as they must look back over their shoulder to see if any traffic is turning off the main road onto the side road.

Colin is clearly aware that the design of this section of infrastructure has been designed by someone without an awareness of the experience of cycling. Instead, they have prioritised the movement of motor vehicles through the design of a wide sweeping junction. Sachdev and Bouris study of 'usable power', that is control over resources, explores this concept within the social identity approach. They found that dominant group members will allocate more resources to the ingroup when they have control over the allocation of resources (Sachdev & Bourhis, 1985). The allocation of resources is mirrored in Colins description of local authorities' refusal to remove space from motor vehicles; *"the route that the council have identified instead of tackling the main road this is like their main route"* (Extract 101: Colin). Colin is describing a route which was designed by his local council as a primary route during the covid-19 pandemic. As the population was under lockdown there was a responsibility on local authorities to provide more space on roads for walking and cycling. However, Colins local authority failed to reallocate space and instead used a parallel route that takes people on bikes past an abattoir, up a steep hill and along isolated paths. While this is a quiet route it is isolated and often unpleasant, and for Colin reflects the local authorities view of people on bikes, that they are not valued enough to be allocated direct routes.

This notion that the design of our built environment is conducted primarily from the point of view of people in cars is echoed by SianAnni, who describes how infrastructure is built as though all people on bikes are a homogenous group; *"[because] of where they are and the places I tend to go to … So you know I mean they they all tend to take you into the city centre"* (Extract 102: SianAnni). SianAnni's comment that cycle routes are generally into city centres implies various assumptions are being made by experts within local authorities, such as the gender of people on bicycles, and the nature of their journeys. It implies that it is predominantly men who are cycling into urban centres, rather than females who have greater caring responsibilities and might need routes nearer to home or schools (Cosgrave et al., 2020). The inference here is that the design and planning

of cycling infrastructure is being conducted by a person driving a motor vehicle, and as members of that particular group, assume that the out-group (people on bikes) are a homogenous group all with the same needs (Postmes & Branscombe, 2010). As discussed in section 5.7.4.1 on salient social identities, this ignores the heterogenous nature of people on bikes as a wider group that includes commuters, activists, transport users, parents, and leisure users.

Similarly, we see the assumptions about people on bikes in Graham's comments about the greenway, and the vulnerability of those who use this space.

> And I have used the greenway at sort of 9 or 10 at night before and that does have a definitely different feel erm where I would be probably going faster erm to try and sort of get through it and in case I do encounter someone a along the route who's up to no good then I can be passed them before they have a chance to do anything (Extract 103: Graham)

Graham's empathy demonstrates an understanding that other more vulnerable social groups would be excluded from this space at certain times, reinforcing the idea that this infrastructure is being designed from the consideration of the more powerful social group that do not consider the needs of various sub-groups.

> if I was a woman cycling on her own outside of daylight hours then I wouldn't feel that level of relief because you know I sh. would would be asking myself whether the greenway was a sensible route to use because it's relatively untraveled and not lit in loads of parts (Extract 104: Graham)

It also presents a paradox in that people on bikes use this space to feel safe as a group and yet by marginalising people on bikes in terms of space, some of the most marginalised social groups such as women may be excluded from them. There is an important point here that the social identity of those with authority in designing space for cycling, may be damaging the potential for modal shift at scale due to subconscious decisions about the people who require safe transport infrastructure.

In addition to these experiences where the participants are made aware of the referent out-group, and that this is influencing their experiences, they also create an awareness of the hierarchy of road users. The hierarchy of road users is a

concept in transport that the most vulnerable road users should be at the top of an inverted pyramid, and be afforded the most protection (Department for Transport & Driver and Vehicle Standards Agency, 2022). This hierarchy is experienced in several ways by people on bicycles, either through interaction with others or through reflections on the nature of the built environment.

The refusal to reallocate road space away from motor vehicles to dedicated cycling infrastructure by local authorities often sees the use of shared space, where the person on a bike is pushed into conflict with pedestrians. As discussed previously some social groups hold a more dominant position in terms of power (Postmes & Branscombe, 2010), and the participants are presenting their experience as a member of a lower status group alongside pedestrians through their experience of being forced to use shared space.

This presents some people on bikes with a dilemma, in that they enjoy the feeling of community that cycling in busy urban areas can evoke but prefer to be physically separated to avoid potential conflict. This reflects the lower status of both groups, relative to people in motor vehicles as Colin describes; *"[when] when its shared space and why is it so wide when it's like a road erm (isn't it?) it's like it's such it's it's it's just such a different feeling being in the Netherlands and Belgium"* (Extract 105: Colin). Colin is describing the amount of space allocated to pedestrians and people on bikes, relative to the amount of space given over to motor vehicles. As someone who has recently visited Holland, Colin is acutely aware of how different this space could be, in a country where cycling as an activity is given greater value. As discussed earlier, these feelings of community are dependent on the specific nature of the built environment, and when the person on a bike is forced into shared space the conflict with pedestrians creates a shift in identity for people on bikes. The person on a bike feels less a part of the community, and instead feels marginalised alongside pedestrians as Colin outlines in his observations on the amount of space allocated to shared space.

There are different forms of shared space in the UK such as where pedestrians, people on bikes and people in motor vehicles are brough together in the same space. This form of shared space is used by councils and planners to try and create

safer road spaces by reducing motor vehicle speed. The logic here is that due to the proximity of vulnerable road users that people driving motor vehicles will be more sensitive to potential danger and naturally slow their vehicles. However, as the inherent physical differences between a pedestrian and motor vehicle are not mitigated through separation, the person on a bike feels the threat of motor vehicles in a space designed without them in mind. In the following quote Laura and I had been discussing junction design where rules and demarcation has been reduced in an attempt to foster a shared space ethos but between people driving motor vehicles, people on bikes and pedestrians; *"it just ends up being survival of the fittest and the big lorry wins because there's no rules governing whether or not it should stop"* (Extract 106: Laura). Laura does not believe this approach works and extract 106 illustrates how, in her view, this results in abuses of power by the more powerful within the transport system. As discussed earlier in discussions around contested space, in spaces with competing interests' people will construct the space differently and for Laura this is a space of uneven power.

Laura is therefore aware of the hierarchy of different transport groups, but in a much more conscious manner and in extract 107 she details how her interactions with others within the transport system is informed by this awareness; *"I try not to be aggressive I try to consciously enforce the road user hierarchy so I try as a person on a bike to give way to pedestrians to be exaggeratedly nice to pedestrians"* (Extract 107: Laura). Laura herself mentions road user hierarchy, and therefore it is not an interpretation of the experience from the position of the researcher, but a conscious verbalised acknowledgement of transport users as group constructs. This hierarchy is manifested in the intersubjective, with Laura acknowledging how she not only understands the relative power of her group, but also in how it shapes her behaviours towards pedestrians.

The hierarchy may also be experienced through poorly designed infrastructure as described by Colin on a couple of occasions. In a section shown in Figure 5:18 and described in extract 108, after following a Quietway through a quiet neighbourhood, a crossing appears that does not fully connect the person on a bike to the subsequent section of the route creating anxiety.

Figure 5:18 Disconnected infrastructure

> the feeling of be. like being disconnected the you know not ha not having the priority you know for you know it's not necessarily the case of having to wait you know that's just that that's just a fact of life with whatever you know the road layout is that in place you're going to have to wait but it's erm er it's it's just where the journey starts to get a little bit bitty … [and] you're not enjoy and you're not enjoying riding your bike you're just kind of getting getting through erm (Extract 108: Colin)

It is the specific nature of the built environment through which Colin embodies the lower status of people on bicycles. Colins description of feeling disconnected indicate that a person riding a bicycle experiences a shift in the embodied experience of this space. He is aware that this space is not designed to suit people on bicycles and as such has shifted to a social identity with a lower status compared to the more powerful person driving a motor vehicle. Even in segregated space experienced people on bikes such as Colin are aware of this hierarchy, manifested through feelings of danger despite being physically separated from motor traffic. In a further example Colin described cycling along a segregated cycle lane is next to fast moving traffic, with only a matter of inches between the cycle lane and lane for motor traffic, which he described as; *"not enjoyable riding experience even that even though it is segregated"* (Extract 109: Colin).

While the participants seemed aware of the hierarchy of road users, their views of the legitimacy of this hierarchical structure varies. Social identity theory posits that if the status system (i.e. the relative dominance of one social group over another) is seen as stable and legitimate then group members will accept the status quo (Postmes & Branscombe, 2010). From the experiences of the participants here, they are often accepting of the group status, and unwilling to challenge the dominance of the person driving a motor vehicle. However, their experiences presented here show that through changes to the built environment people on bikes can begin to question the legitimacy of the higher status group.

Graham accepts that the power lies with the person driving a motor vehicle. He is conscious of the lack of care afforded people on bikes, whether that be from people driving motor vehicles or pedestrians, but these feelings do not manifest as anger or activism but rather as indifference.

> Some, if something happens like a car comes close or somebody steps out in front of you it's it's due to inattention is not about me erm and generally speaking I don't get er sort of stressed about it in return it's like it's like the weather there's nothing you can really do about it erm (Extract 110: Graham)

Graham feels that the threat of other transport users is inevitable. He is attributing threatening behaviours at the individual level rather than the nature of the system in which he is operating. While there is danger and threat, he accepts the power dynamics of the system as it is, accepting the status quo.

However, we see changes in this perception of intergroup relations, through the embodiment of the built environment. There are several illustrations within the participant accounts where they are grateful for any minor accommodations. Though grateful for small pieces of infrastructure, the people on bikes are still accepting of the powerlessness of their group in comparison with the powerful people driving motor vehicles.

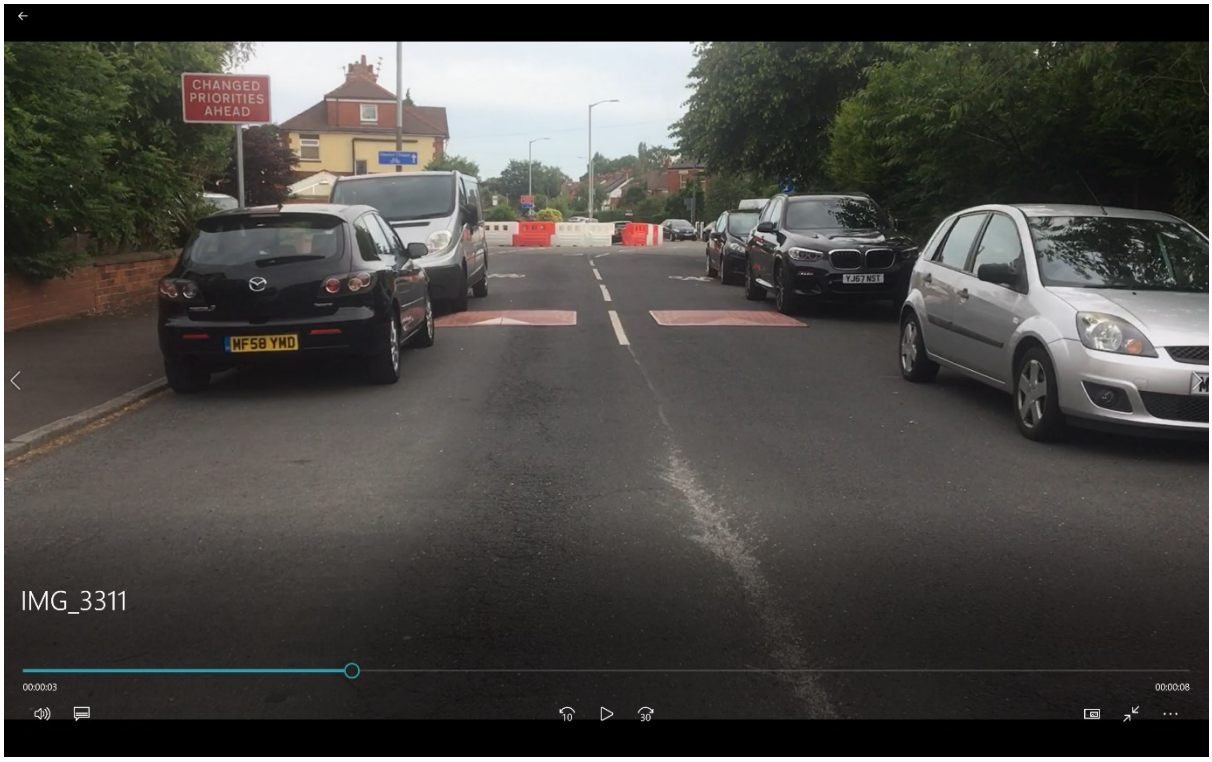

Figure 5:19 Change of priority at a junction

The promotion of a low status group is brought into focus by Colin who is pleasantly surprised that a junction priority had been changed to allow people on bikes to continue along a Quietway uninterrupted (Figure 5:19); *"do you know what I mean like and that and that kind of thing and it's I yeah it's a good idea and fair play it's obviously it's obviously just you know just changing paint a paint around"* (Extract 111: Colin). To Colin these seemingly minor alterations indicate that local authorities are mindful of people on bikes as road users, and therefore makes him believe that they are a legitimate group in the eyes of local authorities. This is particularly evident since the covid-19 pandemic created an awareness of walking and cycling as healthier alternatives to public transport and resulted in the junction being altered as described in extract 111.

These accommodations and promotion of cycling fosters a sense of legitimacy to the point where Laura feels emboldened enough to challenge the legitimacy of people driving motor vehicles; *"[Yeah and] and part of that is because of that kind of hardening of my attitude and a refusal to back down"* (Extract 112: Laura). Laura is cycling through her neighbourhood which is part of an LTN where the free

flowing of motor vehicles has been restricted, and therefore Laura feels able to challenge the legitimacy of people driving motor vehicles in this space. This embodiment of the space within the LTN leads Laura to question the purpose of roads in a broader sense, a clear indication that in these spaces she is questioning not only the legitimacy of people driving motor vehicles, but the purpose of roads more widely; *"and there is more of this question of what are these roads for or what do we want these roads to be"* (Extract 113: Laura).

Moreover, the challenges to the legitimacy of people driving motor vehicles in this community, and the embedding of a cycling culture provides Laura with the confidence that maybe people on bikes are in fact now at the top of the road user hierarchy.

> Well, I think that's the other thing I particularly noticed watching it back and thinking about the idea that your PhD is kind of social identities and people's identity as a person on a bike riding round my village it feels like we're winning. [Laugh]. (Extract 114: Laura)

While in earlier passages, people on bikes were accepting or grateful of the changes to the spatial experience of cycling, here Laura is suggesting of a raising up of her social group to a position of power. The space is no different to many urban environments apart from the filtered traffic, and yet Laura is empowered through the embodiment of this space.

These examples demonstrate how through changes to the built environment the status quo can be challenged, and social competition is promoted. Social competition arises when groups are seen as being of equal status (Spears et al., 2010), and whereas in motor dominated spaces the person on a bike will have a sense of inferiority, in other spaces the person on a bike feels they can legitimately challenge people driving motor vehicles. Some people on bikes will assert this perceived dominance, and legitimacy of their in-group through their positioning when cycling. The values of the person on a bike as someone with a right to use the roads safely is embodied physically in their positioning within the carriageway.

> And generally if I'm particularly assertive it's because I can see that there actually was space for them to pull in and that they have like I I

> kind of think if this was a car car interaction how would you have behaved (Extract 115: Laura)

I feel it is important to highlight here this embodiment of the built environment. In extract 71 Graham described riding upright, his hands off the handlebars. In urban environments he described the hunched feeling he adopted to protect himself. Here Laura is assertive, positioning herself in the carriageway. It is a small but notable example of how the different identities are embodied through cycling. The participants in this study identify highly with their group membership as people on bikes. As such they do not view individual mobility, the ability to move from a lower status to a higher status group as desirable (Postmes & Branscombe, 2010), with motoring being seen as incompatible with their values. Therefore, as the built environment appears to be built for people on bikes in certain areas, this appears to challenge the stability and legitimacy of motor dominated spaces. In line with social identity theory, as individual mobility is undesirable and the stability and legitimacy of group statuses are challenged, the person on a bike rejects the status quo. This is evident in many of the accounts as the cyclist begins to assert their elevated group status.

In contrast to the social competition invoked through perceived unstable group status, when the group statuses are seen as stable and legitimate group members may instead adopt social creativity strategies to develop positive in-group distinctiveness. This may involve redefining the dimensions along which groups are compared, or by comparing the in-group with a different referential out-group (Turner 1999). For example, in extract 116 SianAnni discusses the ability to explore the area when on a bike that those in motor vehicles are unable to do, using exploration as a positive value along which to compare the groups.

> So exploring when you're close to home and finding different you know different sections of road and trails and pathways is one thing but for me you know once I've been cycling somewhere for 45 minutes and I know I'm running out of energy and I've got to you know I need I need to explore the last bit so I think I'm gonna. (Extract 116: SianAnni)

SianAnni does however recognise that this exploration of routes and spaces requires both physical and cognitive effort and cannot be done at the end of journeys. The embodied experience of the person on a bike is therefore mediated temporally in ways that motoring may not be, or rather the temporal nature of cycling is more pronounced due to the energy window being much smaller. This may draw unfavourable comparisons between the people on bikes, and people in cars as a referent out-group.

For people on bikes using these routes, not only do they need the local knowledge of where these routes are and where they go, but also need to have the time and desire to explore. For some this is part of what they enjoy about cycling, that it provides a sense of exploration within their locality. This idea that exploration is of value compared to the referent out-group has been considered by psycho-geographers who note that an increased focus on destination has meant that exploration of urban spaces in an unstructured manner, referred to as derive, has been lost (Kim, 2021). This is particularly notable in cars with the extended cognition available to motorists through satellite navigation that provide the quickest route from start to end points.

Colin similarly offers an exploration of community through cycling that motoring does not enable; *"Erm you know I just just like cycling like seeing the space that being around the community like by the field of being in motion"* (Extract 117: Colin). This is only possible through use of the bicycle though, as articulated by Colin who is aware that being in a car removes you from that space.

> why I like cycle I feel like a more part of the environment and erm you know I'm seeing stuff and I'm taking more stuff in I'm more observant and erm you know maybe I would appreciate it if that view though if I was in a car. (Extract 118: Colin)

The embodied experience, of rhythm and motion, combined with the intersubjective experience of interacting with the community are unique to cycling as a mode of transport. As in sport, motion when cycling elicits particular "lived sensations" which form the experience for the person on a bike (Hockey & Collinson, 2007, pp. 119). The participants here clearly provide a rich description of

their experience in spaces where cycling connects them to the area, but there is a balance between potential hazards such as other users of that space, traffic calming measures, or less then desirable areas to pass through. For the person on a bike, the freedom to explore different areas that may be restricted to people driving motor vehicles is one value along which they can maintain positive group distinctiveness.

We also see evidence of what is referred to in the literature as the black sheep effect, whereby group members more harshly judging other in-group members compared with out-group members (Marques & Paez, 1994). In this case Laura is referring to a phenomenon called shoaling where at traffic lights people on bikes behind you will, rather than queue, jump past you into an advanced position. This results in people on bikes gathering at traffic lights in a large group, or shoal, rather than queuing one behind the other. This further example of the intersubjective experience with in-group members producing intragroup effects.

> Shoaling's a relatively new term basically if I'm stopped at the lights and I'm stopped behind the stop line … and then someone decides they want to come round and they are going to stop at the lights but they're going to stop in front of the stop lines they've kind of jumped the queue in front of me er well if you've done that you better be fast, when the lights change [laugh]… because if you're then gonna like pedal incredibly slowly then I'm gonna be annoyed that you forced me to overtake you … And you've broken the rules and it's like if you really want to get there so much quicker why don't you just pedal a bit harder dude [laugh] (Extract 119: Laura)

As Laura outlines, shoaling refers to people riding bicycles who go around a person stopped at the stop line and stop in front of them. The person behind is then stuck behind a slower person on a bike, and anyone behind them will catch up creating a shoal of fish effect. Laura is positioning herself within the superordinate group of people on bikes as a fast cyclist who adheres to the group norms, in comparison with the slower, rule-bending people on bicycles that irritate her. For her this effect is magnified along the route to work. Parallel routes as referred to by Laura are routes designated as cycle routes by Local Authorities that run parallel to major arterial routes but remove the person on the bicycle from potential conflict by

placing them on a route away from heavy volumes of traffic. As a result, Laura is frustrated with the perceived marginalisation of people on bicycles who not only have to endure the parallel route, but also has the compounding effect of having other people on bikes slowing her journey.

5.8 Conclusion

The participants in this study provided me with photographs and video clips that illustrated their experiences of cycling. Through the subsequent interviews based on the audio-visual material I have explored how the people on bicycles desire an experience synonymous with a flow state. This can be evoked in several ways, primarily as an intrasubjective experience in open spaces, but also through the embodiment of the sensory world and the extended cognition through the bicycle. This flow state is related to a personal identity, which inevitably is interrupted as they move through transitional spaces. In these spaces, and occasionally before, the participants experience a shift to a social identity. These identities are multiple, and highly contextual, reflecting the shifting nature of social identity as the cyclist's journey from place to place with differing intersubjective experiences shaping identity processes. As a result of these shifting social identities, various identity processes are enacted, from social competition to social creativity, and an awareness of the hierarchical nature of social groups in relation to power. Following this exploration, it is evident that the social identity approach is a useful framework for understanding the phenomenological experience of cycling, and therefore an important consideration for local authorities and interested stakeholders in shaping transport policies.

Chapter 6. DISCUSSION AND CONCLUSION

6.1 Introduction

In chapters three to five, three different methods were used that sought to explore cycling and other modes of transport with regards to group identity and intergroup processes. Throughout this research, an overarching research question has guided the design and development of the three studies included here. Specifically, I set out to 'explore the usefulness of the social identity approach and how we can apply theories of intergroup processes to cycling as mode of transport'. For that reason, the thesis comprised three studies with distinct methodologies, each of which explore the social identity approach from a slightly different perspective in relation to transport choice. In doing so they provide a broader understanding of the usefulness of the social identity approach within this domain rather than adopting a singular perspective. The methodological implications are discussed in section 6.4.1.

In the discussion that follows I bring together the results from the three studies and use social identity as a lens through which to interpret them. Firstly, I set out the results as described in each study, and then draw on the previous discussions of these results integrating them into a single account of how we might understand cycling in terms of social identity. Limitations of this research, along with social implications and recommendations for future research are included towards the end of this chapter.

6.2 Summary of Results

The first study adopted a thematic analysis to explore how newspapers represent people on bicycles and presented six categories of people on bicycles commonly seen in UK newspapers. In the second study, I used discourse analysis as proposed by Potter and Wetherell to analyse semi-structured interviews conducted with nine transport users. The results featured three distinct interpretive repertoires, that the participants drew on in a discourse of transport. Finally, an interpretative phenomenological analysis of the lived experiences of four people on bicycles used photo-elicitation to form the basis of semi-structured interviews. The results

presented the lived experiences of people on bicycles, drawing on a shift from personal identity to salient social identities and the resultant intergroup processes.

6.2.1 Study 1 findings

In the first study, a thematic analysis of newspaper representations of people on bicycles, six common themes were outlined: activist, criminal, culture, healthy bodies, outdoorsperson, and transporter. Activists were portrayed as people raising awareness for good causes, or in protesting against some form of injustice. 'Criminals' were commonly used where the bicycle was not necessarily part of the crime, more it was a mode of transport people were using when engaged in criminality. The third theme features people on bicycles who live culturally rich lives while healthy bodies represented people with active lives through sport and exercise. The 'outdoorsperson' was used to represent people on bicycles who were linked with environmental issues such as recycling and the final theme of transporter was, as the name suggests, focused on people who use bicycles for utilitarian purposes.

In each of these the cyclist was represented as someone outside the norm. For example, in the discussion of healthy bodies, the cyclist was a person with a high disposable income who could afford a home-based training system, which they used more regularly than one might expect. This othering of people on bicycles as a social group was presented in the media against the banality of motoring. In a recent paper Walker, Tapp and Davis (2022) referred to this phenomenon as 'motonormativity' the general bias towards motoring, and the acceptance of the risk they pose due to their ubiquity.

6.2.2 Study 2 findings

In the second study, a discourse analysis of semi-structured interviews with a variety of transport users, three interpretive repertoires were outlined. The first repertoire of rhetorical construction is one where transport users argue they have choice or no choice in their mode of transport. This rhetorical account is built through discursive features including lengthy descriptions, anecdotes, and extreme case formulations. The second repertoire uses extended metaphors for war, animals, and water, through which the transport users convey the abstract concept

of power within the system to convince the listener that they should take a side in the fight for power. This positions different transport groups as oppositional, engaged in a war over resources. Finally, the law-breaking cyclist trope allows different transport users to deploy differing subject positions within the discourse depending on how they use the trope. These repertoires, used flexibly throughout the speaker's accounts, allow us to understand how the speakers talk about transport choices through the lens of social identity.

6.2.3 Study 3 findings

Using photo-elicitation, four people on bicycles captured regular journeys using photos or videos which formed the basis of subsequent semi-structured interviews. They described how their interaction with place can engender feelings of flow in line with Csikszentmihalyi's writings on optimal human experiences (1991). The bicycle was also seen to extend their physical body into the world to produce embodied experiences (extended embodiment). However, interruptions to the flow state due to interaction with others (intersubjectivity) or the built environment (embodiment) resulted in social identities being made salient. As a result of this shift in identity from personal to social, the participants became conscious of how the status quo of social groups is perpetuated or challenged through the design of the built environment.

6.3 Discussion

In this discussion I aim to draw cross-cutting themes from the three studies into a single account, interpreted through the lens of social identity, and how we may be able to consider modal shift considering these findings. As set out in the introduction to this thesis, modal shift away from the single occupancy motorized vehicle to more sustainable modes is healthier for both the individual and the planet. The experiences of people using their current transport choices, and understanding why they have made these choices, is therefore important in understanding how to encourage people to choose more sustainable modes.

The research presented here has demonstrated the value of exploring transport choice, and specifically cycling, as a group process rather than focusing on the

individual as the locus of change. Through the lens of social identity, we have seen how group identities shape our understanding of transport, allowing us to explore modal choice in the UK from a novel perspective. This insight is demonstrated consistently through the three studies and is particularly notable in the third study where the subjective experience of cycling may have been expected to reveal a psychology rooted in the individual, and yet social identities and the relationship between transport groups were clear. By revealing a common social aspect to modal choice through these studies we add valuable knowledge to our understanding of the factors that may reinforce or prevent the use of cycling as a mode of transport at a time of increasing threat from climate change. Shifting away from car-dependency requires behaviour change in a large proportion of the population in order reduce climate damaging emissions at scale.

Through the rest of this discussion, I set out the facets of the social identity approach that were evident through the analysis that contribute to our understanding of how group processes may shape transport choice within the UK. In doing so I explore how the identity of people on bicycles shifts from an individual experience towards social identities that are made salient. Furthermore, as social identities are made salient for all transport users, I discuss the influence this has on perceptions of oppositional groups and intergroup dynamics, and perhaps unusually, superordinate groups that provide normative influence in people's daily lives.

The hierarchy and legitimacy of different transport groups is further explored, and how societal influences such as the media, or the built environment may serve to reinforce or challenge the status quo in the minds of transport users. I start with a finding from the third study where the experience of cycling was seen to be unique to this mode and acted as motivation for the participants to continue cycling for transport.

6.3.1 Cycling from the individual to the social

In the third study on the phenomenology of cycling, many of the participants described cycling as an activity they participated in solely for the enjoyment they derived from it. The experience they described was interpreted as synonymous

with a flow state in line with Csikszentmihalyi's writings on peak performance (Csikszentmihalyi, 1991). The meditative aspect of cycling that the participants described primarily occurred in greenspaces, and it appears that they valued cycling as a solo activity where they could experience a flow state away from motor vehicles and other people.

It should be noted that it is not necessarily the case that all people on bicycles experience cycling in the same way. Glackin's exploration of green exercise with club cyclists demonstrates the psychological benefits of cycling in a group in more rural environments (Glackin & Beale, 2018). The study presented here was a small study (n=4) of people who cycled regularly around Manchester and London, predominantly in urban environments, and not necessarily people on bicycles who would venture out on club rides around the countryside.

We should therefore be careful of interpreting these findings as a universal experience, particularly when we consider decarbonization of the transport system requires people to cycle in busy urban environments in conflict with other modes of transport rather than in greenspaces. However, in the low traffic neighbourhood Laura lives in, she demonstrated that a flow state can be achieved in urban settings where the design of the built environment is conducive to a flow state.

Experiences such as these also raised the issue around the type of bicycle used. Where Laura used a more upright bicycle, she felt more relaxed, like a 'princess' (extract 76), and Richard also noted that being more upright felt relaxing and contributed to the desired state. In the Netherlands, a more upright style of bicycle as described by Laura contributes to a slower pace of bicycle riding, and in contrast in the UK we more commonly see racing bikes with more aggressive geometry that enables people on bicycles to cycle more quickly to avoid danger (see extract 87).

The environment and the embodied experience therefore contribute to the flow state, and in considering an approach that appeals to the experience of cycling we should consider these different aspects of the lived experience described by the participants.

Furthermore, for the people on bicycles that took part in study three, their experience of a flow state while cycling is interpreted in line with a sense of a personal identity as posited by Mao et al., (2016) given the individual nature of the cycling. This is in line with Turner's conceptualization of identity that runs on a continuum from a sense of 'I' or 'me', to a sense of 'us' and 'we' as social identities constructed in various social groups. Therefore, even at points where cycling appears to be an individual activity, and a personal identity is salient, there is still value in considering identity from a group perspective, particularly as we consider that social identities are made salient as discussed in section 6.3.1.2.

6.3.1.1 Personal identity and individual models of behaviour

While this thesis is not explicitly concerned with individual behaviour change, modal shift is a change in behaviour in opting to use one mode of transport rather than an alternative. The findings from study three suggest that individual models of behaviour change may have utility and the extant literature *has* focused on the individual and how to understand behaviour change in relation to modal shift.

The personal identity that the participants imply is salient while cycling on their own would mean that individual models of behaviour change such as the Theory of Planned Behaviour (TPB) may have utility. Commonly used in research around modal shift, the TPB considers how likely an individual is to engage in a particular behaviour, depending on their intention to perform that behaviour. For example, whether a person intends to start cycling will determine the likelihood that they will cycle or not. The antecedents to intention in the TPB include attitude, perceived behavioural control (PBC) and subjective norms (Ajzen, 1985). Attitude and PBC are beliefs held by the individual and therefore if cycling is seen as an individual endeavour, then models of behaviour change such as the TPB may prove to retain some usefulness.

However, the TPB has its critics, notably around the temporal nature of the intention-behaviour gap or whether habit is a greater predictor of future behaviour (Lois et al., 2015). Additionally, when we consider the descriptions of flow as described by the participants, there may be further aspects of cycling that models of behaviour change may not be able to capture. Csikszentmihalyi (1991) describes

flow as being the highest form of intrinsic motivation, and any model that considers behaviour change at the individual level should take into account the intrinsic motivation of a flow state apparent when people cycle in certain spaces. Other models such as Self-determination theory may therefore be more useful in being able to explain the motivation to cycle from an individual perspective given that it is a model of motivation that ranges from autonomous to controlled motivation. However, as discussed, the people on bicycles here are already committed people on bicycles who experience flow as an embodied state which provides motivation to continue cycling. If we are considering behaviour change for other transport users, particularly motorists, then appealing to the intrinsic motivation of flow may not be fruitful as they will not possess a frame of reference from which to draw on as motivation (i.e. they have not experienced a flow state while cycling and cannot use that experience as motivation).

Furthermore, if we consider the individual as existing on a personal to social identity continuum, then considering a modal shift only in relation to the individual may have limited utility. This is particularly relevant when we consider a shift from motoring to cycling and may need to consider the social influence of group memberships and norms on an individual's modal choice. This became evident as people on bicycles described how they experienced an unconscious shift from a sense of a personal self to a sense of self that was in relation to others.

6.3.1.2 Social identities are made salient when people on bicycles encounter an object

As discussed in study 3, the tension between the individual subjective experience studied through phenomenology and the social identity approach where identity is constructed as part of social groups warrants consideration. These two positions, a lifeworld built on the individual subjective experience, and a social world where our reality is constructed in relation to others may appear contradictory. However, according to Heidegger the individuals lifeworld is inherently social (Malpas, 2012), as the person is out in the world and their subjective experience is always in relation to others through the intersubjective. As such even our own individual experience is in part determined by others. A consideration of social identity may

therefore provide a perspective that has some utility in discussions of modal shift. Intergroup processes are often implied in research that does not explicitly apply the social identity model such as Guiver's discourse analysis of how people discuss modal choice which explores the "inconsistency in the way that people talked about them as users or as from outside" (Guiver, 2007, pp. 245). Guiver observed that people's attitudes towards a particular mode of transport was inconsistent, and depended on whether they were talking about their own mode of transport, or a mode they do not use. This offers some validity to the assertion that group membership is an important consideration in how we frame decisions around transport modes. Hoekstra's explicit study of road users' behaviour being in line with group identification further supports my assertion that theories of intergroup behaviours are a fertile ground for considering modal shift (Hoekstra et al., 2018).

This becomes particularly apparent when we consider that the people on bicycles in this research articulate a shift in experience from an individual sense to a sense of identity that is rooted in relation to others, a social identity. This process of depersonalization or acting in the best interests of the group (Tajfel et al., 1979), was often at places of transition (Dawney, 2013) or where the cyclist interacts with others, making social identities salient (Hull & O'Holleran, 2014).

We can therefore consider the salience of social identities as a critical factor in modal choice, including behaviours towards other group identities. As discussed in Chapter 5 there appears to be both a switch from personal to social identity at points of transition and between various social identities depending on a range of stimulus within the environment. Switching identities has been shown to be highly efficient (Zinn et al.), triggered by various salient factors (Kuppens & Yzerbyt, 2012) and as noted appears to occur frequently for cyclists. As such salience appears not only to be related to end points of journeys as people travel between places, but to shift and change *through* the journey.

Additionally, while the insights presented in chapter five are drawn from the experiences of cyclists, it is also important to consider the implications of salience on other transport users, specifically motorists. As Kuppens & Yzerbyt (2012) discuss, priming certain social identities result in different emotional reactions to

other social groups depending on the identity being primed. This may in part explain why in Chapter 4 David believes the temporary cycle lanes are a "catastrophic failure", as in priming his identity as a motorist he feels anger towards the council who have created space for cyclists on busy roads. That is not to say that providing for vulnerable road users should be avoided, but instead consider how identity salience relates to different transport groups and the implications for behaviour as a result of this salience.

Creating conditions that prime specific social identities may therefore be a useful approach for local authorities and other stakeholders. Social identity may be experienced as a member of a group that is related to a specific mode of transport as in the cyclist's case, or as part of other social groups. In study two I explored how transport users relate to different social groups such as the family, or super-ordinate groups such as those that are based on geographical locations such as Manchester.

The consideration of transport related social identities based on higher order categories offers a notable development in this thesis from previous research. Modalities are often considered in terms of in and out group distinctions, of motorist versus cyclists or cyclists versus pedestrians (Hoekstra et al., 2018) and Delbosc et al., (2019) suggests there may be value in promoting a common identity that appeals to shared values between groups. In line with Chan's (2014) assertion that appealing to superordinate identities allows ordinarily opposing groups to share common goals, I found that when identities based on a geographical location were made salient then users of distinct transport modes are able to consider alternatives based on the norms of the superordinate group.

Within this exploration of modal choice, identity salience has been explored as fluid; from personal to social, through various social identities and within different hierarchical levels, providing a different conceptual framework to draw on beyond the in/out group dichotomy.

6.3.1.3 Social identities are context specific

Not only do people cycling appear to shift along the personal-social identity continuum, but there is also a flexibility in identity as posited in social identity theory. This is evident in several ways through the second and third studies. The flexibility of positions adopted by participants in the second study through the trope of the law-breaking cyclist showed how through these four positions transport users maintain a positively distinctive in-group identity through the flexible use of the trope, irrespective of their mode of transport. Similarly, the use of personification in study 2 was flexible, with cars routinely personified unless the participant was driving, when we saw the motorist retaining agency over the vehicle. Finally, as the participants in study three cycled through different places, their identity shifted from an individual cyclist through several different social identities including community member, activist, transport professional, vegetarian and environmentalist. Postmes and Branscombe (2010) outline how categories are not fixed cognitive structures, but instead are contextual and relative, and therefore as the context we exist in is constantly changing then it would be logical to assume that so would the categories that are relative to that context.

Within the physical activity literature, appealing to a social identities where exercise is normative can encourage participation in physical activity (Stevens et al., 2017), and it is possible that the same mechanism could be utilised given the flexibility of transport users identity. This could be through the design of the built environment, or as Gössling (2013) discusses, how authorities communicate their strategies and aims in regard to transport.

It is evident throughout the three studies that cycling can be a personally enjoyable activity, but that social identities are made salient at various junctures in people on bicycles' journeys. In the next section I will consider what this means for intergroup processes, and transport users understanding of social groups.

6.3.2 Intergroup processes

6.3.2.1 Transport modes are not equitable

Group-based theories of behaviour appear particularly relevant when we consider the inequity between modes of transport. Motoring attracts greater financial investment and public space than cycling, particularly as seen in the current debate around the 'war on the motorist' and the reallocation of budget from high-speed rail to road projects (Department for Transport, 2023b). Power is therefore not only seen in the physical allocation of public funding and space, but in ideological positions as to which modes of transport are more valuable to society. The more this is perpetuated the less likely that motorists will consider individual mobility to alternative modes.

6.3.2.2 Group hierarchy is understood by all

The inequity in modes of transport was evident through all three studies, and additionally was seen to be commonly understood by the participants in studies two and three in addition to how the media understood transport, even if this was subconscious. We saw this through the media representations of people on bicycles and how they are 'othered' compared with the 'motonormativity' of the dominant motoring group (Walker et al., 2022). Similarly, within the discourse analysis participants used extended metaphors to convey these power structures and that the listener was invited to join a side in the struggle. The war metaphor made this struggle for power clear and has been shown in previous studies to be a common discourse within transport studies (Aldred, 2013b).

The status of different transport users appears inequitable, and yet through the discourses that participants drew on, it was sometimes felt that the current power structure was considered unstable. The challenges to the status quo and the established hierarchy were evident in the third study in locations where changes to the built environment that prioritize the movement of people over motor cars provided people on bicycles with reassurance that they were a legitimate group in the eyes of local authorities, such as the low traffic neighbourhoods of London and in small sections of Quietways in Manchester.

The distinction between dominant and subordinate groups was added to original conceptualizations of the social identity approach in order to provide an explanation for how alternatives to the status quo may be perceived (Postmes & Branscombe, 2010). Therefore, in social identity terms, the changes to the built environment may provide evidence to members of lower status groups that their group status is being legitimized and therefore that the current stratification of transport groups is unstable. Small changes to the built environment may therefore be as useful as larger infrastructure projects.

Where the status quo is maintained, motorists may not be willing to move group to what they perceive to be a lower status group, although if high status group members perceive a threat to the status quo they may be willing to consider a move to a lower status group given the identity based threats (Scheepers & Ellemers, 2005). From a social identity perspective these insights may be informative in considering a group-based approach to modal shift. Social identity theory can be seen to be able to predict a variety of responses depending on a combination of four factors. The four-factor model of status position interacting with acting individually versus collectively in addition to perceived stability/instability and perceived legitimacy/illegitimacy" (Postmes & Branscombe, 2010) provides a framework for predicting modal choice given the shifting nature of the personal to social identity continuum seen in study three, coupled with the questions of stability described above.

As with the discussions of norms in geographical locations, motorists holding pro-environment values may be encouraged to leave the dominant group through the apparent elevation of lower status groups as they are legitimized. This may provide an opportunity for motorists to demonstrate individual mobility and move from a high to low status group and adopt the norms of the new group in terms of transport behaviours.

6.3.2.3 Values and transport group identification

The studies presented here demonstrate that the values used to make comparisons between groups commonly appear to differ between transport groups. The social comparisons between groups that are central to the social identity approach are

built on the social values of the perceiver. That is, as certain values are important to the individual, they make comparisons with other groups and are motivated to define the in-group positively compared with a relevant out-group using these values (Turner, 1982). In study two the rhetorical constructions of choice or forced choice brought this to life, with many non-motorists discussing their values based on their impact on the environment. For non-motorists, concerns about the environment were common, and while motorists were aware of issues around climate change, their group identity as caregivers or professionals meant that environmental values were of secondary concern. That is not to say they were dismissive of environmental concerns, but rather that their social identity was more instrumental in decisions around their mode of transport.

We might therefore consider the values along which group members may be making group memberships and intergroup comparisons and the possibility of appealing to values that may encourage modal shift, particularly in motorists. However, the in-group comparisons appear loaded with commonly understood discourses of power which are articulated through the extended metaphors of war, water, and animals and as the participants seek to draw the listener to one side or another in this struggle for power, interventions designed to encourage modal shift based on group identities may prove challenging with high identifying group members. In fact high identifiers may be highly motivated to adhere to group norms despite their poor health impact, such as the sedentary nature of driving (Wakefield et al., 2019). This was evident in the rhetorical constructions in study 2 where some people would construct elaborate justifications of their forced choice.

In contrast, there is the possibility that while individual mobility is usually considered to be in an upwards direction from a lower status group to one of greater power, threats to the social identity of the more powerful group members where the moral behaviour of the group is called into question may result in an individual moving to a group, that once legitimized, offers a viable alternative to the status quo for low identifiers (Doosje et al., 1998). The nature of the values which are used to drive the intergroup comparisons therefore appear to be important,

and appealing to values that challenge the moral behaviour of higher status groups would appear a worthwhile consideration.

6.3.2.4 Defence of the in-group identity

Given the identification with certain groups along these valued dimensions, protecting the positive distinctiveness of the in-group appears important for many of our participants, and manifests itself in different ways. People riding bicycles are often keen to manage the reputation of the in-group through strategies such as the black sheep effect noted in study two section 4.4.3.3 which demonstrates how the errant behaviour of in-group members is seen as more deserving of criticism than the same behaviour in out-group members. Similarly, in study three Laura described her frustration at the shoaling of people on bicycles and expressed how they felt they should behave, and that they had 'broken the rules' (Extract 119: Laura).

While people riding bicycles are keen to manage the reputation of the in-group, so were many of the non-motorists who often cycled as part of their transport mix. However, this manifests slightly differently, with avoidance of conflict a common part of the extended war metaphor seen in study two in extracts 33 and 34.

In contrast, motorists appear less likely to change their mode of transport and their defence of the in-group identity is less overt, indicative of their power as the dominant group. For motorists the defence of their group membership is achieved through subtle constructions of discourse in which they claim to have no choice due to the norms of their groups, or that they feel cocooned. This seems to be embedded in the norms of important referent groups such as the family, or in larger geographical groups such as Manchester.

6.3.3 Structural forces can be influential

6.3.3.1 Normative influence central for some transport users

Societal power structures therefore appear to contribute to social norms as seen in the discussions in study 2 around what is normalized in different towns, cities, and countries. While the theory of planned behaviour draws on the social influence of groups, these are seen as influences on intention rather than the norms of a group

to which people conform if they identify with the group. Group identity and intergroup processes may therefore provide a more useful framework for interrogating modal shift than individual models of behaviour change.

Majority groups can influence conformity through "material power to administer rewards and punishments, impose sanctions, mobilize surveillance" (Abrams & Hogg, 1998, pp. 24) as we see in study 1 and the influence of the media, which contrasts with the subordinate group members who influence group members through the use of information, and therefore more closely represents reality. Strong normative influence of certain groups such as the family, being a parent, or living in Manchester may prevent individual mobility unless the out-group can be seen as permeable (i.e. the safety of cycling in Manchester can be addressed or a professional identity allows for cycling as part of its identity). This could be linked to the norms in models of behaviour change, although in those models they are seen to influence change whereas here they serve to reinforce current group membership. While being indicative of future behaviour it is more likely that people are continuing with the same behaviour, and therefore unhelpful in consideration of behaviour change.

6.3.3.2 The influence of motonormativity

The structural forces of the media and discourses that shape society also appear to be influential on motorist's decisions to continue with the personal automobile as their preferred mode of transport. For example media content can influence intergroup cognitions and attitudes and whether group members consider alternatives to the current intergroup situation (Harwood & Roy, 2005). The absorption of media representations around the othering of people on bicycles may be influential here, reflecting the wider power structures that affect transport and attitudes towards different modes creating negative attitudes towards other modes of transport. Persistent negative media representations may encourage individual mobility in those from subordinate groups, due to chronic social identity threats (Saleem & Ramasubramanian, 2019).

Additionally poor attitudes towards public transport, perpetuated by the media may contribute to avoidance of using public transport and maintain the dominance

of cars in the mind of the public. In the second study Richard referred to a quote often misattributed to the former prime minister Margaret Thatcher that “Anybody seen in a bus over the age of 30 has been a failure in life.”, reflecting a general attitude that public transport is for the poor or unsuccessful and that the private motor vehicle is preferable (Hickman et al., 2018). This may partially explain why motorists described their experiences as being ‘cocooned’ in the second study, reflecting their preference to use the car in order to feel safer (Wells & Xenias, 2015).

6.3.3.3 How to challenge motonormativity

To challenge the ‘motonormativity’ of society evidenced here through the othering of people on bicycles in the media, and the nature of the built environment that perpetuates the status quo, it may be worthwhile considering an appeal to a super-ordinate social identity. Collective messaging as used in Copenhagen (Gössling et al., 2013) may foster a superordinate identity similar to London or Amsterdam where sustainable travel is normalised rather than considered an outlier. Social identity has been critiqued for focusing on the in-group/out-group discussion rather than superordinate identities that alter the relationship between oppositional groups. Chan (2014) and Aldred (2013b) have demonstrated the validity of superordinate identities in creating inclusive groups that focusses on issues, identity and culture, rather than values such as environmentalism (Aldred, 2013b).

In doing so it may be possible to bring about social change that leads to changes in individual behaviour. Through social change our knowledge of the world changes, and meanings of groups may change, even as new groups emerge. Identifying with these groups brings new norms and values which may make different personalities possible. (Postmes et al., 2013).

In summary, the structural forces of society should be considered as part of the discussions around modal choice. The different norms of geographic locations, values that are important to individuals, and the influence of the media on the perception of different social groups appear to shape decisions around transport choice. We should therefore look beyond the individual, and instead take a

systemic view of transport choice to understand both individual and group-based identity processes that affect transport choice.

6.4 Observations

6.4.1 Methodological comments

In addition to the new theoretical knowledge generated here, the construction of this thesis is methodologically unique, drawing together a range of approaches that add a breadth to our understanding of a topic that may have been limited through the application of a single study. Through an exploration of how transport groups are constructed in the media and everyday discourses, while also drawing on participatory techniques to consider the lived experience of people on bicycles, I have created an understanding of the topic from a variety of perspectives. Through the adoption of a variety of methodological approaches this thesis also demonstrates how a combination of qualitative approaches can have usefulness in exploring complex social problems. Jackson and Sherrif suggest that more mixed methods qualitative research is needed in social identity research "to ascertain deeper meanings and explanations of "messy" and complex real-world group processes" (Jackson & Sherriff, 2013, pp. 261).

By adopting a single method, our understanding of this novel approach to modal choice would perhaps have been limited in scope and understanding. For example, I suggest in study one that the findings represent the views of the dominant social group, the motorist. This may provide a useful insight into how transport is viewed by the media but given the biases in news reporting as discussed in study one, this is not necessarily a complete view of group identities in relation to transport. Studies two and three do further support the assertion that motoring is the dominant group, but they also give a voice to other views by including discursive and phenomenological accounts of members of the public. While they may not be completely neutral accounts, they provide a different perspective to the media who curate content based on its 'newsworthiness'.

Furthermore, each study provides insights into different facets of social identity as a useful framework for exploring transport choice. The dominant finding from the

first study was the othering of people on bicycles by the dominant group. While the phenomenological study of people on bicycles' experiences draws attention to the personal identity and flow state, while studies two and three brought focus to the hierarchical nature of transport groups and the stability and legitimacy of groups, along with threats to social identities. With only one of these studies the usefulness of the social identity approach may not have been as easy to determine if I had only been able to explore one aspect of the theory.

6.4.2 Limitations of this study

In developing this thesis there are limitations that should be acknowledged. As the bulk of the recruitment and data collection was conducted during the lockdown of the Covid-19 pandemic, recruitment was limited to those that could be reached through social media channels and the university email mailing lists. This may have limited the potential participants that could have taken part in the second and third studies, and as a result the participants were a convenience sample primarily affiliated with the cities Universities or local cycling groups in Manchester, with one participant from London. As such they are not representative of the general population, and the people on bicycles will likely be high identifying and have already overcome many of the motivational barriers to cycling. Furthermore, each study is small in its sample size, and while not problematic for qualitative enquiry, it does make generalizing difficult. The research is a relatively small qualitative piece of research and should be considered exploratory in nature.

Additionally, both the second and third studies drew on semi-structured interviews, that while commonly used in qualitative research are not without limitations. Diefenbach identified a number of issues with semi-structured interviews including the "theoretical position, interests, and political perspective" of the researcher (Diefenbach, 2009, pp. 891), in addition to social desirability bias of the participant although Collins et al. found little evidence of problematic biases in their analysis of 22 interview transcripts (Collins et al., 2005). Due to the nature of postgraduate research these interviews were coded solely by me and not by additional researchers as would usually happen with research to ensure inter-rater reliability.

While qualitative studies can afford some degree of interpretation, consistent coding can help to assuage notions of researcher bias.

Similar criticisms could be levelled at participatory photo-elicitation. Gorm and Shklovski (2017) note a number of issues including that participants can interpret instructions differently, while some may not be appropriate. Additionally, because many people use mobile phones to take photographs it can be easy to forget to collect data, as participant 1 in study three commented. This use of non-technical equipment may also result in technical difficulties, as found with participant 4 in study 3, and participants may present themselves in a particular light, or censor aspects of the self that they do not wish to be viewed. In that sense, the ride along interview, or ethnographic approach may provide a more realistic portrayal of participant experiences.

It should also be noted that the analysis of media presentations took place in 2019, just before the global pandemic took hold. During the pandemic there was a relative resurgence in cycling in the UK, and since lockdown measures were eased, there has been a reticence for people to use public transport again. These changes in transport habits may not be permanent, but they reflect that the research conducted here reflects a cross-sectional view of the socio-historic context. The first study would benefit from replication to determine whether attitudes in the press changed during the pandemic, whether they remained consistent or have reverted to those I found in the first study. More generally, to design interventions around modal shift policy makers and those in local authorities would likely require further research to be conducted on this novel approach.

6.4.3 Social Implication and Future Research

Understanding modal shift is essential to decarbonize a transport system that currently contributes to more greenhouse gas emissions than any other sector of the economy, and using the social identity approach to consider how we can change group identities and associated norms and how people think and act (Postmes & Branscombe, 2010). Challenging the status quo through the elevation of lower status groups, through changes to the built environment and the prioritization of sustainable transport would contribute to a greener transport

system, and a healthier population if we are able to make significant changes to how people travel around our towns and cities.

The findings from this thesis should be considered as a useful theoretical framework for future research that is quantitative in nature, which would enable further development of the exploratory findings presented here to determine the significance of the social identity approach for travel related behaviours in the general population. While qualitative data offers rich insights into people's experiences of phenomena, complementing these findings with quantitative research will provide stakeholders with behavioural data in the wider population. This is an important consideration given the scale of the problem facing society caused by using private motor vehicles reliant on fossil fuels.

This would be particularly useful in creating an inter-group dynamic where people see a potential for individual mobility from dominant groups to subordinate groups that motorists view a shift from cars to sustainable forms of transport as legitimate and does not present a social identity threat. Future research may therefore consider what interventions are necessary in elevating subordinate groups, or which values and identities motorists see as aspirational or valuable enough that they are willing to move group.

Additionally, replicating this research in other UK cities, and other countries may produce additional insights into the influence of intergroup processes on transport choice, particularly in collective cultures or where sustainable forms of transport are already well established. It was notable within this research that Laura's experiences in London, where transport provision is much more equitable than the rest of the UK, saw a greater challenge to the status quo. Therefore, considering how inter-group dynamics operate in different cultures and locations would be an interesting development of the ideas presented here.

Finally, and possibly the most important aspect of this discussion, is how the findings presented here can be applied in policy and practice in order to facilitate change. It is evident through this research that tangible changes to the built environment within communities can provoke a positive view of groups who have

traditionally been viewed as marginalised. The mantra of 'build it and they will come' as discussed in 2.1.5 may retain some value in creating an environment that promotes the needs of people on bicycles and allow them to feel their group is viewed as legitimate by other road users and local authorities. However, in discussing the factors that influence how people decide on their mode of transport, while safety is often a primary concern, safe infrastructure appears to be a necessary but not necessarily sufficient component of modal shift.

Therefore, adopting a systems-based approach to modal shift at a regional level that moves away from individual models of behaviour change may be necessary. Authorities in Holland adopted such an approach in the 1970's, combining the provision of safe infrastructure, changes to town planning approaches in addition to presumed liability laws, all of which seek to serve those adopting sustainable modes of transport. In doing so the interrelated policies and practices create cultural norms that offer signals within the environment to transport users that this is a place where active travel is normalised, making related identities salient.

In much the same way as Billig's (1995) banal nationalism discussed a constant but subtle reinforcing of a national identity, or Walker et al., (2022) discussed motonormativity and how we subconsciously accept the cost of motoring, a systems based approach may help reinforce or dissuade particular modes of transport.

The costs of a transport system reliant on motor vehicles include carbon emissions, poor air quality and health inequalities, all of which can be mediated through a shift to active travel. Through the devolution of some aspects of governance to local government, elected officials have the ability to shape policy in line with local needs in relation to climate and health related public policies (Local Government Association, 2024). For example, Manchester City Council aim to be zero carbon city by 2038 (Manchester City Council, 2023b), feeding in to the broader UK target of achieving NetZero by 2050 (Burnett et al., 2023). Additionally, the creation of a zero emissions zone in Manchester aims to improve air quality in the city centre in line with government targets.

A shift to active travel would help meet the targets set through such initiatives, and in addition would help reduce health inequalities as a result of a transport system that prioritizes motorised transport. Manchester City Council's Active Travel Strategy directly confronts the health inequalities by developing a strategy for active travel that provides for those with the greatest need (Manchester City Council, 2023a).

At a regional level in Manchester where much of this research was conducted there has been an increase in the amount of safe cycling infrastructure being built as part of the Bee Network to address some of these climate and health related goals, and yet providing safe space or restricting vehicular access in the city centre may still encounter resistance from groups who feel a threat to their identity as members of the dominant group as discussed in chapter four.

Based on the discussions of hierarchy in 6.3.1.2 this could also be true at a community level. Low traffic neighbourhoods have been trialled in Greater Manchester with varied levels of support from the local community, and establishing a clear local identity may go some way to alleviating the conflict we have seen in attempting to establish traffic mitigation schemes. For example, the Dutch campaign 'Stop de Kindermord' appealed to identities as parent, which transcended in-group/out-group dichotomies. In this sense a social identity approach may be a useful framework in allowing local leaders to create a shared identity between transport users of different modes based on a superordinate group identity that reduces resistance to changes in policy and planning for sustainable modes.

Haslam et al., (2020) devised a theoretical framework for leaders based on group processes, that explore how leaders may invoke a shared identity between themselves and the groups they wish to lead. Within this framework they suggest leaders should be, identity entrepreneurs, identity prototypes, ingroup champions, and identity impressarios, creating an identity for the group they wish to lead, positioning themselves within the group and promoting it to others. Based on the research presented here this in-group identity could be at a geographical level (e.g. Greater Manchester), creating a super-ordinate identity that normalizes what 'we'

do here, irrespective of the mode of transport that may currently dominate. This approach moves beyond the singular focus on the built environment, and instead suggests shaping a local identity where messages, marketing and legislative policies from local leaders and authorities help create an identity that reinforces sustainable transport.

6.5 Conclusion

In setting out to conduct this research I was driven by the idea that a different approach to transport choice and cycling was required. In doing so I wanted to consider a group-based conceptualization of identity, rather than the dominant individual approach, and therefore drew on the social identity approach of Tajfel and Turner which suggests that membership of certain social groups can inform behaviour (Tajfel et al., 1979). Given the climate emergency that poses an immediate threat to life on this planet, decarbonization of transport as the most polluting sector is essential and yet modal shift has remained stubbornly unyielding, except for certain locations such as London where trips by bicycle are now the most common form of transport on the roads. As such this thesis is timely and adds to the exploration of modal shift within the extant literature.

Through the three studies that comprise this thesis, the experience of cycling was evidently important, with a flow state desirable to the people on bicycles that participated in this research. This was an important aspect of cycling that appears neglected in considerations of behaviour change. It raises the question of whether the experience of cycling itself is being considered in designing spaces for cycling that enable this type of psychological experience. It is unlikely that humorous graffiti is considered an integral part of cycling infrastructure and yet it adds to the interest of cycling that is appealing. This also raises the question of whether this aspect of cycling is being considered in behaviour change. While the flow state appeared motivating to people on bicycles, for motorists who have never had such experiences, how do stakeholders convince them of the more desirable aspects of cycling?

The intrinsic motivation of achieving a flow state was further explored in relation to a sense of personal identity (Mao, Roberts, & Bonaiuto, 2016), which is further discussed as part of the personal to social identity continuum first conceptualized by Turner (1982). The personal to social identity continuum, and the salience of different social identities transpires through transitional spaces or boundaries where people on bicycles encounter other people or changes to places that they cycle through. This shift from personal to a social identity adds to other findings

presented here that demonstrate the prevalence of group-based processes, and therefore the usefulness of considering transport choices through the lens of the social identity approach. As people on bicycles journeyed through our cities various social identities were made salient, emphasizing how context can shape identity and identity processes.

Through the shift from personal to social identity, and the salience of social identities, there was an awareness of the hierarchy of transport groups. This mirrored the analysis of discourse that revealed repertoires built on metaphors for war, water and animals that transformed the power within transport into a commonly understood language. Evidently the power held by different groups in terms of transport was important to the participants, as it featured heavily within the research.

The second discursive repertoire also attempted to convince the listener that the participants had no choice in their mode of transport which suggests that they are aware of the impact of their mode of transport, particularly for those who drive motor vehicles. In constructing a rhetorical account, they sought to justify their choices, and reinforce these as non-negotiable. It appeared that motorists identified highly with their group, often using lengthy descriptions and extreme case formulations on which to base their justification. Non-motorists in contrast saw more choice in transport than one might expect, and yet talked about transport using similar discursive practices.

Further group-based processes around the legitimacy of various groups, and the stability of transport groups was explored, and this aspect of study two mirrors the othering of people on bicycles by the press who exude the 'motonormativity' seen in wider society that I explored in study one. For motorists this normalisation of motoring is reinforced through their memberships of particular social groups such as the family, or certain professions, or in identification with specific geographical areas that represent superordinate groups. While non-motorists appear more flexible in their transport choices, the social identity approach provides a useful framework to consider these choices in line with the values of the participants.

The idea that motor vehicles are the dominant group, and that motorists hold the power is reinforced through the third repertoire of study 2 where the trope of the law-breaking cyclist, and the laughter that routinely accompanies road violence demonstrates a commonly held understanding of the hierarchy of transport modes. This was not only from the participants, but echoed in my role as the researcher, where I often laughed along with the participants.

While the hierarchy of different transport groups is often seen as stable, changes to the built environment that further legitimize sustainable modes of transport may create a social identity threat for motorists. This may also offer an opportunity to encourage modal shift if motorists believe cycling to be a legitimate group, encouraging individual mobility.

This research is novel both theoretically and methodologically, presenting a unique perspective on modal shift that contributes to our understanding of why people choose different modes of transport. We need to challenge the current system of 'motonormativity' (Walker et al., 2022) and instead put sustainable modes at the heart of daily lives. Unless systemic changes to transport are made, which normalizes cycling, it is unlikely that individual models of behaviour change will be sufficient. The social identity approach appears to be a fruitful area of research in this respect and should be considered by stakeholders in developing strategies that seek to shift people from more polluting modes of transport to sustainable travel.

In major cities such as Manchester normalizing sustainable transport as 'what we do here' requires consideration not only of building infrastructure, but how stakeholders talk about transport, and what transport means to different social groups. For example, if being 'professional' in the UK means people think they cannot arrive at work sweaty then the notion of what being 'professional' means should be challenged. Alternatively, decision makers may need to consider other factors that prevent or enable cycling being normalized when a 'professional' identity is invoked. For example, do companies provide travel information on cycling routes and storage, or provide showers or changing facilities?

Similarly, if the parental identity is invoked there are assumptions that this requires a car to enable educational escort that is safe and yet allows people to travel to work and still return home to assume parental duties. These are clearly not problems that are simple to solve, but they illustrate that individual models of behaviour change that consider modal change may be insufficient.

To conclude, I call on local authorities and transport planners to think beyond individual approaches to modal shift and consider how the normalization of sustainable modes may be a powerful force for change in this domain. Past public health campaigns such as the ban on smoking, or compulsory seat belts relied on changing the public's perception of behaviour, and similarly challenging the societal attitudes to the use of motor vehicles while normalizing active travel appears to be a useful approach given the findings discussed here. As I stated in the introduction, safe infrastructure for cycling is a necessary, but not necessarily sufficient, aspect of modal shift. There are clear patterns of group-based identity processes being accessed, and authorities should be mindful that getting people to adopt more sustainable transport practices involves consideration of the group-based identities.

6.5.1 Reflection

While most reflective models are cyclical, aiming to strengthen the research process by affecting changes as the researcher reflects on the research as it happens, Schön's model (Schön, 1991) includes reflection on action, an allowance of reflecting on past events that do not necessarily create learnings to be implement such as in Kolb's model (Kolb, 2015) which includes active experimentation.

The reflection on action aspect of Schön's model asks practitioners to reflect on what happened, drawing on the context of the situation and the incident holistically rather than focusing on one aspect. In that respect I consider the process of authoring this thesis as a whole, which I think is useful given the varied methodologies employed. Schön asks us to consider what happened, why it happened, and how we can deal with a comparable situation in the future. Schön's model also suggests that this can integrate new information, or theoretical perspectives gained that help the researcher in processing thoughts and feelings.

In doing so I draw on extensive notes contained in two research journals that I used throughout the four years of study. These included thoughts and reflections in addition to notetaking of more functional aspects of the PhD. While thinking holistically, there are certain elements of this thesis that warrant particular attention, predominantly around the context in conducting this research, what this research meant to me as a cyclist, and the design of the thesis.

In an unprecedented time, much of the world was in the grip of the Covid-19 pandemic. In late 2019 cases of this novel virus appeared in Wuhan, China, and quickly spread across the globe. From March 20th, lockdown measures were implemented in the United Kingdom to try and restrict the spread of the virus given the fatality rate seen worldwide. Various lockdown measures continued throughout 2020 until April 2021 when the last restrictions were removed in the UK. As my PhD began in January 2019, the pandemic had an impact on my ability to conduct different facets of the research. Normal avenues of recruitment through posting leaflets and posters were impossible, while face to face meetings with participants were banned. As a result of these measures many activities in the UK moved online, and the acceleration of digital technologies such as online meetings, has seen a shift in how people work, with many retaining the flexibility of being able to work from home for some of their working week. Personally, this meant some struggles at home with a family of four attempting to maintain some semblance of normality in terms of access to work and education through the technology we had at our disposal. As a result, in addition to the inevitable delays to recruitment and data collection, the interview stages of studies two and three were conducted online. While the pandemic was an unprecedented event and hopefully one that does not occur again, the shift in digital technologies has introduced new ways of working that have increased the flexibility in how we conduct research, which I feel has been beneficial once I was able to resolve the issue of resources within the family home.

The impact of the pandemic and the switch to digital technologies also impacted the design of study three. While initial considerations included the ride-along as a means of data collection, the inability to meet people face to face required me to

adopt a different approach. Hence the use of participatory photo-elicitation enabled me to 'be there' while not being there. The experience of conducting research in such a manner has given me pause for thought in conducting further research. Specifically, I have begun to question the presence of the researcher in conducting psychological research, and how this may affect the collection of data. While the concept of social desirability bias is not new in psychological research, the development and use of digital technologies means that we can overcome some of these challenges, although they may also create some of their own particularly around privacy and safety.

The final aspect of this thesis that has caused a substantial amount of concern and reflection is its breadth. While I have seen this as a positive, it may be considered weaker by drawing three different methodological approaches. As a researcher I often felt that understanding the different theoretical approaches of discourse analysis and phenomenology was hindered through having to spend time on three approaches instead of one. Despite this the flexibility in methods has provided me with experience across a broader range than I might otherwise have been exposed to, and as an early career researcher this learning has been valuable.

Finally, my own position within this research as an advocate of sustainable practices may have influenced my approach, particularly in the interviews and analysis of transport users in study 2. As I interviewed motorists who rejected cycling as a mode of transport, it may have been natural to challenge and correct some of the myths or misunderstandings they elaborated on. Instead, I tried to consciously hold or bracket my personal feelings on sustainable practices while drawing out the participants views on transport within the UK. Building rapport with participants on divisive subjects such as climate change and transport is challenging, and there were times when I bristled at some of the dismissive attitudes to cycling. This research has therefore provided valuable experience in conducting psychological research that may counter my own ideological position which I can take forward into my early research career, but also into my own practice as a practitioner where I am likely to come across people with opposing views.

Chapter 7. APPENDICES

7.1 Appendix 1 – Study 2 recruitment

Social identity and Transport study recruitment

I am currently recruiting for a small qualitative study into social identity and transport choice as part of my PhD, looking for participants willing to be interviewed via Skype or Zoom.

You must be English speaking, over 18 and have access to a computer that is able to run either Skype or Zoom in a private location.

You should also normally commute to your place of work or study i.e., not be home or field based. This is how you would normally travel, ignoring the current travel restrictions due to the Coronavirus pandemic.

The interview will be conducted via Skype or Zoom and should last no more than 1 hour.

If you wish to take part, please contact me at ian.cookson@stu.mmu.ac.uk and I will provide you with a participant information sheet and consent form in order to confirm your eligibility and collect demographic information.

Thankyou

Ian Cookson

7.2 Appendix 2 – Study 2 participant information sheet

Participant Information Sheet

Examining everyday understandings of the identities of transport users

1. Invitation to research

I would like to invite you to take part in a study considering social identity and transport choice. MY name is Ian Cookson and I am a PhD student at Manchester

Metropolitan University conducting this study under the supervision of Dr. Robert Lowe and Dr. Andrew Stevenson. Our research project is a qualitative study considering everyday discourses and how we construct and use our social identity with regards to transport choice.

2. Why have I been invited?

You have been invited because you are either a staff or student at an institution that promotes sustainable transport. I will be individually interviewing people who travel to campus regularly about their journeys and views on transport. The staff and students are likely to use different forms of transport to reach the campus, and offer a range of views on this topic, within the context of a pro-sustainable transport institution.

3. Do I have to take part?

No, it is entirely up to you to decide. We will describe the study and go through the information sheet, which we will give to you. We will then ask you to sign a consent form to show you agreed to take part. You are free to withdraw at any time, without giving a reason up untiI I undertake analysis of your data, likely to be March 2021. I will contact you prior to analysis to confirm you are still happy for your data to be included.

4. What will I be asked to do?

If you decide to take part in this study, you will be asked to complete the digital consent form and provide basic personal information about yourself and how you normally travel to your place of work or study. This information will only be used to identify suitable participants and allow anonymisation of the data by using a pseudonym you provide. If selected from the participant pool, you will be invited via email to participate in an interview with myself via online video conferencing i.e.

Skype, Zoom or MS Teams. As this interview is being conducted online you should ensure your computer is up to date with any relevant security updates, and is running anti-virus and anti-malware software, as this is your responsibility.

At the start of the interview I will ask you to confirm that you are still happy to participate in the study. The interview will be conducted between us via an online video conferencing platform i.e. Skype, Zoom or MS Teams. The interview is expected to last an hour, and the audio will be recorded for further analysis. At the start of the interview I will ask you again that you confirm you are happy to take part. The recording will not be used further, other than for transcription purposes. The transcription itself will then be analysed for research and publication.

5. Are there any risks if I participate?

Whilst your data will be anonymised there is the risk that a breach of anonymity may occur if there is a data breach. Additionally, while the topic being discussed is of an everyday event, exploring this may make some participants uncomfortable.

6. Are there any advantages if I participate?

While there is no monetary reward or reward in kind for taking part, the knowledge generated by this study will help psychologists understand the identity processes at play in transport choices.

7. What will happen with the data I provide?

When you agree to participate in this research, we will collect from you personally-identifiable information.

The Manchester Metropolitan University ('the University') is the Data Controller in respect of this research and any personal data that you provide as a research participant.

The University is registered with the Information Commissioner's Office (ICO), and manages personal data in accordance with the General Data Protection Regulation (GDPR) and the University's Data Protection Policy.

We collect personal data as part of this research (such as name, telephone numbers or age). As a public authority acting in the public interest we rely upon the 'public task' lawful basis. When we collect special category data (such as medical information or ethnicity) we rely upon the research and archiving purposes in the public interest lawful basis.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained.

We will not share your personal data collected in this form with any third parties.

If your data is shared this will be under the terms of a Research Collaboration Agreement which defines use, and agrees confidentiality and information security provisions. It is the University's policy to only publish anonymised data unless you have given your explicit written consent to be identified in the research. **The University never sells personal data to third parties.**

We will only retain your personal data for as long as is necessary to achieve the research purpose.

The personal data requested, specifically your name, date of birth, email address and primary form of transport, along with a pseudonym to enable anonymisation of data will be retained within the University email system which is password protected. Ensuring your confidentiality is important and therefore from the primary investigators point of view, will be maintained by ensuring the online call and recording will be conducted in such a manner that it cannot be overheard. In line with current guidance on conducting internet research, the computer used will be running the latest anti-malware software and only yourself will be provided with the meeting code. A recording of the call and its subsequent transcription will be

uploaded to the MMU data repository system during the duration of this PhD (until January 2022). Each recording will be named with the pseudonym you provide . Anonymisation will extend to the transcription of the call, removing any identifiable data. Upon completion of the PhD viva, all data, including audio recordings and transcriptions will be allocated as "archived" within the University's Institutional Data Repository system, and retained for 10 years in line with University policy upon which the University will overwrite the data, permanently removing it.

For further information about use of your personal data and your data protection rights please see the University's Data Protection Pages (https://www2.mmu.ac.uk/data-protection/).

What will happen to the results of the research study?

It is anticipated that this study will be used in producing articles for publication in research journals, in addition to posters and/or conference presentations that I may attend. Additionally this study forms part of a three study PhD programme, and the data you provide will be used within that thesis publication.

Who has reviewed this research project?

Detailed below are all those that have had access to some or all of this research project, and the scope of their involvement/access.

Dr. Robert Lowe – Director of studies, Manchester Metropolitan University

Dr. Andrew Stevenson – Supervisor, Manchester Metropolitan University

Ethics committee - Manchester Metropolitan University

Who do I contact if I have concerns about this study or I wish to complain?

General questions Ian Cookson
19015173@stu.mmu.ac.uk
07748961896
29 Lavington Avenue,
Cheadle,

	Cheshire SK8 2HQ
Supervisor	Dr. Robert Lowe r.lowe@mmu.ac.uk Manchester Metropolitan University Faculty of Health, Psychology and Social Care Brooks Building, 53 Bonsall St Manchester M15 6GX, UK +44 (0)161 247 5792
Faculty ethics	Professor Khatidja Chantler k.chantler@mmu.ac.uk Manchester Metropolitan University Faculty of Health, Psychology and Social Care Brooks Building, 53 Bonsall St Manchester M15 6GX, UK
DPO & ICO	The Data Protection Officer dataprotection@mmu.ac.uk Legal Services All Saints Building Grosvenor Square Manchester M15 6BH 44 (0)161 247 3884

If you have any concerns regarding the personal data collected from you, our Data Protection Officer can be contacted using the legal@mmu.ac.uk e-mail address, by calling 0161 247 3331 or in writing to: Data Protection Officer, Legal Services, All Saints Building, Manchester Metropolitan University, Manchester, M15 6BH. You also have a right to lodge a complaint in respect of the processing of your personal data with the Information Commissioner's Office as the supervisory authority. Please see: https://ico.org.uk/global/contact-us/

THANK YOU FOR CONSIDERING PARTICIPATING IN THIS PROJECT

7.3 Appendix 3 – Study 2 consent form

EthOS ID: 24707

Name of Researcher: Ian Cookson

CONSENT FORM

Title of Project: Examining everyday understandings of the identities of transport users

Instructions for completing the digital consent form.

a) Please check the boxes next to each item by double clicking

b) Please complete the demographic information

c) Verbal consent will be taken at the start of the interview to confirm that you are happy to proceed.

Please check box

1. I confirm that I have read the information sheet dated 27/10/20 (version 2) for the above study. ☐

2. I have had the opportunity to consider the information presented here. ☐

3. I have had the opportunity to ask questions and have had these answered satisfactorily. ☐

4. I understand that my participation is voluntary and that I am free to withdraw at any point up until data analysis begins in March 2021, without giving any reason, and without my legal rights being affected. ☐

5. I understand that the information collected about me will be used to support other research in the future, and may be shared anonymously with other researchers. ☐

6. I am happy to use [delete as appropriate Zoom/Skype/MS Teams] to conduct the interview. ☐

7. I agree to take part in the above study. ☐

Demographics

Name (taken as signature) _____

Preferred pseudonym _____

Age _____

Gender _____

Mode of travel _____

Date _____

Signature of Person _____Date _____

taking consent

7.4 Appendix 4 – Study 2 Interview structure

1. Introduction - I am Ian Cookson, a PhD researcher at Manchester Metropolitan University conducting research into social identity and transport choice. With me I have participant X. They have already signed a consent form, but just to reiterate that they may withdraw at any point, in which case this recording will be destroyed. Could you, for the recording just confirm that you have given your consent to take part in this study? And for your own piece of mind, if I inadvertently identify you during the recording by any means I will be anonymising the transcript to maintain that anonymity.
2. Can you tell me about how you usually travel when you go to work/education? Where/when/mode/frequency
3. How much do you travel around Manchester?
    a. How do you feel about travelling around Manchester? Would you say its enjoyable?
    b. What issues do you face?
    c. How would you describe transport in Manchester?
    d. What do you think could be changed or improved?
4. Of the different forms of transport you use?
    a. How much does it vary?
    b. Which do you prefer?
    c. Can you tell me why?

5. Can you describe the last journey that you made? (mode/experience)
6. When you travel do you take much notice of other people travelling?
    a. Do you notice people travelling using other modes?
    b. What do you think about how other people travel?
7. What kinds of transport would you *like* to use?
    a. What is it about it that makes you want to use it?
8. How does a good journey compare with a bad journey?
9. How much notice do you take of (other) people using bikes?
10. What would you say the typical person on a bike looks like?
11. These are the types of people using bikes we found in newspapers, what do you think?
12. Do you think you're like any of these people?
    a. Why is that? Or other prompts/probes
13. When you're travelling which of these represent cyclists in some way?
    a. Why?

Any others?

7.5 Appendix 5 – Study 3 recruitment

Let's explore your cycling world

I am currently recruiting for a small study into social identity and transport choice as part of my PhD, looking for participants to explore their cycling activity.

You must be English speaking, over 18 and be willing to create a visual record that describes the experience of a journey that you regularly take. Using film/photo or sound recording I'd like you to **highlight at least three things you like/dislike about the route, and three favourite locations.** The recording should be conducted safely. After you've recorded your journey or ride, I would ask you to participate in an interview that discusses your piece of work, and what it means to you.

The interview will be conducted in a private location within the university or via video conferencing technology such as Skype/Zoom/Microsoft teams and should last no more than 1 hour.

If you wish to take part please contact me at 19015173@stu.mmu.ac.uk and I will provide you with a participant information sheet and consent form in order to confirm your eligibility and collect demographic information.

Thankyou
Ian Cookson

7.6 Appendix 6 – Study 3 participant information

Participant Information Sheet

Social identity and peoples experiences of cycling

1. Invitation to research

I would like to invite you to take part in a study considering social identity and transport choice. My name is Ian Cookson and I am a PhD student at Manchester Metropolitan University conducting this study under the supervision of Dr. Robert Lowe and Dr. Andrew Stevenson. Our research project is a qualitative study considering the experiences of cyclists and how that relates to our social identity.

2. Why have I been invited?

You have been invited because you are a cyclist in Manchester and have expressed an interest in this study. I will be asking you to create an audio or visual recording of your experience and then discuss the piece in an interview.

3. Do I have to take part?

No, it is completely up to you to decide. I have provided you with this information sheet that describes the study and takes you through the process. I will then ask you to sign a consent form to show you have agreed to take part. You are free to withdraw at any time, without giving a reason up until the point of analysis, which is anticipated to be March 2021. I will confirm you are happy to proceed prior to analysis.

4. What will I be asked to do?

If you decide to take part in this study, I will ask for some basic personal information about yourself. This information will only be used to identify suitable participants, and allow anonymisation of the data by using a pseudonym you provide. If selected from the participant pool, you will be invited via email to take part in the study.

Using whatever method of audio or visual recording you wish to use I will simply ask you to create a visual record that describes the experience of a journey that you regularly take, highlighting at least three things you like/dislike about the route, and three favourite locations. This can be a series of at least six photographs or a five minute video, but must be created safely - do not cycle as you film or take photographs, unless the recording device is a go-pro device that is mounted on your bicycle or helmet. Otherwise please stop safely and record the film or take photographs while stationary in a safe manner.

I would then ask that your send me via email your photographs or film, and I will then invite you to take part in an interview where we will discuss your experience. This interview will be recorded and the audio transcribed for further analysis.

5. Are there any risks if I participate?

As your recording may take place in a public space your anonymity at this stage cannot be guaranteed. Additionally, by recording items and places of interest to you, they may allow you to be identified. However once your visual piece is returned to me and downloaded, any subsequent data will be anonymised. To prevent risk of injury as you cycle I would ask that do not cycle as you film or take photographs, unless the recording device is a go-pro device that is mounted on your bicycle or helmet, recording continuously. Otherwise please stop safely and record the film/take photographs while stationary in a safe manner.

6. Are there any advantages if I participate?

While there is no monetary reward or reward in kind for taking part, the knowledge generated by this study will help psychologists understand the identity processes at play in transport choice.

7. What will happen with the data I provide?

When you agree to participate in this research, we will collect from you personally-identifiable information.

The Manchester Metropolitan University ('the University') is the Data Controller in respect of this research and any personal data that you provide as a research participant.

The University is registered with the Information Commissioner's Office (ICO), and manages personal data in accordance with the General Data Protection Regulation (GDPR) and the University's Data Protection Policy.

We collect personal data as part of this research (such as name, telephone numbers or age). As a public authority acting in the public interest we rely upon the 'public task' lawful basis. When we collect special category data (such as medical information or ethnicity) we rely upon the research and archiving purposes in the public interest lawful basis.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable

and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained.

We will not share your personal data collected in this form with any third parties.

If your data is shared this will be under the terms of a Research Collaboration Agreement which defines use, and agrees confidentiality and information security provisions. It is the University's policy to only publish anonymised data unless you have given your explicit written consent to be identified in the research. **The University never sells personal data to third parties.**

We will only retain your personal data for as long as is necessary to achieve the research purpose.

The personal data requested, specifically your name, date of birth, email address and level of experience in cycling, along with a pseudonym to enable anonymisation of data will be retained within the University email system which is password protected. Ensuring your confidentiality is important and therefore from the primary investigators point of view, the subsequent interview will take place in a private office within the university or online via video conference technology. If the latter, then in line with current guidance on conducting internet research, the computer used will be running the latest anti-malware software and only yourself will be provided with the meeting code. A recording of the call and its subsequent transcription will be uploaded to the MMU data repository system during the duration of this PhD (until January 2022). Each recording will be named with the pseudonym you provide. Anonymisation will extend to the transcription of the interview, removing any identifiable data. Upon completion of the PhD viva, all data, including audio recordings and transcriptions will be allocated as "archived" within the University's Institutional Data Repository system, and retained for 10 years in line with University policy upon which the University will overwrite the data, permanently removing it.

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What will happen to the results of the research study?

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Who has reviewed this research project?

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Dr. Andrew Stevenson – Supervisor, Manchester Metropolitan University

Ethics committee - Manchester Metropolitan University

Who do I contact if I have concerns about this study or I wish to complain?

General questions	Ian Cookson 19015173@stu.mmu.ac.uk 07748961896 Manchester Metropolitan University Faculty of Health, Psychology and Social Care Brooks Building, 53 Bonsall St Manchester M15 6GX, UK
Supervisor	Dr. Robert Lowe r.lowe@mmu.ac.uk Manchester Metropolitan University Faculty of Health, Psychology and Social Care Brooks Building, 53 Bonsall St Manchester M15 6GX, UK +44 (0)161 247 5792
Faculty ethics	Professor Khatidja Chantler k.chantler@mmu.ac.uk

Manchester Metropolitan University
Faculty of Health, Psychology and Social Care
Brooks Building, 53 Bonsall St
Manchester M15 6GX, UK

DPO & ICO

The Data Protection Officer
dataprotection@mmu.ac.uk
Legal Services
All Saints Building
Grosvenor Square
Manchester
M15 6BH
44 (0)161 247 3884

If you have any concerns regarding the personal data collected from you, our Data Protection Officer can be contacted using the legal@mmu.ac.uk e-mail address, by calling 0161 247 3331 or in writing to: Data Protection Officer, Legal Services, All Saints Building, Manchester Metropolitan University, Manchester, M15 6BH. You also have a right to lodge a complaint in respect of the processing of your personal data with the Information Commissioner's Office as the supervisory authority. Please see: https://ico.org.uk/global/contact-us/

THANK YOU FOR CONSIDERING PARTICIPATING IN THIS PROJECT

7.7 Appendix 7 – Study 3 consent form

EthOS ID: 25286

Name of Researcher: Ian Cookson

CONSENT FORM

Title of Project: Social identity and peoples experiences of cycling

Instructions for completing the digital consent form.

d) Please check the boxes next to each item by double clicking

e) Please complete the demographic information

f) Verbal consent will be taken at the start of the interview to confirm that you are happy to proceed.

Please check box

8. I confirm that I have read the information sheet dated 18/1/21 (version 4) for the above study. ☐
9. I have had the opportunity to consider the information fully ☐
10. I have had the opportunity to ask questions and have had these answered satisfactorily ☐
11. I understand that my participation is voluntary and that I am free to withdraw at any point up until data analysis begins in April 2021, without giving any reason, and without my legal rights being affected. ☐
12. I understand that due to the visual nature of the project my anonymity cannot be guaranteed ☐
13. I agree that the visual material I produce will be stored by the primary investigator in line with MMU's policy for storage of research material ☐
14. I am happy to use [delete as appropriate MS Teams/Zoom/Skype] to conduct the interview. ☐
15. I am happy to the interview being recorded for transcription purposes. ☐
16. I agree to take part in the above study. ☐

Demographics

Name (taken as signature) _____

Preferred pseudonym _____

Age _____

Gender _____

Date _____

Signature of Person _____Date _____

taking consent

7.8 Appendix 8 – Study 3 interview structure

I am Ian Cookson, a PhD researcher at Manchester Metropolitan University conducting research into social identity and transport choice. With me I have participant X. They have already signed a consent form, but just to reiterate that they may withdraw at any point, in which case this recording will be destroyed. Could you, for the recording just confirm that you have given your consent to take part in this study? And for your own piece of mind, if I inadvertently identify you during the recording by any means I will be anonymising the transcript to maintain that anonymity.

1. Can you tell me about how you usually travel when you go to work/education?
2. Rapport building/intro
3. Why did you pick this clip/photo?
4. Tell me about the route/space in this clip/photo?
    a. Why this particular part of your route/this space?
    b. What is this route/space like for cycling?
    c. Thinking just about the route/space – how does it make you feel?
    d. Are there any particular elements of this route/space that you particularly like or dislike?
5. Can you tell me how you felt producing this clip/photo?
    a. What emotions did you feel?
    b. How important is the experience to you?
    c. What was it about the experience that you liked/disliked?
    d. How does this compare with some of your other clips/photos?
    e. What would improve the experience?
6. Can you describe how your body feels when cycling here?
    a. Do the physical feelings change on different sections?
    b. What physical sensations does cycling give you here?
    c. How do you feel physically after cycling?
    d. What about other cyclists? Do you think they physically experience something similar?
7. How does this clip/photo represent you as a cyclist?
    a. Does this represent other cyclists as well?
    b. Would other cyclists have chosen different clips/photos do you think?
8. Tell me about the other people that appear in this clip/photo?
    a. What does having other people around mean to you when you cycle?

b. How did they affect your experience?
c. Did you produce this clip with other people in mind?
d. Were you aware of other people when you recorded it?
e. Do you think about the presence or absence of other people when you're cycling?
f. Do they affect your decisions about time or route?

Chapter 8. REFERENCES

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