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LSE GROUPS takes place during the final fortnight of the LSE summer term. Undergraduate students are placed in small groups; these are cross-year, interdisciplinary, and group members do not know one another in advance. Each group must then devise its own research question, and carry out every stage of a small-scale research project in less than two weeks.

LSE GROUPS is part of the LSE commitment to students learning through enquiry, and developing the skills for knowledge creation.

The overall theme of LSE GROUPS 2023 was *Connections.*

This paper was submitted on the final Thursday afternoon of the project. Students then presented their work at a conference, on the closing Friday.

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"*THE NORTH REMEMBERS*: COMPARING STUDENT PERCEPTIONS OF PUBLIC TRANSPORT SERVICES IN THE MIDLANDS AND THE NORTH OF ENGLAND TO LONDON."

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ABSTRACT

The North/South divide in England is a widely discussed issue in academia and beyond, especially with respect to public transport infrastructure. Despite the prominence of this topic, few studies have explored the influence of the differences in public transport infrastructure within the North/South divide on students. Our paper seeks to bridge this gap, focusing on students who grew up in the Midlands and North, and are currently living in London for university. Through interviews and questionnaire data, we aim to capture patterns of perceptions of public transport in the Midlands/North and London. Our findings highlight significant differences in the availability and service quality of public transport between the areas of interest. This study hopes to contribute to the broader discourse on the North/South divide and provide further justification to foster cross-region interconnectivity by investment in Northern public transport infrastructure.

Key Words: *Public Transport, North/South Divide, Student Perceptions, Spatial Mobility*

INTRODUCTION

There is a clear disparity between public transport infrastructure in the North and South of England (Raikes L., 2019). A striking statistic is that the planned investment in public transport per capita in London is reported to be "2.9 times higher than that for the North" (Raikes L., 2019, pg. 4). This is associated with a lower quality of life (Chng et al., 2016, p182), GDP (Chng, 2016), employment rate (Dobbs, 2005), educational opportunities (Raikes L., 2019, p20) and higher mortality rates (Hacking, J. M. et al., 2011); all indicators of social wellbeing. Furthermore, the substandard public infrastructure in the North contributed to a substantial reduction in migration into the region during the post-Thatcher era (Raikes L., 2016). This disparity has led critics to argue that the UK is "consistently more divided than any comparable country" (Raikes L., 2016, pg 3).

Given this context, our research will explore the differences in perception of public transport infrastructure among students from Northern England and the Midlands who are currently studying in London. Transport plays a vital role in student life, influencing everything from leisure activities to daily commutes to school or work (Gallotti and Barthelemy, 2014, p2). By focusing on students from the North/Midlands, we aim to uncover their perceptions and insights into the sociological disparities that exist between the North and South.

LITERATURE REVIEW

The available literature suggests that in today's society, "spatial mobility is highly valued in relation to individual freedom" (Flamm and Kaufmann, 2006, p167). Individual freedom in this context is understood to encompass the ability to travel anywhere at any time, choose relationships, and decide one's place of residence. Spatial mobility significantly influences life trajectories and is considered a "deciding factor of social integration" (Flamm and Kaufmann, 2006). Thus, while spatial mobility is interconnected with economic, social, and cultural factors, it also presents itself as a unique form of "capital" (Flamm and Kaufmann, 2006). This concept refers to the potential advantages and opportunities that increased spatial mobility can offer, such as access to better education, jobs, and social networks. As such, the concept of spatial mobility has been rightly identified as a significant driver of differences within the North/South divide.

Within the context of "regional consciousness", the North/South divide plays a heavy role in shaping the self-identities of UK citizens and therefore influences their daily life choices (Balchin, 1996). It is recognised that while citizens from "Devon or Cornwall would [unlikely] regard themselves as living in the North", when people identify as Northerners, they necessarily take on the associations that have defined the "North" for generations. Historically, as Paul Balchin argues, the North has always experienced an economic imbalance. For example, during the great depression and even during the post-WWII era, where the North/South disparity was at its lowest, the North had double the unemployment rate as compared to London (Balchin, 1996). This disparity was exacerbated during the "long boom" where London grew at a faster rate than the rest of the UK, thereby increasing the economic and infrastructural disparity between the North and South (Balchin, 1996). This historical context continues to influence the perception of Northerners, including those who migrate to London, and therefore, the associations of the North with lower socio-economic factors and poorer public amenities such as public transport infrastructure may influence the choices made in their daily lives (Balchin, 1996).

Current literature often takes a broad view of the North/South divide, with more specific studies focusing on socio-economic class. These studies encompass a wide range of backgrounds and predominantly categorise people based on income. For example, in Flamm and Kaufmann's work the respondents were studied based on what transport choices were financially available to their households (Flamm and Kaufmann's, 2006). In another example, research was conducted based on unemployment rates (Rowthorn, R., 2010). These studies illustrate that the link between socio-economic class and public transport infrastructure is thus well established. Importantly, improved public transport enhances job accessibility, hence it is closely linked to socio-economic class through employment opportunities.

However, the current literature's focus on socio-economic class presents an opportunity to delve deeper into the concept of spatial mobility. This study aims to explore the direct connections between spatial freedom amongst students and public transport infrastructure, potentially showing how the importance of spatial mobility analysed based on other ways to perceive demographics.

RESEARCH METHODOLOGY

We used a mixed methods methodology to evaluate a combination of quantitative and qualitative data to draw conclusions. For the former, we conducted a survey amongst Northern students in London. For the latter, we conducted personal interviews and investigated into their personal preferences.
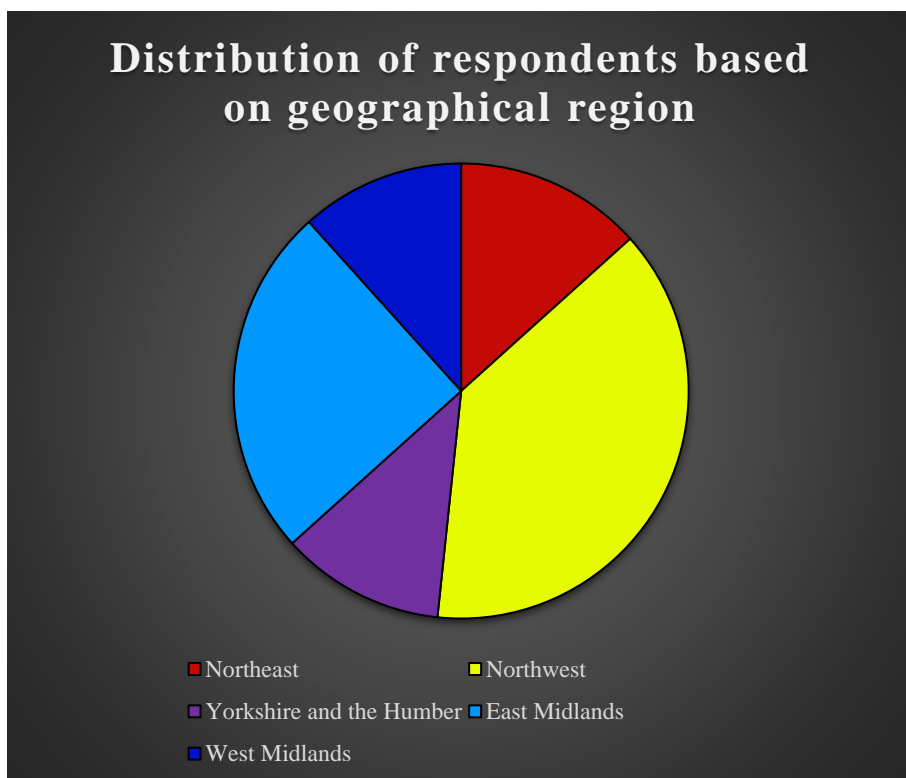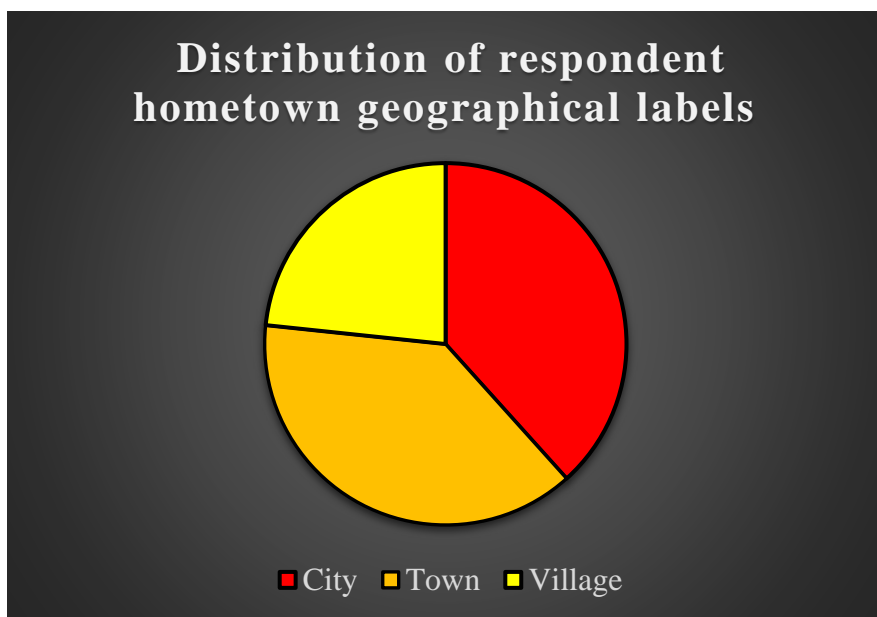
Quantitative data collection: Surveys

Control Factors

To control for any unconscious biases in student perceptions we maintained an inclusion criterion for responses in our dataset. We ensured all included responses were from Northern students studying at University of London. Additionally, we used a variety of distribution methods – including but not limited to student halls, student society pages and departmental email chains - to obtain a representative sample of university students. Our survey received 72 responses, of which 61 passed the inclusion criteria and were utilised for further analysis.

A significant discrepancy we identified is that few respondents, especially those from the Midlands, did not recognise themselves as northerners. Therefore, for the purposes of this study we consider people from Northeast, Northwest, Yorkshire and the Humber, East Midlands, and West Midlands as 'from the midlands and the north'. In fact, 23% of respondents who pass our inclusion criteria, do not consider themselves as 'from the north'.

Characteristics of the Dataset

Distribution of respondent hometown geographical labels

City   Town   Village

Distribution of respondents based on geographical region

Northeast
Northwest
Yorkshire and the Humber
East Midlands
West Midlands

Our questionnaire required respondents to grade the general availability and service quality of public transportation in London and their hometown on a 5-point scale. Furthermore, the respondents were asked to rate their personal reliance on public transport services in London/Hometown for (a) day-to-day activities, (b) Social Networks, (c) Education on a 5-point scale ranging from No Reliance to Extreme Reliance. The third aspect of focus is to investigate consumer preferences for different qualitative factors – like waiting times, service cancellations, crowding, value for money etc. Each ranking option was assigned a numerical code (ranging from 1-5) to prepare the data for analysis. Refer to appendix for full questionnaire.

Methods of data analysis

As our dataset included many categorical variables, we chose to conduct chi-squared tests to investigate the association between multiple variables. Additionally, our dataset meets the requirements for using chi-squared tests which are: random, mutually exclusive data drawn from independent variables. The use of data visualisation diagrams has also contributed to our understanding of the data and its underlying trends.

Qualitative data collection: Interviews

For our qualitative interviews, we adopted Flamm and Kaufmann's methodologies, particularly their use of semi-structured interviews to delve into participants' transportation experiences and preferences. Our sample included eight individuals who reside in the Midlands and Northern England but temporarily live in central London for their university education. Our participants spanned a variety of social science disciplines and ranged in age from 19 to 23 years.

The interview prompts were divided into three parts. First, we explored participants' experiences with public transport in the North, with questions such as "What motivates you to use public transport?" and "What challenges, if any, do you face when using public transport in the North?" We then asked about their experiences with public transport in London, using similar questions. Finally, we investigated whether these contrasting experiences influenced their perceptions of public transport in both regions, asking, for example, "How has your experience of using public transport in London compared with your experience in the North?"

Through thematic analysis of the qualitative data, we uncovered broad focuses of our respondents. We began by coding the interview transcripts manually, identifying recurring concepts, which we grouped into larger themes. Three main themes emerged from this process: the **quality** of available public transport, the **availability** of the services, and **accessibility**. Further details about these themes and their implications are discussed in the results section.

RESULTS AND DISCUSSION

Quality of Transport

A recurring theme identified from the interviews conducted was the quality of transport, with the consensus among participants being that transport in the North and Midlands lags that of London. The difference in service quality was found to be significant and convincing (p=0.000084).

a. Interconnectedness of Transport Networks

The participants highlighted the interconnectedness of transport networks as a significant factor contributing to their overall impressions of transport quality. In this regard, the urban areas of the North and Midlands, such as Bradford as mentioned by Interviewee 8, were commended for their relatively effective bus networks during the day. They discussed their enjoyment and in using these services; "public transport is an efficient way to connect with others and the city". This underlines the crucial role of public transport in the social and economic life of the residents.

However, when comparing these networks to London's transport system, the participants perceived a stark contrast. London's transport was often lauded for its seamless interconnectedness, with most participants stating that wherever you are in London, you are five minutes away from a public transport option. This suggests that London's integrated transport system significantly contributes to a positive user experience and likely influences the higher reliance on public transport in London compared to the Midlands/North found in our study. Despite this, the increased reliance on public transport in London for students was not found to be significant (p = 0.1515), suggesting that the demand for public transport is driven by necessity over preference. In a similar way, the reliance on public transport for different activities

(day-to-day activities, social networks, education) did not differ between the Midlands/North and London, see below.

Midlands/North

London

b. Regional Disparity in Transport Networks

Participants also drew attention to regional disparities, specifically between urban areas and peripheral towns and villages in the North and Midlands. In these less urban areas, transport services were reported as being less frequent and less reliable, causing inconvenience for the residents; "there were more bus services that would go to the housing estates surrounding the centre, whereas there was one or two bus services which would pass through my local town

every now and then, so it was definitely more difficult". This could potentially result in social isolation and limit access to employment and educational opportunities for people residing in these regions, which can exacerbate socio-economic inequalities; "if you have to put in so much effort and so much money to go into work, you're going to be less motivated to get into work ".

    c. <u>Modes of Transport Infrastructure</u>

Diving deeper into the infrastructure quality, our participants provided mixed views about different types of public transport in the North and Midlands. Buses were critiqued for their outdated payment systems requiring cash fares, whereas the train system, despite being more expensive, was seen as more reliable.

However, train infrastructure was not exempt from critique. Participants noted issues such as unannounced strikes, delays, cancellations, and lack of direct routes as barriers to using trains. Furthermore, the environmental impact of the over-reliance on cars in these areas due to inadequate public transport was mentioned by interviewee 2; they mentioned that environmental factors are not prioritized by residents of their town when weighing up whether to use public or private transport, demonstrating that other issues, such as cost and ease of access play a more prominent role in determining the type of transport used.

Availability of Transport Services

The second theme emerging from the interviews concerns the availability of transport services. The difference in availability of public transport between the Midlands/North and London was found to be extremely significant ($p = 0.0001554$), which we further analysed in the interviews.

    a. <u>Bus Services</u>

The lack of night buses in the North and Midlands emerged as a significant concern. These services reportedly cease operations between 9pm and 11pm. This limited availability constrained the participants' social activities and even left them stranded at times. They contrasted this experience with the extensive night bus service in London, which they felt offered them safety and the freedom to enjoy their evenings without concerns about transportation. This points to the significant influence of service availability on the perceived reliability and convenience of the public transport system.

b. Train Services

In Northern England, the train services were perceived as less efficient, with longer waiting times and the frequent need to change trains acting as barriers to usage. The contrast with London's faster and more direct train networks was stark. The convenience and efficiency of London's train system were seen as significant advantages, encouraging public transport use. Indeed, transport strikes are a significant criticism that interviewees have of London transport, illustrating the importance of regularity in train infrastructure.

However, the perception of the train infrastructure in the North and Midlands should be contextualised within the overall public transport landscape in these areas. While train services were critiqued, it is notable that the tram infrastructure in Nottingham and Liverpool received positive comments from the participants, suggesting when efficient public transport options are available, they are well received.

c. Car Reliance

Finally, the interviews revealed a significant reliance on cars, taxis, and Ubers in the North and Midlands, especially when public transport services were unavailable. This demonstrates service gaps in the current public transport system, necessitating the use of private transport options.

While this may meet the immediate transportation needs of residents, it has important environmental implications due to increased carbon emissions; "I feel like if there was a big investment in public transport in the North people would use public transport more and then there'd be less carbon emissions". This suggests the need for a comprehensive and sustainable public transport system that can meet the needs of residents at all hours while supporting environmental sustainability goals.

Accessibility of Transport Services

Accessibility, understood in this context as proximity to a public transport service such as a bus stop or train station, and the reliability of the service, emerged as a significant theme.

a. Proximity and Reliability of Services

The interviews highlighted that most participants resided within walking distance of a public transport service. However, for those based in the outskirts of towns, the key issue was not so much the distance but the infrequency and unpredictability of these services, often rendering them impractical.

b. Dependence on Public Transport for Employment and Education

Participants emphasised the importance of reliable and punctual transport services given the significant reliance on these for vital aspects of life such as employment and education. In areas with poor transport services, it was noted that this often acted as a deterrent to seek employment. Similarly, access to preferred education institutions was reported to be heavily dependent on good public transport connections.

In our survey, we compared the reliance on public transport for educational purposes in participants' hometowns versus in London. We found this comparison to be statistically insignificant ($p = 0.6689$). At first glance, this might suggest a lack of correlation between levels

of reliance on public transport in different regions. However, this data aligns with the narratives from our interviews, particularly when interviewees discussed their university choices being influenced by the quality of public transport infrastructure. Specifically, the absence of a well-connected public transport network in their hometowns may have been a deterrent for students when choosing a university in their home region. While our data did not find a significant difference, it does introduce an interesting question: to what extent does the availability and quality of public transport influence students' choice of university? We recommend further research in this area, which could involve a closer examination of students' decision-making processes when selecting universities, as well as an exploration of university policies and planning in terms of access to public transport

 c. <u>Availability of Alternative Options and Their Impact on Social Inclusion</u>

The analysis also revealed a link between the availability of alternative transport options and social inclusion. Participants from the North indicated a tendency to choose trains over buses, despite the former's higher costs, due to the poor frequency of bus services. This choice, however, was not equally available to all and could potentially widen social disparities. For instance, disruptions like delays and cancellations, which were often communicated at short notice, left little time to plan for alternative transport, disproportionately affecting those who lack access to personal vehicles or the ability to pay for more expensive transport options. Labour market implications of these disparities were discussed; those who have no other option but to take unreliable public transport can be perceived as unpunctual by bosses, which can lead to dismissals; "if you're texting your boss every day 'I'm going to be thirty minutes late because my train keeps getting delayed' then an employer isn't likely to want to hire you because you want someone who comes in on time rather than someone that is going to be late even if it's not their fault".

Many public transport services are inaccessible to those with physical disabilities, leaving them no choice but to use more costly modes of private travel. Furthermore, wheelchair accessible taxis were reported to be more costly than those that are not wheelchair accessible, but also far less available; "my mum knows all the taxi drivers by name because there are so little of them". This exacerbates the social exclusion of individuals with physical disabilities; an inclusive public transport system is thus necessary.

On a broader view of the themes analysed, we found an overlap between 1c (Modes of Public Transport) and 3c (Availability of Alternative Options). Importantly, the availability of alternative modes of transports negatively influences the perceived quality of public transport infrastructure, thereby disincentivising students from commuting using public transport. The theme of quality, in the form of convenient payment options, implicitly influences how likely students are to take alternative modes of transport purely from a personal viewpoint. Thus, this suggests that spatial mobility should be contextualised within the psychological behaviours of individuals, as it is not just the physical access to alternative transport, but also the quality of alternative transport that is important. In identifying this overlap, we believe there to be potential opportunities to further research on how our identified themes intertwine with one another.

CONCLUSION

Summarising our findings, our research identifies the existence of significant disparities in student perceptions of public transport services between the Midlands/North and London. Our analysis has identified quality, accessibility, and availability as primary factors influencing these perceptions. Furthermore, our findings illustrate the interconnectivity between these themes, suggesting that they should not be considered in isolation but rather as parts of an intertwined system affecting student experience and satisfaction.

Our study, however, has certain limitations. Although we have accounted for a wide range of perspectives, we have not specifically examined the influence of socio-economic background on students' perceptions and experiences of public transport. Despite this, we consciously decided to focus on students only, as our objective was to highlight a specific demographic's perception of the North/South divide in public transport investment.

In relation to broader issues, our study calls attention to the need for more equitable investment in public transport infrastructure. These results show that improving the quality, accessibility, and availability of public transport services in the Midlands and the North is not only a matter of economic development but also a matter of social justice, affecting students' quality of life, their welfare, and potentially their future opportunities.

We hope that our research will serve as a steppingstone for further explorations into this topic. We believe that the issues uncovered in this study are pressing and warrant deeper investigation, particularly in how they intersect with other societal issues like social mobility, educational opportunities, and regional economic development.

BIBLIOGRAPHY

Balchin, P. N. (1996). Regional Policy in Britain: The North-South Divide. Palgrave Macmillan.

Chng, S., White, M., Abraham, C., & Skippon, S. (2016). Commuting and wellbeing in London: The roles of commute mode and local public transport connectivity. Preventive medicine, 88, 182-188.

Dobbs, L. (2005). Wedded to the car: Women, employment and the importance of private transport. Transport Policy, 12(3), 266-278.

Flamm, B., & Kaufmann, V. (2006). Operationalising the concept of motility: a qualitative study. Mobilities, 1(2), 167-189.

Gallotti, R., & Barthelemy, M. (2014). The multilayer temporal network of public transport in Great Britain. Scientific Data, 1, Article number: 140049.

Hacking, J. M., Muller, S., & Buchan, I. E. (2011). Trends in mortality from 1965 to 2008 across the English north-south divide: comparative observational study.

Raikes, L. (2016) Transport Investment in the Northern Powerhouse. IPPR North

Raikes, L., Giovannini, A., & Getzel, B. (2019). Divided and Connected: Regional Inequalities in the North of England. IPPR North.

Rowthorn, R. (2010). Combined and uneven development: Reflections on the North–South divide. Spatial Economic Analysis, 5(4), 363-388.
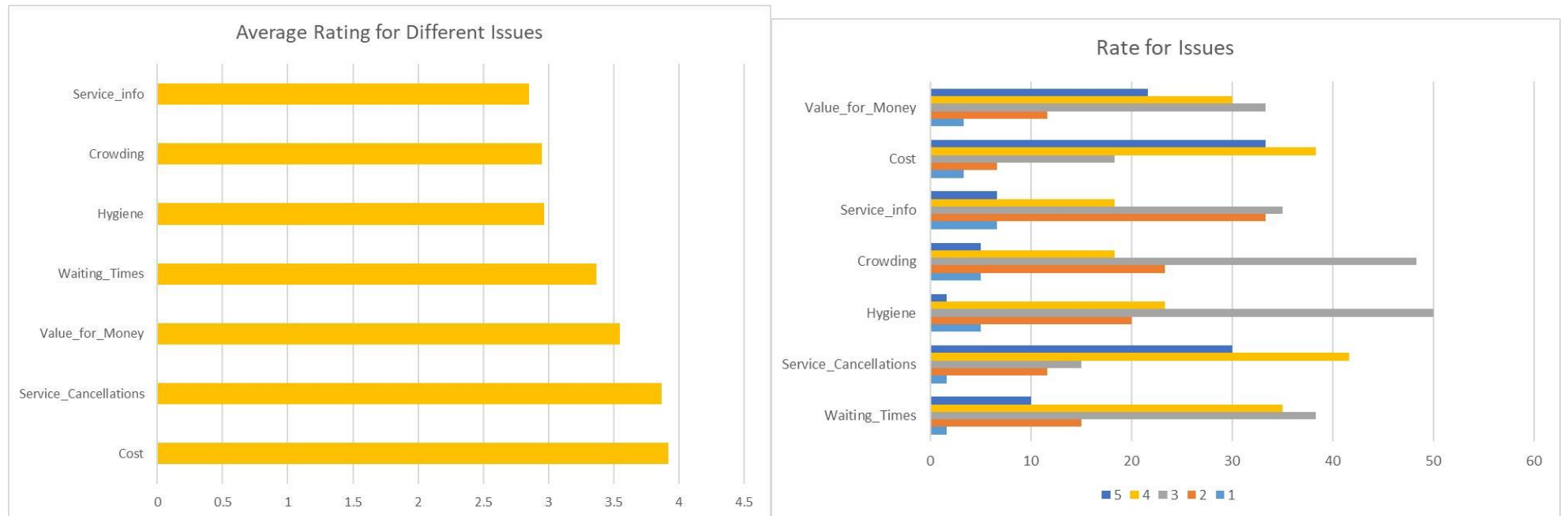
Distribution of respondent hometown geographical labels

City	38.33%
Town	38.33%
Village	23.33%

Code grids for thematic analysis

Navigational Challenges	Direct Lines	Bus stop infrastructure	Carbon emissions	Train Infrastructure
Takes a long time for trains to set up ramps for wheelchair access to carriages, and poorly connects to locations where people need to get to, hard to reach long distances from train station to required destination with wheelchair on cobbled/inaccessible roads and pavements, so easier to rely on taxis and Ubers (interviewee who's family member requires a wheelchair does not have access to a private car, so relies on taxis and ubers) "when I went home none of the taxis took card… especially at night that can be dangerous if someone has no other means but to use taxis" Interviewee 2: "A lot of the time we can't actually get a wheelchair accessible taxi, so she has to sit in the back with us and we have to fold up the wheelchair but it is very chunky so we have to request a taxi with a big boot for it to go in." "It's not really a fold down wheelchair.. she's meant to stay in it in terms of everywhere that she goes but we are very lucky that we	City centres have much more complex and wide connections and networks, towns have interlinked networks connecting to cities, however there are very scarce networks within towns and between towns. "My sister lives in such an area that for me to get there i have to take the bus to Bradford interchange which is all the way in town, and then from Bradford interchange i have to get the other bus, so two buses in total, which is kind of annoying but to be honest with you i don't really mind the journey i'm someone who really enjoys the journey it's a lot of fun" "there were more bus services that would go to the housing estates surrounding the centre, whereas there was one or two bus services which would pass through my local town every now and then, so it was definitely more difficult" "There were about four to five buses that would go into the city centre, but then if you were going somewhere else it wasn't that great, but from the city centre you could get to pretty much anywhere." Incentivises people to enter cities, but very difficult to travel around and between towns, especially between town outskirts and town centres.	Bus stop infrastructure in Northern towns renders bus travel unsafe at night, because bus stops are badly lit and bus stops are not called out. This makes it easier for bus stops to be missed. Bus stops being far apart and buses arriving infrequently risks leaving people stranded for long times in remote areas, causing lack of safety. Without access to private transport, this causes danger. "when you go past a stop most bus services announce it, whereas at home they wouldn't do that, so you either have to have your phone out with google maps on to make sure that you're going to the right place, or you'd have to be really vigilant, and when you're coming back on a bus and even when it's 5pm in winter you can't really see out the window you can't see what stop you're on. Whereas in London you know which stop is coming up because they announce it so you know so you don't have to be as vigilant, so you feel like you're actually going to go to the right place, but at home the number of times I've missed my stop because it was dark and I couldn't see where I actually was" "Normally I would either work out if any of my friends lived in that area, or I would try ring someone that would be able to come pick me up. Luckily, I've never ended up too far out, the only time that I did luckily my step sister lived in the town that I ended up in and I could stay with her for a while. There's no other transport you could	Little discussion about carbon footprint in Northern towns where there is a heavy reliance on private cars. "People feel inclined in the North to rely on private transport, to just get in the car because it's easier, and obviously it's worse for the environment, people just using cars, so I feel like if there was a big investment in public transport in the North people would use public transport more and then there'd be less carbon emissions. I feel like people use their cars for quite short routes as well they could use a bus route. Trains are good I feel like people use trains pretty solidly but I feel like there's a decline in people having a preference towards them because of the strikes, not massively though." "IF there was an investment in public transport I feel like people would feel like they could use it and probably opt for that instead of cars."	In North, train networks interconnect well within cities, between cities, between towns and cities, not within towns and between towns. Train strikes, delays, and cancellations in North are often unannounced so hard to plan, often leave people stranded, risks unsafety in cases where people cannot rely on private transport. Recent improvements are focusing on comfort and appearance of trains, e.g. by increasing charging sockets, not increasing lines.

can take her out and sit her in the back seat. And even to hospital appointments my mum always needs the wheelchair with her so she can't just not take it" Taxis and Ubers are scarce in Northern towns, wheelchair accessible ones are even more scarce and more expensive. "My mum knows all the taxi drivers by name because there are so little of them"	"You'd have to take the bus into Nottingham, then take the tram to wherever you wanted to go… the bus is at least an hour, sometimes an hour and a half, by car it's like half an hour, maybe 45 minutes in rush hour" Long waiting times, unreliable services. Less footfall in towns, socio-economic consequences as makes educational institutions and employment less accessible among people without access to private transport. "I didn't really need them as much because the boarding school provided transport, but the bus services were shockingly bad, mainly because it was so expensive, I think they technically counted the local buses as tourist buses so they could upcharge it because to the local town it was like £8.50, and for the local city which was Lancaster it was like £11.50, and this was four or five years ago so it's probably more now" London has direct lines and plenty of options "In London I just think the public transport is amazing, and even when there are tube strikes, public transport in London is more reliable than when at home, like a thousand times better in London" "It shows there is capacity for there to be better transport"	get you'd have to wait for the next bus service. But one goes one way, one goes the other way, around the same time, so as soon as you get off on the wrong stop, the bus on the other side of the road has probably already gone so you'd have to wait for the next one which could take up to an hour." "I was in a small town next to Bradford, it was near 10pm, it was winter and it was really cold, I was going to the bus and I didn't realise different bus companies operate around the area, and my bus ticket which was for a different bus company wouldn't be valid for that bus and I wanted to get home.. When I tapped my ticket it wasn't valid so I had to pay for another ticket." In London, buses are frequent, bus stops are lit well, and bus stops are called out. Buses cannot cope with extreme weather conditions. In North, due to lack of alternative services, bus breakdown risks leaving people without access to private transport stranded. "My experiences with getting buses at home have made me reluctant to take buses in London because I'm scared I'll get the same problem of just being dropped off in the middle of nowhere and not knowing where I am" In London, there are alternative services in cases of breakdown, and is more walkable as a city. In Northern towns, many buses still require cash. "at home you have to ask for a ticket, lots of people still pay cash… I don't know if they can take card"	"If you go to anyone at home they probably are not going to be like "oh I'll take the bus because it's more environmentally friendly", I think politics is always polarizing but at home it's not really spoken about" "People would choose to take the bus because it goes near their house and they can't drive anymore, I feel like there's not really a discussion, the main discussion at the moment is obviously about strikes but i feel like people don't really talk about why they use public transport" "It's less talked about (than in London)"	

Availability of Transport

Buses	Trains	Trams	Car reliance	Alternatives
"I would say the buses are reliable, but the waiting times are quite unreliable" No night buses in North, only in London. In North, causes sentiments of restraint, being stuck, getting stranded. Not the case in central London. However, during crowded events in Greater London, in cases of bus breakdown there are sometimes no alternatives, and Uber price spikes due to crowds renders getting home difficult. "They are generally reliable… especially buses I feel like they come quite often, especially night buses as well you know you can get back if you're out" "The knowledge that if something goes wrong, if I don't feel safe if I'm at an event, I know I can get on a tube and get home, but in home id be less inclined to go out because I'd feel less safe and I wouldn't have the option to get transport back id have to walk back" However, affordability schemes available in North but not in London: "I mainly relied on buses, especially in sixth form because Manchester does this	Longer waiting times in North than London. Less direct lines in North, more in London. "You can essentially get anywhere in London, I always know I can rely on transport, at home I sometimes feel stuck"	People living near cities with tram networks perceive them as "cool", they are well received. However, not everyone uses them: "There are also trams but I don't really use them personally just because buses are easier, they're closer to my house."	"I definitely say something you could go for a short journey in London you would need a longer journey for up North which is why people are more inclined to private transport" "For my sister the reason why she has to go further is because she has complex needs so there are less hospitals that can suit her needs, whereas probably in London there's more hospitals that can suit that" Heavy in North. People with access to private transport believe themselves to be "lucky". Participants, in North, who do not have access to cars rely on taxis and Ubers more. "If you don't have a car you're pretty much screwed" "A lot of people didn't have cars in my town, they couldn't afford to have a car to drive every single day, but if there	Few alternative options in North. Always within 5 minutes walking distance of alternative in London. "How frequent (transport in London) is definitely shocked me" "if you do get off at the wrong stop, it's quite easy to walk back to where you initially wanted to be"

scheme where you get free buses, between 16 and 18, when you're in college, so I used that" Despite this, without affordability scheme buses in Manchester are significantly more expensive than buses in London: "It's significantly cheaper than in Manchester" "In London there's a lot more regular transport" "The area I used to live in there was like one bus every 45 minutes, whereas when I moved, not even that far away, every 10 to 15 minutes there was a bus, so it really just depends on where you live, even in Manchester itself" "During sixth from I had to take the bus into the city centre and then change, even though it wasn't that far away, just because there were no direct buses to do that, but pretty much everyone from my school would have to do that"			was a bus that would come every 20 minutes they'd be more likely to want to go into the town, and the town itself would probably flourish a lot more because people would actually be suing he facilities in the town." No mention of reliance on private transport in London, and reliance on taxis and Ubers much more rare in London "I've never used Uber or anything (in London) but that's a last resort"	

Accessibility

Walking distance (i.e. proximity)	Alternative options	Strikes	Essential
In North, whilst participants said they were within walking distance of a public transport service, e.g. from home, place of work or study, issue was unreliability of the service, often did not know whether bus would arrive. In London, always within close proximity to reliable, punctual public transport service.	North: very rare that alternative service can be relied on if main service is out of order. If buses are out of service, can rely on trains where available, but trains less affordable. Interviewee 1 mentioned that in her town, despite buses being more affordable, most choose trains over buses, due to lack of reliability and punctuality of bus services. In London, there are always alternatives nearby.	In North, sometimes there is little notice about strikes but usually there is notice in advance. There is much less notice about delays and cancellations. "Strikes are a big part of our history in the North" "I think the conversation at LSE is we support the strikers but can you run the trains because it's kind of annoying, but they clearly don't understand the strikes then because they are meant to be inconvenient" "I feel like the people I've had conversations with in the North, they understand the strikes and why they're happening… it's more about people.. not understanding the reasoning" "There's general consensus of people not understanding the strikes" In London, there are more notices and advance announcements of strikes, and many alternatives on offer.	Public transport connects people with each other and with the city: "Being in Bradford and being in London and being in other parts of the UK as well, public transport is such an efficient way to get to know the different patterns of the city." "On the bus you can strike up a conversation with someone that you've never known before" "Just having the simple than k yous and excuse me it goes a long way" "It can be alone time but at the same time you're also connected with the city and it's a really nice feeling and it's something I've experienced in London and in Bradford and in Manchester and in other parts of the UK" "It doesn't matter where you are, I just think public transport is an efficient way to connect with others and the city". In North, many rely on access to public transport for employment and education. However, due to low reliability of services, especially in towns, people feel less motivated to travel to work due to long distances and high likelihood of arriving late due to poor transport infrastructure. Puts greater stress on people commuting to education and work. "I lived on the outskirts of the town where my school was, so it would've taken about 2.5 hours to walk it so I had to rely on transport to get into school everyday" "the school bus was better, but the public bus no, one would come every hour or so, and sometimes it would come and sometimes It wouldn't come, and the service itself is quite slow"

			"so my mum cant drive, so she couldn't give me a lift to school, so it would've had to be taxi, walk, or school bus" "a lot of people in my school were exactly the same; they lived quite far out and needed the bus to get to school" "it was a direct service but it would take about 1.15 hours to do the journey. So when school, days start at 8.30 in the morning you'd have to take the bus at like 7am and pray that it actually comes, which is quite difficult" "the school bus took longer than what the normal bus took" "a lot of people in my school were exactly the same; they lived quite far out and needed the bus to get to school" People get turned away from working in her town in North, chose to work in London instead, due to 4 hour commute that would be required from home to work, despite it being in her town. "if you have to out in so much effort and so much money to go into work, you're going to be less motivated to get into work anyway" "In terms of the school that I went to, it was a better school than what the school in the local area were because it was independently run because it was a Catholic school. I think my friends who lived in my suburban town would have been more likely to want to go to that school (had there been better transport links) because it would be less effort to get there" "To go to a better school you would have to inconvenience yourself with public transport but i think if it was there people would definitely use it"

Code used for analysing the survey data in RStuido

```
1  library("readxl")
2  data = read_excel("D:/sunny/LSE/LSE GROUPS/Transport1.xlsx")
3  View(data)
4  nrow(data)
5
6  sum(is.na(data))#check if there is null data
7
8  summary(data)
9
10 #chi-square test
11 chisq.test(data$availability_home, data$availability_ldn)
12 #p<0.05, reject null hypothesis and these two variables have significant relationship
13
14 chisq.test(data$ser_qua_home, data$ser_qua_ldn)
15 #p<0.05
16 0.0000839
17
18 chisq.test(data$Activities_home, data$Activities_ldn)
19 #p>0.05
20
21 chisq.test(data$Social_Networks_home, data$Social_Networks_ldn)
22 #p>0.05
23
24 chisq.test(data$Education_home, data$Education_ldn)
25 #p>0.05
26
27 #percentage of people who considered themselves come from the north
28 sum(data$north == "1")/nrow(data)

29 #percentage of different living area
30 #cities
31 sum(data$living_area == "1")/nrow(data)
32 #Borough
33 sum(data$living_area == "2")/nrow(data)
34 #town
35 sum(data$living_area == "3")/nrow(data)
36 #village
37 sum(data$living_area == "4")/nrow(data)
38
39 # Calculate the percentage of each rating
40 # Change "Activities" and "1" to get different values
41 rating_counts <- table(df$Activities == 1)
42 total_responses <- sum(rating_counts)
43 percentage_ratings <- (rating_counts / total_responses) * 100
```

Survey Questions

1. I agree to participate in the study. I understand the purpose and nature of this study and I am participating voluntarily. I grant permission for the data generated from this survey to be used in the research's publications, maintaining the respondent's anonymity. *

   ◯ I agree to participate

2. Do you attend a London university? *

   ◯ Yes

   ◯ No

3. Which region(s) of the UK do you have the most **lived experience** in: *

○ Scotland

○ North East

○ North West

○ Yorkshire and the Humber

○ East Midlands

○ West Midlands

○ Wales

○ East of England

○ London

○ South East

○ South West

○ Other

4. Do you consider yourself to be from the **North** of England? *

○ Yes

○ No

5. Which geographical label best suits the area(s) you have the most lived experience in *

○ City

○ Borough

○ Town

○ Village

6. How would you rate the **availability** of public transport options in your Hometown? (for eg. operating times, reach, frequency etc.)

   1 being significantly poor transport infrastructure and **5** being significantly developed transport infrastructure. *

1	2	3	4	5

7. How would you rate the **service quality** of public transport options in your Hometown? (for eg. cleanliness, crowding etc.)

   1 being significantly poor quality and **5** being significantly high quality. *

1	2	3	4	5

8. In your **hometown** to what extent are you reliant on public transport services for the following activities:

   Respond ranging from **No Reliance** to **Extreme Reliance.** *

	No Reliance	Low Reliance	Moderate Reliance	Heavy Reliance	Extreme Reliance
Day-to-day Activities (eg. grocery shopping, gym etc.)	◯	◯	◯	◯	◯
Social Networks	◯	◯	◯	◯	◯
Education	◯	◯	◯	◯	◯

9. How would you rate the **availability** of public transport options in London? (for eg. operating times, reach, frequency etc.)

   1 being significantly poor transport infrastructure and **5** being significantly developed transport infrastructure. *

1	2	3	4	5

10. How would you rate the **service quality** of public transport options in London? (for eg. cleanliness, crowding etc.)

    1 being significantly poor quality and **5** being significantly high quality *

1	2	3	4	5

11. In **London** to what extent are you reliant on public transport services for the following activities:

Respond ranging from **No Reliance** to **Extreme Reliance.**

*

	No Reliance	Low Reliance	Moderate Reliance	Heavy Reliance	Extreme Reliance
Day-to-day Activities (eg. grocery shopping, gym etc.)	○	○	○	○	○
Social Networks	○	○	○	○	○
Education	○	○	○	○	○

12. Rate how significant these issues are to you:

Respond ranging from **Not Significant** to **Very Significant.** *

	Not Significant	Low Significance	Moderately Significant	Highly Significant	Extremely Significant
Waiting Times	○	○	○	○	○
Service Cancellations	○	○	○	○	○
Cleanliness/ Hygiene	○	○	○	○	○
Crowding	○	○	○	○	○
Access to Service information	○	○	○	○	○