A Journey of Habits:
Making, Sustaining and Transforming Everyday Urban Mobilities

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(*The following draft is adapted from different sections of a future chapter of my PhD thesis. The chapter deals with switching to underground rail – the metro – for the purpose of commuting. The study was carried out in Sofia, Bulgaria, and focused specifically on those commuters whose homes and workplaces were reached by the 2012 underground rail expansion. The purpose of the chapter is mainly to explore the circumstances under which commuters switch from private car to public transport. However, switching from one kind of public transport to another kind of public transport as a result of infrastructure changes is also addressed. To explore these topics, commuting is framed as a type of habitual behaviour, where habit is treated as an embodied technological practice.)*

1. Introduction

In research and policy on low-carbon urban mobility, the main focus is often on walking and cycling, due to their relatively minimal impact on the environment and economic affordability. Nevertheless, public transport also plays an important role in the sustainable transport mix, as it affords better speed and can accommodate different kinds of physical abilities. As a result, the transition from private car to public transport is considered one of the important components of the shift towards sustainable urban mobility.

However, conceptualising such an interplay of habit and disruption in everyday mobility presents a number of challenges. Theoretical contributions have often conceived of habit as entrenched and automated, and disruptions as instances of the rational re-evaluation of habit under changed external stimuli (Wood, Tam, and Witt 2005). This is also the basis on which many practical approaches have been based, with infrastructure- or information-based interventions expected to act as the trigger for the interruption and substitution of car habits.

Up to the present date, car habits have proved highly resistant to interventions, and the success of both material and communication interventions in the everyday mobility setting have achieved only limited success. To begin to imagine alternative approaches to the transition from private car to public transport in everyday urban mobility, different conceptualisations of travel habits may be needed.

This chapter looks at theoretical and empirical openings which could contribute towards this

goal. The next section outlines briefly some of the literatures which can be useful when thinking about habit although, due to limited space, much that is to be fully developed in the chapter is only mentioned here. The sections on methodology and findings are similarly brief, and present a sketch of the empirical data which informs these reflections. Some preliminary directions for the discussion are offered.

2. Re-thinking habitual travel behaviour

From an economic perspective, the commute is a derived demand. For most economists, commuting is a temporal and financial cost, incurred in order to reach a "meaningful" place such as work or home (for a critique, see Banister 2008; Watts and Urry 2008; Edensor 2011) The *Homunculus Economicus* which transport planners and economists often use to conceptualise daily travel has been repeatedly demonstrated to misrepresent the experience, meanings and values of the commute (Adams 1981:215). Nevertheless, it continues to dominate much research and importantly, most of urban transport planning and policy making (Golias 2002; Levinson and Zhu 2013).

A different, but related, view of the commute is provided by psychological research. In approaches originating in psychology, everyday travel is conceptualised as driven by two sets of factors: attitudes and beliefs, and habits. Attitudes and beliefs can be thought of as the "rational" drivers of everyday travel behaviour. As is often the case in psychological research, it is assumed that actions are the visible expressions of attitudes and dispositions. However, this idea has often been criticised as problematic: unsound due to problem of proving it empirically without falling into the trap of confirmation bias, and unaccommodating to the myriad daily occasions when people behave "out of character" (Smith, Phillips, and King 2010). The reverse critique also applies: observing the behaviour of people does not necessarily have to reveal something about their enduring attitudes and beliefs (Bissell 2010:282). Thus, a study of what people think about public transport commutes, how they act as commuters, the dynamics of how the two change over time, and whether they are interconnected, needs to move beyond assumptions about the view of behaviours as the embodiment of attitudes and social structures (Hitchings 2010).

Using the prevalent ideas about habit, a linear before-and-after timeline can be drawn to describe the change resulting from infrastructure development. In this view, the existing transport habits of commuters in neighbourhood X are deeply entrenched repetitive behaviours, based on earlier rational decisions. These behaviours are linked to specific

transport modes. Thus, some of these commuters drive personal cars, as they have considered personal costs and benefits at some point in the past, and decided that given convenience, alternatives available for reaching their destination, personal safety, and so on, this was the best option to choose. Psychologists would point out that this may or may not still be the best alternative – circumstances might have changed significantly, but the power of habit will drive people to continue repeating the habitual behaviour.

While a new metro station is being constructed in the neighbourhood, and when it eventually opens, this disruption is likely to be significant enough to cause many commuters' existing habits to be re-evaluated. In these circumstances, commuters 'switch' from their 'automatic', habitual, everyday behaviour, to a mode of 'rational decision-making': the new variables are re-considered, costs and benefits are weighed up given the new options available, and a decision is reached as to whether, and how, to adjust behaviour. If a new kind of commute is adopted – for example, a switch from car to metro is initiated as a more beneficial option – within a short period of time, this new behaviour becomes routine too. In other words, the conscious decision-making is once again replaced by unconscious movement 'on auto-pilot.'

Given the far-reaching influence which perspectives from economics and psychology have in everyday life, and especially their importance to the study of transport infrastructure and travel behaviour, this conceptualisation can seem almost intuitively true. However, it also has a number of shortcomings.

Firstly, it relies on a Cartesian dualistic understanding of mind and body. The strict division between the critical mind and the unthinking body can misrepresent the processes which can lead to changes in behaviour. Habits are not necessarily the product of "solidified" past rational decisions, just like the changes in habitual behaviour are not always the product of re-evaluating external circumstances (Schwanen, Banister, and Anable 2012). The links which connect the environment, the body and the mind have increasingly been shown to be multi-directional and complex, stretching far beyond the linearity of stimuli-perception-decision (Ingold 2000). Attending to the embodied intelligence of travel habits can demonstrate that the practice of everyday mobility can involve a continuous flow of mid-body-world interactions, with change originating in any of the three. A number of related theoretical approaches have been developed in different discipline, which can be usefully deployed to think about habits and their role in everyday mobility. These include theories of embodied and distributed cognition in the cognitive sciences (Hutchins 1995; Wilson 2002) and theories of social practice in the

social sciences (Shove 2009; Shove, Pantzar, and Watson 2012)have been found to be particularly useful. In the application of these theories presented here, individual practices of ticketing, carrying, occupying space, and interacting with others, are taken as the components which make up travel habits. In addition, these practices of everyday mobility are framed as embodied and technological – that is to say, as doings and encounters which are shaped by the coming together of bodies, minds, and objects, and not as the outcome of dispositions and decision-making.

Secondly, the notion of habitual travel behaviour typically implies the consistent repetition of one kind of behaviour, until it is replaced by another. However, habits can follow much more complex patterns, varying in a cyclical fashion between seasons or weekdays, slight adaptations instead of before-and-after transformations, or spontaneous and temporary changes which have no obvious 'rational' antecedent. Attempts to distil a 'typical' journey from these variations can seem more useful in the context of transport research (Gatersleben and Uzzell 2007; Marsden and Docherty 2013). However, attending to this diversity can also yield interesting results, particularly in terms of enriching our understanding of everyday travel habits.

Finally, the habitual journey to work involves a wealth of activities and encounters which are not attended to when only recording origin, destination and mode (Watts and Urry 2008;Bissell 2010). A monolithic conception of travel brings with it a simplified definition of habit, where the commute is reduced to a single travel mode. However, the different facets of the commute do not change at the same time and in the same way as the main transport mode which is taken to define it. Thus, drawing attention to the walk to and from stations, to reading and texting, to luggage, travelcards, weathers and moods can reveal more about the mechanisms of how travel habits change – i.e. how their many components are assembled, sustained and adjusted.

These arguments, if supported by empirical data, could have some implications beyond the theoretical when it comes to efforts to promote sustainable urban mobility. The power of habit is often blamed for the unwillingness of commuters to switch to sustainable travel (Gärling and Axhausen 2003). As a result, debates around new public transport infrastructure are often reduced to scepticism or optimism of whether they offer sufficient benefits to lure commuters away from their cars. Similarly, punitive measures (such as congestion charging, or parking restrictions) are discussed in terms of whether they are compelling enough to discourage driving or other unsustainable behaviours. Instead, by attending to the elements which make up

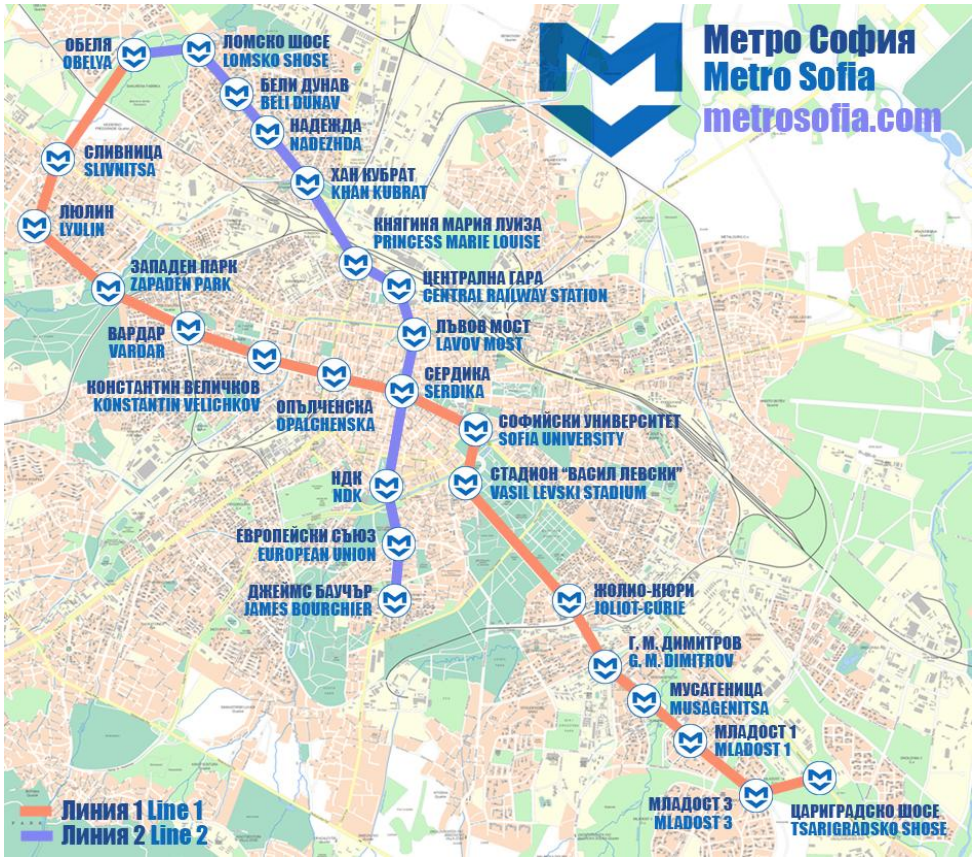
everyday mobility, including human and non-human actions, encounters and skills, the mechanisms of how behaviour happens can be better understood.

Methodology

These theoretical arguments about the nature of travel habits were tested empirically in a study of the role of the 2012 Sofia Metro network expansion on the everyday mobilities of commuters. The study was based on a quasi-longitudinal design, following 20 commuters over 9 months between 2012 and 2014. Through the use of ride-along interviews, participant observation, photography, GIS and participatory mapping, I sought to gather as much detail as possible on the mobility routines of the respondents before and after the opening of a new metro station near their home or workplace. Much of the research was exploratory in nature, allowing respondents to discuss topics, sometimes only loosely related to their commute, which they saw as important. Only during later ride-along interviews were these organised into a few specific themes, which were then explored in more depth.

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The Sofia Metro



Map of the Sofia Metro as of January 2014
Source: MetroSofia.com

On 20 January 1998, the first short section of Line 1 began operations. By then, Sofia was a heavily congested and polluted automobile-dependant city of 1.5 million with a hugely inadequate road, parking and pedestrian infrastructure, and insufficient public transport provision. The number of cars in the city had more than doubled between 1990 and 2005 from 288,000 to 615,000, passing the one million mark by 2008 (Sofia Municipality 2009).

Up until 2009, the Metro was widely regarded as marginal and extravagant, "leading from nowhere to nowhere", a fairground train that small children might ask to be taken to on a Sunday afternoon (Capital 1998). From 2009 onwards, the Metro occupied a progressively important role in the city's mobility, especially after in September of that year the two operating sections of Line 1 were connected to provide an uninterrupted North West-South East service across the city (Line 1 is indicated in red in Map 1).

Line 1 was extended again in April-May 2012, with five new stations. However, the crucial moment in the development of the Metro came on 31 August 2012, with the launch of Line 2. Its first 12 stations opened simultaneously, connecting a densely populated suburban residential area to the North, the Central Railway Station, the busy city centre with its concentration of retail, entertainment and office spaces, and a higher-income residential area South of the city centre (see Map 1). Further expansion of the two lines continued in 2013-14, with Line 1 planned to reach Sofia's airport by early 2015.

Findings

When does an activity become routine? What makes people give up a habit? Both of these are questions which have dominated much of the research on travel habits, and which have rarely yielded practically useful results. They are therefore approached differently here, based on the idea that a habit of everyday mobility can be broken down further into its constituent parts – the meaningful activities, skills and encounters which make up the practicing of a habit. Based on the findings from Sofia, the following seven aspects of everyday mobility were selected as significant in how travel behaviour is made, sustained and modified. In the sub-sections below, each theme is illustrated with a quote from a ride-along interview with a metro commuter. The quotes are selected to draw attention to the instances of change in habitual travel behaviour. No distinction is being drawn between big and small change at this stage; all modification or substitution of aspects of the journey are assumed to potentially have a significance for understanding travel habits and decisions.

Modality. Apart from the 'main' mode of transport used during the journey, this section explores the dynamic interplay, continuous transformations, and subtle substitutions which take place in everyday journeys in terms of mode. Thus, some respondents chose to walk to a farther metro stop when the weather was nice, while others were alternating bicycle and metro within the same week.

"Until May 2012, I gave colleagues at my old job a lift. No-one in the same direction as me at the new job, so driving became even more depressing. Even before the metro opened [in August 2012], I was sure I would like it and that I would use it to go to work. I had told myself it would be my main mode of transport. I think my enthusiasm has only grown since then.

My biggest worry was the walk to the station, that I would be cold. I am always cold, and what I loved about the car is not having to spend any time outside. But the metro opened in August and the weather was lovely, so I had time to get used to the idea." (Jenna, F, 33)

Activity. This section attends to the activity which commuters chose to occupy all or some of their commuting time – including the occasions when they chose to 'do nothing' (Ehn and Lofgren 2010). Although the activities in this section are very diverse – from snoozing to studying for exams, from people-watching to texting, their common trait is that they are driven by something other than the objective to move in physical space. That is to say, they are not activities undertaken specifically for the purpose at-hand, that of getting from A to B.

"I had stopped listening to music because I was worried my hearing was getting worse because of the headphones. Then one morning I knew I would have a long way to go during the day, so I ended up putting the headphones in my bag again. So they just stayed there, and I ended up using them during the commute again" (Ivan, M, 23)

Augmented self (wearing and carrying). Previous research has already highlighted the fact that passengers on public transport are "augmented" human bodies (REF). This section focuses on the bags and coats, umbrellas and e-books which commuters wear or carry, transforming their bodies into commuter-bodies.

"I had been using my Kindle in the metro for a long time. I would lean against the door that doesn't open until my stop, and just read. But then one morning when it was particularly busy I had to hold on to the central handrail between the two doors. I realised I would struggle to operate the Kindle with just one hand. Ultimately, it's something that's mainly suitable for when you're sitting down. So that's how I took out the smartphone for the first time [during the

commute]. Now I basically don't read on the Kindle while I'm in the metro. I just browse stuff online." (Ina, F, 37) [In the case of Ina, three events almost coincided: the mobile coverage which provides an internet connection on the metro was expanded to her route in November 2013; She was given a new smartphone in February 2014; And the trains started getting more crowded, making the e-reader less convenient to use].

Consumption. Apart from what is being worn and carried, what is being consumed can also be significant to the ways in which everyday mobility is performed. Smoking, eating and drinking are discussed in this section.

"I've cut down on smoking since I don't drive to work in my car. You can't smoke on the metro, and I would never smoke while walking." (Jenna, F, 33)

"More and more people are taking their food onto the metro. I am getting increasingly irritated by this – I am on a diet, but even if you're not on a diet, it's not nice to smell someone else's McDonald's. Plus, it's forbidden anyway." (Mariana, F, 27) [This also ties in with the communication/contagion theme]

Ticketing. Tickets and travelcards are discussed here as practices rather than objects. They are significant not only because they constitute one of the formal rules which organises public transport systems, but also because they illustrate how aspects of the commute extend beyond its specific time and space. Therefore, this section attends to the use of tickets and travelcards during the journey, but also to how and where they are bought and renewed, as well as the micro-practices involved in their everyday use.

"In October, it got cold and windy. I didn't want to cycle in that weather. So I renewed my expired metro travelcard for another month, and started commuting by metro again. Then the weather became really warm again for quite a while - but I was stuck with the monthly travelcard, and commuted by metro so it doesn't go to waste." (Tanya, F, 32)

"I used to take out my travelcard to tap it on the reader on my way in. But about a month after I switched to a travelcard (and two after I started using the metro) I saw how people would just touch their entire wallet on the reader. So I started doing that too, it's very cool." (Jenna, F, 33) [Learning and adopting new skills from observing others is also connected to communication/contagion]

Communication and contagion. This section explores both intentionally initiated communication by people co-present on public transport during the commute, as well as

interaction which just 'happens'. Both verbal and non-verbal interaction is included, especially when it is influential to changes in the habits and practices of the commute. Examples include following someone's gaze to understand which direction to expect the train from, or dealing with the 'embarrassing' situation of standing on the wrong side's doors as the ones behind you open.

"The evening commute is different. It is more melancholic, people are more introverted. It's a different atmosphere, quiet. There aren't as many people. Maybe to some extent it's my own mood that affects my perception though." (Boryana, F, 30)

"I try to take the end seat lately. At least you're 'hugged' by someone's massive winter coat only on one side." (Jenna, F, 33)

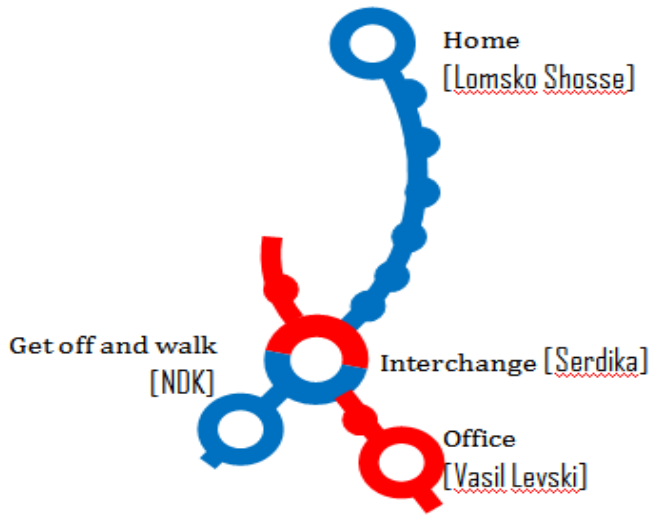
Planning routes and schedules. The last two sections are dedicated to the practices, activities and skills involved in organising the time and space of the commute. 'Planning' refers to organising times and spaces which are not now and here, using watches, maps, experience, talk, among others. The final section, **Inhabiting routes and schedules**, focuses on the activities which take place when the commuter is orientating themselves in the present moment, using a number of skills to tell which station the train is in, or which exit to take, or whether to start walking faster. These two sections relate to existing research on way-finding and way-making in everyday mobility (Laurier and Lorimer 2012).

"I've noticed lately that I have started memorising the times of specific metro trains. So that's after almost a year since the station opened near my house. Basically, I aim for the 8:29, and I almost always end up getting on the 8:37. This happens only in the morning though, not in the evening." (Ina, F, 37)

"On the first two days of going to work by metro, I kept getting the exit out of the station near my office wrong. On the third I came up with this mental marker that I need to exit in the direction of the train's movement." (Jenna, F, 33)

"These days I can be completely engrossed in my book, I still know where I am. At the stop before mine, the doors start opening on the other side. That's how I know that it's just one more stop now, and I should start getting ready." (Tanya, F, 32)

"I used to take the metro to Serdika station, where I would change to Line 1 for two stops. I found the need to transfer frustrating and at some point, I decided to just get out of at NDK and walk to the office from there. This switch happened during late spring, when walking was pleasant, and then just carried on into winter too. The walk from NDK takes 15 minutes. It's not much slower. Also, I can walk through the smaller street, which saves me a few minutes of possible waiting at this big interchange, where waiting for a pedestrian green light can take forever. I think if it was 20 minutes of walking, it would already be too long. But 15 min is nice, I like a bit of walking. Especially in the city centre. I try to vary the walk a bit, take different streets, learn their names. I try to go down one street on the way to the office, and along another one on the way back."(Ivan, M, 23)



In order to make findings of this kind useable, they will be presented in graphic form. The format of these diagrams is still in draft form, and I hope to be able to present some possible directions for its development during our meeting in Leeds. This format allows for changes which took place during the researched period to be visualised, while drawing attention to the different ways in which change in travel behaviour can occur.

Discussion

Habitual behaviour is seen as originating in rational decision-making, which is in turn seen as shaped by beliefs and attitudes. Sustainable urban mobility policies and campaigns thus often focus on information and tactics aimed at changing these behaviour-shaping beliefs and attitudes (Barr and Prillwitz 2013). However, the link between beliefs and behaviour has been demonstrated to be tenuous when it comes to the practices of everyday life and environmental sustainability (Hitchings 2010; Shove, Pantzar, and Watson 2012). Zooming in on the different components of habitual travel behaviour may offer new perspectives on how change may occur.

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