

“We can all just get on a bus and go”: rethinking independent mobility in the context of the universal provision of free bus travel to young Londoners

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ABSTRACT

This paper uses qualitative data from interviews with 118 young Londoners (age 12-18) to examine how the universal provision of free bus travel has affected young people's independent mobility. Drawing on Sen's capabilities approach, we argue that free bus travel enhanced young Londoners' capabilities to shape their daily mobility, both directly by increasing financial access and indirectly by facilitating the acquisition of the necessary skills, travelling companions and confidence. These capabilities in turn extended both opportunity freedoms (e.g. facilitating non-"necessary" recreational and social trips) and process freedoms (e.g. feeling more independent by decreasing reliance on parents). Moreover, the universal nature of the entitlement rendered buses a socially inclusive way for groups to travel and spend time together, thereby enhancing group-level capabilities. We believe this attention to individual and group capabilities for self-determination provides the basis for a broader and more child-centred view of independent mobility than the typical research focus upon travelling without an adult and acquiring parental permissions.

INTRODUCTION

Independent mobility in childhood

Recent decades have seen growing concerns that young people lead increasingly domesticated lives and enjoy less 'independent mobility' than previous generations (Fotel and Thomsen, 2004, Kytta, 2004) (O'Brien *et al.*, 2000). For example, Hillman *et al.* (1990) showed that between 1971 and 1990 British parents raised the age at which they granted their children 'licences' to undertake different sorts of journeys (e.g. going to school unaccompanied), and this remained true as of 2010 (Shaw *et al.*, 2013). This decline in independent mobility has been linked to various negative outcomes including decreased physical activity (Page *et al.*, 2009), reduced opportunities for social, emotional and cognitive development (Kytta, 2004) and increased fear of the local environment (Prezza and Pacilli, 2007).

Yet despite its widespread currency, some have critiqued the concept of independent mobility as being insufficiently specified, as drawing too heavily upon adult perspectives, and as focussing excessively upon the presence or absence of adults as determinant of independence. For instance, the Italian school travel program 'We go to school alone', offers primary-school children the chance to travel to school "with their school friends, unaccompanied by their parents" (Prezza *et al.*, 2010, p.10). This focus upon travelling 'alone', and the conflation of 'alone' with 'unaccompanied by parents', arguably represents an adult-centred focus on transport autonomy that renders invisible the intensely social nature of children's travel (Mikkelsen and Christensen, 2009). A research focus on parental accompaniment and parental permissions may also obscure the role of wider societal factors, including the potential for intervention by schools, local authorities or other State bodies (Kearns and Collins, 2003, Fotel and Thomsen, 2004). This marginalisation of both sociability and social factors may reflect the fact that children's independent mobility is often framed primarily as a physical health or 'active travel' issue (Mikkelsen and Christensen, 2009); indeed, at times independent mobility has been treated as being coterminous with walking or cycling (Hillman *et al.*, 1990, Whitzman *et al.*, 2010).

There is therefore a need to conceptualise independent mobility in ways which are more child-centred, which examine transport modes other than walking and cycling, and which examine relationships with actors other than parents. There is also a need for approaches that

explore the children's experiences across a wider age range and with reference to a wider range of spaces. To date, most investigations concern children aged between about 7 and 12 years (e.g. Hillman *et al.*, 1990, Christensen and O'Brien, 2003, Mikkelsen and Christensen, 2009, Page *et al.*, 2009), which may explain their predominant focus on parental permissions and on mobility close to the home. Yet children can occupy both familiar local spaces near their house and also less familiar public spaces further away (Harden, 2000), and the acquisition of public mobilities may be just as significant a transition as the earlier acquisition of local mobilities (Milne, 2009).

In this paper we therefore seek to extend the independent mobility literature by examining mobility on public transport, mobility beyond the familiar local area and mobility by adolescents. We also seek to show how the idea of independent mobility can usefully draw upon the account of freedom proposed by Amartya Sen in the context of his influential 'capabilities approach' to human development. Sen proposes that what matters for human freedom is not what people actually do (their 'functionings') but rather the range of options open to them (their 'capabilities') (Sen, 2002). Thus far, Sen's concept of capabilities is analogous to the concept of potential mobility or 'motility', defined by Kaufmann *et al.* (2004, p.750) as "the capacity of entities (e.g. goods, information or persons) to be mobile in social and geographic space" (see also Kaufmann, 2002, Kellerman, 2012). One additional distinction which Sen makes is between opportunity and process aspects of freedom. As Sen writes, "First, more freedom gives us more *opportunity* to achieve those things that we value, and have reason to value. This aspect of freedom is concerned primarily with our *ability to achieve*, rather than with the process through which that achievement comes about. Second, the *process* through which things happen may also be of fundamental importance in assessing freedom" (Sen, 2002, p.585 emphasizes in original). In other words, it not only matters what people can achieve but also how they come to achieve these things, including "whether the choices are being made by the person herself – not (on her behalf) by other individuals or institutions" (Sen, 2002, p.508). The potential value of this distinction to the mobilities literature has been recognised before (Sager, 2006), but examples of its empirical application are lacking. In this paper we seek to show how attention to both the opportunity and process aspects of freedom can provide a fuller understanding of what young people feel it means to be 'independent' in their mobility.

Free bus travel for young people in London

Barker (2009, p.5) writes that "age (young age) and mobility recursively produce one another in the course of young people's everyday lives". At the family level, we have already touched on one example of this when considering the mobility 'licences' that parents may grant their children at certain milestone ages (Hillman *et al.*, 1990). At a societal level, this co-implication of age and mobility can be observed in the widespread practice of subsidising children's travel on public transport. Across the UK, for example, children aged under 5 years travel for free on mainline trains while children aged 5 to 15 travel half price. Local authorities in the UK also have a statutory duty to provide children aged 5 to 16 with free transport to school if they meet means-tested criteria and/or live above a certain distance from their nearest school (Education Act, 1996; 2006). Our focus in this paper is on an innovative transport intervention that goes beyond these discounted, means-tested and/or school-focussed approaches, namely the introduction of free bus travel within London for all young people at all times of day. This scheme was introduced in 2005 for under-17 year olds (Transport for London, 2007b), and has since been extended to include 17-18 year olds in full-time education. Young people access the free travel by applying for a photo-ID 'Zip card'. This

simultaneously functions as a conventional ‘Oyster card’, the ticket-free electronic card system which all users of London’s public transport can pre-load with money for travel. Many young people refer to their Zip cards as ‘Oyster cards’ or use the terms synonymously.

Soon after the scheme’s inception, the then Mayor of London said “This will help young people reach their full potential through continued studies and is a cost-saving measure for thousands of London families” (Transport for London, 2006, p.7). The scheme has also since been justified in terms of “helping young people to unlock education, sport, leisure and employment opportunities” (Transport for London, 2007b). The rationale for the scheme was therefore closely linked with wider governmental concerns about the barriers that transport problems can pose to social inclusion (Social Exclusion Unit, 2003, Markovich and Lucas, 2011). Similar concerns have been voiced by the UK Youth Parliament (an elected body of 11-18 year olds that seeks to represent British young people), which recently voted that ‘Make public transport cheaper, better and accessible for all’ should be their top priority campaign for 2011/12 (UK Youth Parliament, 2012). As some evidence that the Zip Card scheme may have been successful in these respects, we have previously shown that the average number of bus trips made by 12-17 year olds increased by 35% following the scheme’s introduction (Green *et al.*, In press-b). We have also previously used qualitative research to argue that ‘transport poverty’ is not conceptually significant as a constraint upon the lives of young Londoners (Jones *et al.*, 2012).

We now build upon this analysis to examine more closely the implications of the fact that the London free travel scheme is *universal* rather than limited to particular types of journeys (e.g. the journey to school) and/or targeted at specific groups (e.g. low-income families). We focus in particular on how this has affected young Londoners’ ability to travel in ways of their choosing, arguing that the universal provision of free bus travel has accommodated the social, peer-oriented nature of young people’s travel choices and has increased their freedom to practice independent and “care free” mobility. We further argue that the population-level effects of this universal free travel provision may be greater than would be expected simply by scaling up the individual-level effects of a traditional, targeted approach. This reflects the potential emergent properties of universal provision, i.e. properties possessed by ‘wholes’ that arise from the interaction of individual parts but cannot be predicted simply by summing the activity of those individual parts (Goldstein, 1999). These emergent properties include shifting travel norms by establishing bus travel as the default, lowest common denominator mode for group travel; and the increased mobility options that young people enjoy when both they and, crucially, (almost) all of their friends have free travel.

This paper also seeks to provide a broader and more child-centred view of what ‘independence’ means and what is needed to achieve it, drawing for our argument upon Sen’s concepts of opportunity and process freedoms. In particular, we argue that what young people value in their mobility includes reaching desired destinations, socialising with peers and engaging in recreational or exploratory travel. Achieving the opportunity freedom to do these things may require not only parental permission but also additional capabilities such as financial access, transport skills, company for the journey and the knowledge that you have a ‘safety net’ if things go wrong. We argue that for many young Londoners, free bus travel facilitates their acquisition of these additional capabilities. The process whereby these capabilities are exercised is also important, with many young people *feeling* more independent if they do not constantly need to rely on their parents for money. Finally, the universal nature of this entitlement enhances group-level mobility options by providing a socially inclusive means for young people to travel together or spend time together. Although

perhaps not the sense in which Transport for London intended to promote ‘social inclusion’ among young Londoners, many young people value the increased potential this offers for travelling as a group and making collective travel decisions. The universal provision of free bus travel may therefore have increased young people’s capabilities for independent mobility at both the individual and the group level.

METHODS

This paper draws on qualitative data generated during the mixed-methods ‘On The Buses’ study (Wilkinson *et al.*, 2011). As previously described in more detail (Jones *et al.*, 2012), we chose diverse areas of London that varied in their local transport availability, area deprivation and inner/outer London status. Between February 2010 and August 2011 we recruited 118 young Londoners (age 12-18, 65 females) living or attending school in these areas (N=96) or else doing work experience at the London School of Hygiene and Tropical Medicine (N=22). These participants were recruited via a range of institutions (including schools, academies, youth clubs and a pupil referral unit), and were purposively sampled to generate a diverse sample in terms of age, gender, ethnicity and area deprivation (see Table 1). In total we conducted 43 in-depth interviews (group size 1-3, 61 individuals) and 10 focus groups (group size 4-8, 57 individuals). Our aim was to elucidate young people’s tacit knowledge of travelling in London, the everyday influences on their travel choices and the perceived consequences of these decisions, with a particular focus on bus use. The topic guides therefore focussed on generating stories by asking about: modes of travel used in the daytime, evenings and weekends; experiences of different transport modes and rationales for transport choices; and interactions with others when travelling. Interviews and focus groups were audio-recorded and transcribed verbatim. NVivo8 was used to facilitate data management and coding.

Table 1: Characteristics of study participants (N=118)

		N (%)
London area	Inner London	54 (46%)
	Outer London	64 (54%)
Gender	Female	65 (55%)
	Male	53 (45%)
Age	12-13 years	26 (22%)
	14-15 years	70 (59%)
	16-18 years	22 (19%)
Ethnicity	White British	52 (44%)
	White other	8 (7%)
	Black	26 (22%)
	Asian	8 (7%)
	Mixed	18 (15%)
	Other	6 (5%)
Area deprivation†	Fifth 1 (most deprived)	34 (31%)
	Fifth 2	24 (22%)
	Fifth 3	13 (12%)
	Fifth 4	20 (18%)
	Fifth 5 (least deprived)	18 (17%)

†Fifths defined with reference to Greater London as a whole. Numbers add up to only 109 for area deprivation because of missing postcode data on 9 participants.

Transcripts and fieldnotes were analysed qualitatively, drawing on techniques from the constant comparative method (Strauss, 1987). This included initial micro-level open coding, the identification of emerging themes and conceptual categories, and an iterative approach that refined these categories through discussion and ongoing analysis. All authors were involved in analysis. In presenting quotes, names and other identifying details have been removed, and extracts have been tagged by interview number, inner/outer London status and age (for interviews) or age range (for focus groups). All young people provided written informed consent for interview, and approval was granted by the London School of Hygiene and Tropical Medicine ethics committee.

RESULTS

Context: travel choices reflect and create social relationships

To understand the effects of free bus travel on independent mobility, it is necessary first to appreciate that for most young people travelling without adults did not necessarily mean travelling alone. Instead, like previous research with children at younger or similar ages (Christensen and O'Brien, 2003, Symes, 2007, Mikkelsen and Christensen, 2009), we found that socialising with peers was a pervasive aspect of, and influence on, young people's mobility. This intense sociability encompassed decisions about whether, when, where and how to travel, ranging from the routes they chose to where they sat in the bus. Travel with friends was valued by many as being more fun, as reducing the chances of getting lost or as at least providing someone else to be lost with. Some additionally said that travelling with friends made them feel safer from fights or confrontations with other young people, highlighting that not all peer contact on buses was welcome (cp. Scott *et al.*, 1998, Matthews and Tucker, 2006).

Young people's preference for (the right sort of) companionship was often matched by a marked willingness to sacrifice time or energy in order to travel with friends. This included going out of one's way to meet friends, taking a longer route to suit friends, waiting for the next train or bus if friends missed the previous one, or getting off a bus if friends could not get on it too. Moreover, several young people described doing these things not only because it made their own journey more enjoyable but also because to do otherwise might be construed as a breach of friendship. For example, participants in one focus group agreed that travelling with your friends was a form of "loyalty", giving the following example:

F1 I got on the bus and everyone else was just left there. And then he [the driver] just, he, I was like can you open the door because you're not letting my friends on? I was going to come off. Drove off, I had to walk all the way [back to join my friends] and that's actually quite a long walk (Focus group 14, outer London, ages 14-16).

The participants in this focus group then went on to highlight the possible consequences of failing to show this form of loyalty, with one participant describing getting "really angry" when she was left by herself during a bus trip. As she concluded "Your friends just like *leave you* on the bus. I said, like, I'll just sit by myself, thanks a lot. It's kind of loyalty to get on the bus with your friends." (Focus group 14, outer London, ages 14-16, emphasis in original). Similarly in a different interview, one boy explained "If you leave [your friends], if you, if they can't go on the bus, they see it as a kind of betrayal." (Interview 18, outer London, age 15). Travel choices were therefore not simply passive reflections of existing relationships. Rather they could also be *constitutive* of relationships by providing an active opportunity to demonstrate friendship ('loyalty') or fail to do so ('betrayal').

Thus many young people valued being able to travel with friends and were willing to use their travel choices as a means of demonstrating friendship. As we argue across the remainder of this article, free bus travel enhanced young Londoners' capabilities to travel in these and other ways of their choosing. This did not always make young people more autonomous or independent in the sense of being "disconnected from others" (Mikkelsen and Christensen, 2009); on the contrary, free bus travel more often heightened the extent to which young people showed *interdependence* in their travel behaviours. Yet by increasing the extent to which young people could practice self-determination in their mobility, free bus travel was often explicitly described by our participants as making them feel more 'independent'. Such self-determination represents, we argue, the core facet of what it means for young people to be and to feel independent in their mobility.

Free bus travel promotes young people's capabilities for independent mobility

Increasing financial access to a relatively independent mode

One of the most direct effects of free bus travel was to increase financial access to what many young Londoners experienced as a comparatively independent mode. This comparative independence is, indeed, implicit in young people's description of travelling or not travelling with friends as an issue of 'loyalty' versus 'betrayal'. This overtly moral framing presupposes a certain level of self-determination: it only makes sense to hold your friends accountable for their actions if they did in fact have a choice about whether to remain on a bus or not. This implied self-determination contrasts with previous descriptions in younger samples of London children of the substantial control that parents have over children's experiences of car travel (Barker, 2009). The potential reduction of independence during car travel was also recognised by some of our participants: "[Free bus travel] makes things easier because if it was, for example if I was getting a lift with parents [...] they're going to be, 'oh I can only give you a lift at this time' " (Male, interview 12, outer London, age 15). As we have previously reported, many young people (particularly from outer London) said that if they had to pay for the bus they would often instead get lifts from their parents (Jones *et al.*, 2012). By removing financial barriers, free bus travel may therefore have extended the mobility options open to young people by increasing their capabilities to travel in relatively independent ways.

The removal of financial barriers also increased young Londoners' options within particular bus journeys. For instance, when it came to demonstrating 'loyalty', free bus travel removed any economic disincentive to getting off a bus that your friends could not board. A few young people stated this explicitly: "[We get off the bus if] a couple of people get on and then some of them are left. If we didn't, if we had to pay, I would stay on the bus. I would stay on the bus because I'm not paying no more money" (Female, focus group 14, outer London, ages 14-16). More often, this absence of a disincentive was implicit in the way in which young people automatically accommodated friends without thinking, or else focussed on non-economic factors in stories about the costs of accommodating friends (e.g. waiting for a long time, waiting in bad weather, 'having to walk' to rejoin friends).

Facilitating the acquisition of transport skills and providing a safety net during travel

Eliminating the financial cost of bus travel therefore had a direct effect on the capabilities of young Londoners to travel in ways of their choosing. Free bus travel also increased these capabilities indirectly, by facilitating the acquisition of the skills necessary to negotiate London's bus network. It has long been recognised that possessing mobility skills or 'competences' is a crucial component of an individual's potential for mobility (Kaufmann, 2002, Kaufmann *et al.*, 2004) and it has previously been argued that public transport provides an important route whereby children can acquire these skills (Symes, 2007). In our data, some participants described acquiring these skills through practice journeys: practice journeys which, importantly, could be undertaken without any economic disincentive. For example, one twelve-year-old girl described receiving her Zip card and "getting on the bus three times just to see how it worked – I just went round the corner three times and got off" (Interview 3, inner London). Others described learning by making sure they travelled with others when first venturing beyond their familiar, local area:

F I feel so much more confident going by myself everywhere now....[but before] if I wanted to go to say Oxford Street [a central London shopping area] to return something I'd be like to my friend, I'd be, 'oh do you want to come shopping with me' rather than just go and return it. But now I just go by myself. (Interview 7, outer London, age 17)

These accounts resonate with Milne's (2009) argument that 'having no one to go with' can restrict children's mobility in public spaces just as much as not having parental permission. They also highlight that acquiring 'independent' mobility can be a social process that, at least initially, may involve dependence on family or friends. Travelling with friends could therefore play an integral role in giving young people the confidence to start making trips without adults and, as illustrated in the previous quote, sociability could even be used as a device to allow mobility. To the extent that free bus travel made it easier to persuade friends along with you (because they could usually also travel free), it could help realise this desire to use friends as a safety net on unfamiliar journeys.

In addition several young people described free bus travel as providing a safety net in itself, preventing one being "stranded" and providing a contingency plan if things went wrong:

M When I came to London I didn't yet have free bus travel [...and] it actually limited me and didn't allow me to go places that I would actually go when I had the free bus travel. For example, when you go out because I can get lost easily, you know? If you have to pay for the bus it's going to limit you from getting back. (Interview 21, inner London, age 14)

F If I go out, and it's getting late, or if my original journey, say if the train's cancelled, I know I can just get a bus. I've got it free, I can go a different route. [...] So it's like really important, I think, yeah, so security. (Interview 38, outer London, age 17)

This positive value given to potential as well as actual bus trips exemplifies Kaufmann's (2002) observation that people may value potential mobility ('motility') as a form of

insurance against the unexpected. Free bus therefore not only increased financial access to buses, but also helped young Londoners' acquire the skills, companions and sense of security necessary to take advantage of this financial access. In doing so, free bus travel helped young people both to *become* and then to *be* more independently mobile.

Free bus travel increases independence through both opportunity and process freedoms

Extending opportunity freedoms, particularly for non-‘necessary’ trips

Young Londoners typically spoke very positively about their free bus travel. Often this reflected an explicit recognition that it extended the mobility options open to them, i.e. extended their opportunity freedoms. Although young people valued these freedoms in relation to many journey types, free travel made a particular difference for social or recreational trips. Specifically, many young people described how free bus travel facilitated extra trips, trips further afield and/or exploratory trips:

F Me and my friend tend to just get on the bus and go somewhere and then just get off and get the bus back. [...] We saw a park once on a bus we were like ‘that’s nice’ and got off there for a while. (Interview 4, inner London, age 12).

M If I didn’t have free travel I would have to be doing everything through walking and stuff but I wouldn’t, that means that I wouldn’t be going places I would be probably staying quite local and through using free travel it means I can go places that I’ve always wanted to go. [...] You can explore places on your own, you can see what you want to see, not with the guidance of someone who’s obliging you to go and see a museum. (Interview 12, outer London, age 15).

The boy in the final quote who described not wanting to ‘see a museum’ went on to say that instead “with my free travel I always explore places that I didn’t even know were real”, giving as an example a trip right across London with friends to a clothes market they had heard about in a cult TV sitcom (Interview 12, outer London, age 15). This was one of a number of stories recounted by our participants that illustrated how free bus travel can increase young people’s capabilities to control what they do and whom they do it with. As several participants explained, this applied particularly to social or recreational trips because these were not “necessary”. Such trips were therefore most likely to be abandoned if bus travel were not free: “[Without free travel] I think that under-sixteens would only go to places that they thought were really necessary like school [...but] would stop going to places like the park. [...] If it were a park that was far away I would go there less often if I had to pay” (Male, interview 5, outer London, age 15). Nevertheless these non-‘necessary’ trips were highly valued by many of our participants as providing the opportunity to ‘decide for ourselves’ and ‘travel by ourselves’. Such “care free” self-determination was in turn one common way in which young people explicitly linked free bus travel to a sense of greater independence:

F1 [Free bus travel] is good, it’s really useful. It gives, at this age especially, it gives us more independence *to do what we want*, especially on buses [...because] if it was too expensive we’d probably end up getting our parents to drive us everywhere which would be a real problem.

F2 I think at this age it’s really important to have that because we need to learn about the world or London now sort of thing, and how to *travel by ourselves*.

(Interview 7, outer London, both aged 17, emphases added)

Free bus travel and process freedoms

Another common route whereby participants explicitly linked free bus travel to independence was freedom from relying on parents for lifts or “constantly asking them, Dad, can I have bit more money?” (Female, interview 33, inner London, age 13). One reason why this increased independence was simply that lifts or money were not always forthcoming from parents, which could leave you “limited” or “stuck”. In other words, relying on parents might sometimes curtail your opportunity freedoms to travel when, where and how you wanted. Yet even if parents always said ‘yes’, some participants stated or implied that one’s travel was not really independent if an adult was paying. This was illustrated especially clearly by a disagreement about what ‘independence’ means in relation to car driving:

I: What is it that makes you want to learn to drive?

F1: I want to be free, I want to be independent [...] to do things myself, be able to go where I want. [...] I’d just be more independent because you see a lot of working people always in their cars.

I: How about you, are you planning to drive or?

F2: Well we all want to be starting driving now but I don’t want to. I want to do it at a time when I’m able to afford lessons for myself, so I can buy myself a car because I don’t really, again I think it’s independence, I want to be able to pay for myself rather than depend on my mum.

(Interview 7, outer London, both aged 17)

For some participants, therefore, independent mobility entailed not only the opportunity freedom to decide where and when to travel, but also the process freedom of doing so *without relying on parental assistance*. This process freedom was not, however, necessarily motivated simply by a desire to be ‘rid’ of their parents. Instead, several young people said they were pleased to reduce the pressure on their parents’ time or finances:

F My mum’s lost her job and stuff, so it’s difficult for her. [For me to take the bus] doesn’t cost my mum anything, and it just helps her out. (Interview 33, inner London, age 12)

Thus just as failing to travel with friends could sometimes represent a betrayal, failing to insist on travelling with parents could sometimes represent a contribution. The process freedoms granted by free bus travel therefore potentially included both feeling less dependent upon parents and also feeling less of a burden to them.

A key contribution at a transition age

Of course, our findings do not imply that prior to the Zip card scheme young Londoners only ever made ‘necessary’ trips or did not gain independence with age. Indeed, several participants said that having to pay would not affect their travel behaviour. A greater number, however, described free travel as making a real difference at an age when you may have parental permission to travel by yourself in theory, but you may lack the means to act on this in practice:

F The good thing about free travel is that when you’re old enough to be able to get places your own, your parents don’t take you, [...you’re still] not going to be employed because you’re in fulltime education. [...Instead] your parents give you a certain amount of money or no money and you have to use that money to do what you

want to do. And then you're old enough to want to go to the cinema every weekend and see your friends and just get out of the house and if you can't afford that then it's a little, it's annoying. (Interview 12, outer London, age 18).

The potential for free bus travel to offer additional process and opportunity freedoms at this transitional age did not apply only to those from poorer backgrounds. Rather it was raised by participants from a range of social backgrounds, as well as by both genders, all ages and by participants from across London. This may reflect the fact that these freedoms did not simply result from having financial access to buses. Rather these freedoms also resulted from getting that access without needing to turn to parents and without forgoing non-‘necessary’ journeys, which even affluent parents might be unwilling to subsidise. This may in turn explain why, when asked directly, most young people thought it would be “unfair” to withdraw universal free bus travel or to restrict it to children from low-income families.

Extending group level capabilities: the importance of universal entitlement

We have hitherto focussed on how free bus travel affects individual-level capabilities and freedoms. Beyond these, however, significant effects also arise from emergent properties at the group level: that is, from ways in which the scheme’s universal nature affects the mobility capabilities or mobility norms of groups of young people. The first such group-level effect relates to the use of buses as a socially inclusive mode. Several participants explained that, regardless of how they travelled when they were alone, they took buses when out with friends so as not to exclude those who could not pay for transport: “[How I go] depends if I have friends with me, cos they don’t like to go on the train, so if I have friends with me then we go on the bus cos they don’t have to pay” (Male, interview 5, inner London, age 16). By the same token, in the rare cases where participants or their friends did not have free travel, this could be experienced as restricting mobility: “One of my friends he’ll actually, that’s the only bus he can take [a particular bus route that was easy to board without paying] because he never applied for an Oyster. And I keep on moaning at him for it. But so if we ever go anywhere it has to be on [that bus]” (Male, interview 9, inner London, age 15).

The universality of free bus travel therefore increased the capabilities of groups of young people to travel in London together. This, in turn, sometimes extended the capabilities of groups to pursue socially inclusive activities more generally. One boy commented that travelling on public transport could be more inclusive than staying at home because it could involve more people: “at [a friend’s] house there’s a limit to how many people can be there and things like that. Whereas if you’re going to Leicester Square [a central London area with many cinemas and other entertainment centres] you can have 10, 12 friends” (Interview 44, outer London, age 14). Moreover, not only did buses facilitate outings to specific, chosen destinations such as Leicester Square, but several participants described “bus hopping” as an inclusive social activity in its own right:

F Mostly every Saturday [my friend and I] will probably just jump on a bus, because we have a free Oyster Card, and go anywhere and get another bus from there, and another one. And we just travel, we don’t know where we’re going, we just jump on a bus because we can. (Interview 9, inner London, age 15)

Bus travel thus became a kind of ‘lowest common denominator’ activity for groups, a travel mode and a social pastime to which all group members typically had financial access. The importance of this inclusivity can be appreciated if one considers young people’s preference for travelling with friends and their reluctance to ‘betray’ friends by abandoning them. Most

obviously these considerations applied to bus hopping journeys, which were undertaken primarily in order to spend time with friends and only incidentally to “end up somewhere”. The same was generally true of recreational group journeys to destinations that were predetermined but not ‘necessary’, such as the trip described in the previous section to a clothes market on the other side of London. Moreover, for both bus hopping and non-‘necessary’ journeys, the free nature of bus travel was often crucial because “you wouldn’t be willing to pay just to get on a bus for no reason at all” (Female, interview 38, outer London, age 17). A final common element across these journey types was their frequent spontaneity, such that several participants described taking their Zip card “just in case” whenever meeting friends.

The three qualities of sensitivity to social inclusion, sensitivity to financial costs and spontaneity are what make the universal nature of free bus travel particularly important for young people’s independent mobility. As argued in the previous section, social and recreational group trips were the type of travel most often linked explicitly to ‘independence’. As argued here, such journeys may only be possible or morally acceptable if *everyone* involved can come, which (particularly for spur-of-the-moment trips) may only be true if *nobody* has to pay. The universal free travel entitlement increased the ability of groups to meet all of these requirements. It can therefore be seen to have increased the independent mobility capabilities of young Londoners at the group level and not just the individual level.

Finally, this increase in group-level capabilities may, in turn, have had feedback effects that strengthened the status of buses as a popular or even default mode. For example, one boy described how cycling to school was substantially quicker than getting the bus but that he rarely did this “because I know after school I’ll hang around with my friends, go to youth club... and I’ll be the only person with a bike and they’ll get on the bus” (Interview 10, inner London, age 14). Likewise, even though in theory walking represents a socially inclusive, free and spontaneous way for a group to travel short distances, several participants described how “we usually without thinking of walking we just go to the bus stop straightaway” (Male, interview 19, outer London, age 15). Thus by establishing buses as a mode that “everyone can get”, universal free bus travel may have reinforced the status of buses as the transport mode of choice for many young people in London.

The limits to independent mobility: ‘tracking’ and the Behaviour Code

In reviewing the ways in which movement has become ever-more subject to external monitoring, Sager (2006) argues that one important process freedom for travellers is to be free of undue surveillance and control. The experiences of a few participants indicated ways in which the process freedom gained through reduced reliance on parents could be partly offset by becoming more closely connected to mechanisms whereby transport and police authorities monitor and regulate behaviour. To get a Zip card, young people must consent to their personal information (including the electronic record of journeys) being shared with the police “in certain circumstances [...for] the prevention or detection of crime” (Transport for London, 2007a). Although only one participant raised this issue, this young person claimed that this “tracking” was why he had not applied for free travel:

M That’s why I have to pay for everything I do, because there is some little thing, there was a little section that said yeah, if you want free travel yeah put an X that allows you to put all your details on the police database. [...] So say if there’s a robbery at Romford, and you took a train to Romford at that time you’d be a suspect. (Focus group 1, outer London, ages 14-15).

Young people receiving a Zip card are now also required to sign a 'Behaviour Code'. This bans various 'antisocial behaviours', and also bans actions such as lending your Zip card to someone else (Transport for London, 2010). A few young people recounted stories of Zip cards being confiscated at least temporarily. Moreover, perhaps precisely because free travel helped establish buses as an inclusive, default travel mode, the loss of free travel was seen to restrict everyday activities. For example, one boy said "when I didn't have my card I did struggle in terms of not getting everything done" (Focus group 32, inner London, ages 12-17), while another said "it puts a strain on [my friends'] social activities because they can't go out as much." (Interview 18, outer London, age 15).

Thus while the entitlement to free bus travel is universal it is not unconditional, and in practice this excluded (at least temporarily) young people who did not follow the Behaviour Code or, in one case, objected to being "tracked". These State-mediated constraints provide an illustration of the need to conceptualise child mobility in terms of child-adult power relationships that consider not only parental control but also a wider range of institutions and authorities (Kearns and Collins, 2003, Fotel and Thomsen, 2004).

DISCUSSION

Drawing on qualitative data generated in interviews and focus groups with 118 young people aged 12-18, this paper has examined how the universal provision of free bus travel has affected the mobility of young Londoners. In doing so we have sought to show how the concept of independent mobility can be extended beyond local walking and cycling by young children to additionally cover travel further afield on public transport at older ages. We have also sought to challenge other aspects of the way in which independent mobility is often conceptualised or operationalised. Firstly, our findings challenge the idea that the acquisition of independent mobility is simply a matter of obtaining parental 'mobility licences'. Instead our results support and extend Milne's (2009, p.115) conclusion that "the ability to enact independent mobility...[requires] both having parental permission and also the individual confidence to act". Truly self-determined mobility in public spaces may therefore evolve through a learning process that initially requires the company of peers and/or the security of knowing that even if you get lost you will not be "stranded".

Secondly, our findings illustrate that, during the teenage years, young people may have permission to travel by themselves in theory but may not be able to do so in practice if they cannot afford to pay for travel and if their parents are unwilling or unable to give them money or a lift. Thus making any *specific* trip may require not only parental permissions ('mobility licences') and the confidence to act in general, but also financial access to public transport and/or lower-order parental permissions for that particular trip.

Thirdly, although researchers frequently focus upon 'travelling without an adult', this did not always match young people's conception of what it meant to travel independently. For example, travel without an adult could be seen as "not really independent" if the adult was still paying. Nor did young people generally equate independence with travelling "alone": on the contrary, many described using their enhanced travel freedoms in order to align their mobility with their social goals, and so increase the sociability and interdependence of their travel choices. At the core of the concept for young people seemed to be the ability to 'shape daily life' with respect to their mobility, that is "choosing, defining, arranging and organising what is to be done, where, when and with whom" (Zeicher, 2003, p.68). In this paper we have

argued that free bus travel enhanced the capabilities of many young Londoners to do this, by increasing financial access and also by facilitating the acquisition of the necessary skills, companions and sense of security. This in turn extended young people's opportunity freedoms to shape their daily mobility, including when, where and with whom they travelled. We have further argued that for many young people, free bus travel also made their travel choices *feel* more independent by reducing their reliance upon parents (although simultaneously increasing their reliance on the State, which a minority experienced in ways that constrained their mobility). This highlights how the lived experience of 'independence' may depend not only on what options one has but also on how one acquired those options – or, in Sen's language, not just opportunity freedoms but also process freedoms.

When it came to extending opportunity and process freedoms, free bus travel seemed to have the biggest impacts on travel decisions that were described as "not necessary" but were valued as a means of meeting social goals and/or exploring London. This resonates intriguingly with accounts of a group living in very different circumstances but also potentially vulnerable to transport poverty, namely low-income adults in Santiago, Chile. Faced by high bus prices, Ureta (2008, p.286) documents a process of social exclusion enacted not through immobility but rather through a need "to devote most of their motility resources to necessary trips, commonly discarding any other movement as too expensive or unnecessary. The problem is that this unnecessary movement in many cases constitutes the main way in which individuals can participate and make sense of urban space". Such data reinforce the claim that, although policy-makers typically focus upon access to core services and opportunities (e.g. schools, jobs or hospitals), the concept of transport-related social exclusion should also consider access to social networks and civic participation (Kenyon *et al.*, 2003, Cass *et al.*, 2005). Moreover, our findings arguably extend this by highlighting the way in which mobility may promote inclusion not only by granting access to social networks (implicitly assumed to be a destination) but also by providing a social activity in itself.

The phenomenon of bus travel as a social activity ('bus hopping') is only one example of the sociability that was pervasive in young people's accounts of their travel preferences, decisions and behaviours. This stands in striking contrast with accounts of adult travellers who, since the nineteenth century, have been described as using a range of strategies to avoid others, curtail communication, and 'desocialise' shared space (Schivelbusch, 1979, Bull, 2005, Symes, 2007). Our data therefore add support to Mikkelsen and Christensen's (2009) contention that the focus on travelling 'alone' in the independent mobility literature reflects an attempt to operationalise independence from an adult perspective. As Mikkelsen and Christensen conclude, "moving around on their own is not children's first priority" (p.55). Indeed, for our participants 'an absence of companions' seemed more likely to represent a *barrier* to independent mobility rather than a manifestation of it (see also 2009).

Although our focus has been on young Londoners, we believe the pervasive sociability documented in this paper may also be relevant to understanding the mobility experiences of other groups. For example, people aged over 60 are also eligible for free travel in London and we have elsewhere argued that the social benefits of this entitlement are a major reason why it is highly valued (Green *et al.*, In press-a). Moreover, as for young people, these benefits were not just a matter of facilitating access to social destinations. Instead the benefits also included the experience of bus travel as a socially inclusive activity in itself, both through opportunities for interactions with fellow passengers and through a broader sense of belonging to London's 'general public'. Together with our findings, this highlights the need for transport planners to consider the social needs of individuals and groups alongside other

needs such as physical accessibility and financial affordability. The importance of this can be illustrated with reference to a third group of potentially vulnerable transport users, namely disabled travellers. We have elsewhere documented the frustration reported by some young people at the fact that London buses can only accommodate one wheelchair at a time (Green *et al.*, In press-b). This limited capacity meant that pairs or groups of friends in wheelchairs were unable to travel together, something which (like able-bodied young Londoners) they considered of great importance.

The inability of these disabled young Londoners to travel together, despite being physically and financially able to travel separately, illustrates our argument that mobility capabilities can exist at the group level as well as the individual level. We believe that the possibility of such group-level capabilities may have been somewhat neglected both outside and within the mobilities literature. Outside the mobilities literature, one criticism of Sen's capabilities approach has been that it is too individualist (Gore, 1995), and Sen has acknowledged that "the individual is seen as the person to whom relational deprivation [of capabilities] occurs (as it is in the literature on social exclusion)" (Sen, 2000, p.8). Within the mobilities literature, Kellerman (2012) goes beyond most accounts in recognising that 'potential mobility' may exist at a societal level. By this he means the potential of a society for mobility given the cumulative mobility choices of its composite individuals – for example, the fact that most Manhattan residents have no car means that Manhattan as a whole has the potential to function without permanent gridlock. We suggest that this approach would be enriched by also considering the potential mobility of intermediate size entities, such as the friendship groups described here.

In relation to the specific focus of our paper, we have argued that free bus travel increased the capabilities of peer groups to travel or spend time together in a "care free" manner and without leaving anyone out. From a social policy perspective, it is important to note that the magnitude of this group-level effect was crucially dependent on the universal rather than targeted nature of the entitlement. This universal entitlement resulted in near-universal coverage, which in turn extended the independent mobility of both groups (as everyone could go out together) and individuals (as young people could more easily persuade friends to join them on journeys they were not yet confident making alone). These effects indicate one mechanism whereby the universal provision of free bus travel may have generated group-level emergent properties, i.e. properties where the total effect is more than the sum of its parts. Like many emergent properties (Goldstein, 1999), these effects may plausibly be non-linear, decreasing rapidly in strength at lower levels of individual coverage. For example, if only half of individual young people held free bus pass travel then one would expect well over half of groups to include some members without free travel. Another potential emergent property lies in the possibility that the universality of free bus travel may have affected young people's mobility norms, creating a feedback loop that reinforced the status of buses as a preferred or even default mode. Again like many emergent properties, the consequences of this may have differed in *kind*, and not just in degree, from the effects that would have been apparent at lower levels of coverage. For example, the fact that free bus travel was used by everyone may have undermined the traditional perception of bus travel as 'low status' (Hiscock *et al.*, 2002), whereas an intervention targeted at low-income families might plausibly have had the opposite effect (Sen, 1995).

Considering such emergent properties may be important for understanding the full implications of universal free bus travel, not only for independent mobility but also with respect to wider policy issues. Other strands of the *On The Buses* study are examining

impacts on young people's overall levels of walking and cycling, on their exposure to risks of injury or assaults and on their attitudes towards car travel, as well as the possible impacts on other bus users such as the elderly (Wilkinson *et al.*, 2011). Our findings in this paper suggest that any such impacts (both good and bad) may have been greater than would be predicted from the sum of the individual-level effects observed during a targeted intervention. This may be an important consideration when considering how far the findings of this evaluation can be generalised to non-universal fare exemption schemes, or when considering the value of continuing to provide universal free bus travel in economically straightened times.

CONCLUSION

We conclude that the study of children's independent mobility should situate its current focus on parental licences and parental accompaniment within a broader consideration of children's freedoms and capabilities for self-determination with respect to their mobility. Such freedoms may include both opportunity and process aspects, and may be enhanced or constrained by a number of factors including financial access, transport skills, the company of peers or the security of having a contingency plan if things go wrong. These freedoms may be dependent upon structural factors, including the potential role of the State in facilitating or barring (certain) young people's access to public transport. They may also encompass capabilities and freedoms at the group as well as the individual level, including the ability of groups to travel and spend time together in a socially inclusive manner. We hope that situating our analysis within this broader account of mobility freedoms may encourage research that can ultimately inform the design of policies and environments that enhance the capabilities of all young people to be mobile in ways of their choosing.

CONFLICT OF INTERESTS

None

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REFERENCES

- Barker, J., 2009. 'Driven to distraction?': Children's experiences of car travel. *Mobilities*, 4, 59-76.
- Barker, J., Kraftl, P., Horton, J. & Tucker, F., 2009. The road less travelled - new directions in children's and young people's mobility *Mobilities*, 4, 1-10.
- Bull, M., 2005. No dead air! The iPod and the culture of mobile listening. *Leisure Studies*, 24, 343-355.
- Cass, N., Shove, E. & Urry, J., 2005. Social exclusion, mobility and access. *Sociological Review*, 53, 539-555.

- Christensen, P. & O'Brien, M. (eds.) (2003) *Children in the city: home, neighbourhood and community*, London: RoutledgeFalmer.
- Education Act, 1996; 2006. Section 509. Provision of transport etc [<http://www.legislation.gov.uk/ukpga/1996/56/section/509>]. Accessed 11/08/2012].
- Fotel, T. & Thomsen, T.U., 2004. The surveillance of children's mobility. *Surveillance and Society*, 1, 535-554.
- Goldstein, J., 1999. Emergence as a construct: history and issues. *Emergence: Complexity and Organization*, 1, 49-72.
- Gore, C., 1995. Introduction: Markets, Citizenship and Social Exclusion. In Gerry Rodgers, Charles Gore & J. Figueiredo (eds.) *Social Exclusion: Rhetoric, Reality, Responses*. Geneva: International Institute for Labour Studies.
- Green, J., Jones, A. & Roberts, H., In press-a. More than A to B: the role of free bus travel for the mobility and wellbeing of older citizens in London. *Ageing and Society*.
- Green, J., Steinbach, R., Jones, A., Edwards, P., Kelly, C., Nellthorp, J., Goodman, A., Roberts, H., Petticrew, M. & Wilkinson, P., In press-b. On the Buses: Evaluating the impact of free bus travel for young people on the public health. Final Report to NIHR.
- Harden, J., 2000. 'There's no place like home'. The public/private distinction in children's theorizing of risk and safety. *Childhood*, 7, 43-59.
- Hillman, M., Adams, J. & Whitelegg, D., 1990. *One false move.... A study of children's independent mobility* London: Policy Studies Institute.
- Hiscock, R., Macintyre, S., Kearns, A. & Ellaway, A., 2002. Means of transport and ontological security: Do cars provide psycho-social benefits to their users? *Transportation Research Part D - Transport and Environment*, 7, 119-135.
- Jones, A., Steinbach, R., Roberts, H., Goodman, A. & Green, J., 2012. Rethinking passive transport: Bus fare exemptions and young people's health. *Health and Place*, 18 605-612.
- Kaufmann, V., 2002. *Re-thinking Mobility* Aldershot: Ashgate.
- Kaufmann, V., Bergman, M.M. & Joye, D., 2004. Motility: Mobility as capital. *International Journal of Urban and Regional Research*, 28, 745-756.
- Kearns, R. & Collins, D., 2003. Crossing roads, crossing boundaries: autonomy, authority and risk in a child pedestrian safety initiative. *Space and Polity*, 7, 193-212.
- Kellerman, A., 2012. Potential Mobilities. *Mobilities*, 7, 171-183.
- Kenyon, S., Rafferty, J. & Lyons, G., 2003. Social exclusion and transport in the UK: A role for virtual accessibility in the alleviation of mobility-related social exclusion? *Journal of Social Policy*, 32, 317-338.
- Kytta, M., 2004. The extent of children's independent mobility and the number of actualised affordances as criteria for child-friendly environments. *J Environ Psychol*, 24, 179-198.
- Markovich, J. & Lucas, K., 2011. *The social and distributional impacts of transport: A literature review (Working Paper No. 1055)* Oxford: Transport Studies Unit, School of Geography and the Environment.
- Matthews, M. & Tucker, F., 2006. On the other side of the tracks: the psychogeographies and everyday lives of rural teenagers in the UK. In C. Spencer & M. Blades (eds.) *Children and their Environments: Learning, Using and Designing Spaces*. Cambridge: Cambridge University Press.
- Mikkelsen, M.R. & Christensen, P., 2009. Is children's independent mobility really independent? A study of children's mobility combining ethnography and GPS/mobile phone technologies. *Mobilities*, 4, 37-58.
- Milne, S., 2009. Moving into and through the public world: children's perspectives on their encounters with adults. *Mobilities*, 4, 103-118.
- O'Brien, M., Jones, D. & Smidt, S., 2000. Children's independent spatial mobility in the urban public realm. *Childhood*, 7, 257-277.
- Page, A.S., Cooper, A.R., Griew, P., Davis, L. & Hillsdon, M., 2009. Independent mobility in relation to weekday and weekend physical activity in children aged 10-11 years: The PEACH Project. *Int J Behav Nutr Phys Act*, 6, 2.

- Prezza, M., Alparone, F.R., Renzi, D. & Pietrobono, A., 2010. Social participation and independent mobility in children: the effects of two implementations of "we go to school alone". *J Prev Interv Community*, 38, 8-25.
- Prezza, M. & Pacilli, M.G., 2007. Current fear of crime, sense of community, and loneliness in Italian adolescents: the role of autonomous mobility and play during childhood. *Journal of Community Psychology*, 35, 151-170.
- Sager, T., 2006. Freedom as Mobility: Implications of the Distinction between Actual and Potential Travelling. *Mobilities*, 1, 465-488.
- Schivelbusch, W., 1979 *The Railway Journey: Trains and Travel in the 19th Century* Oxford: Blackwell.
- Scott, S., Jackson, S. & Backett-Millburn, K., 1998. Swings and roundabouts: risk anxiety and the everyday worlds of children. *Sociology*, 32, 689-705.
- Sen, A., 1995. The political economy of targeting. In D. Van De Walle & K. Nead (eds.) *Public Spending and the Poor*. Baltimore: John Hopkins University Press, 11-24.
- Sen, A., 2000. *Social exclusion: concept, application, and scrutiny* Asian Development Bank: Office of Environment and Social Development.
- Sen, A.K., 2002. *Rationality and Freedom* Cambridge, MA: Belknap Press.
- Shaw, B., Watson, B., Frauendienst, B., Redecker, A., Jones, T. & Hillman, M., 2013. *Children's independent mobility: a comparative study in England and Germany (1971-2010)* London: Policy Studies Institute.
- Social Exclusion Unit, 2003. *Making the connections: final report on transport and social exclusion* London: Office of the Deputy Prime Minister.
- Strauss, A., 1987. *Qualitative analysis for social scientists* Cambridge: Cambridge University Press.
- Symes, C., 2007. Coaching and Training: an Ethnography of Student Commuting on Sydney's Suburban Trains. *Mobilities*, 2, 443-461.
- Transport for London, 2006. *Transport for London News* London: Transport for London.
- Transport for London, 2007a. *11-15 Zip Oyster photocard* [<http://www.tfl.gov.uk/termsandconditions/5805.aspx>, accessed 11/08/2012].
- Transport for London, 2007b. *Pan-TfL developments: fares and ticketing, free travel for children* [<http://www.tfl.gov.uk/corporate/about-tfl/investorrelations/4427.aspx>, accessed 11/08/2012].
- Transport for London, 2010. *Young persons behaviour code* [<http://www.tfl.gov.uk/tickets/14435.aspx>, accessed 11/08/2012].
- Uk Youth Parliament, 2012. *National campaign! Public transport: cheaper, better, accessible*: [Accessed from <http://www.ukyouthparliament.org.uk/campaign/public-transport-cheaper-accessible/>, 17/08/2012].
- Ureta, S., 2008. To Move or Not to Move? Social Exclusion, Accessibility and Daily Mobility among the Low-income Population in Santiago, Chile. *Mobilities*, 3, 269-289.
- Whitzman, C., Romero, V., Duncan, M., Curtis, C., Tranter, P. & Burke, M., 2010. Links between children's independent mobility, active transport, physical activity and obesity. In E. Waters, B. Swinburn, J. Seidell & R. Uauy (eds.) *Preventing Childhood Obesity: Evidence, Policy and Practice*. Chichester: Wiley-Blackwell.
- Wilkinson, P., Edwards, P., Steinbach, R., Petticrew, M., Goodman, A., Jones, A., Roberts, H., Kelly, C., Nellthorp, J. & Green, J., 2011. *The health impact of free bus travel for young people in London: protocol for an observational study. Occasional papers in transport and health (2)* London: LSHTM ISBN 978 0 902657 83 6.
- Zeijher, H., 2003. Shaping daily life in urban environments. In P. Christensen & M. O'Brien (eds.) *Children in the city: home, neighbourhood and community*. London: RoutledgeFalmer.