Accessibility, mobility and transport-related social exclusion ☆

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Abstract

This paper briefly reviews the inexorable rise of the social exclusion policy paradigm and uses an adaptation of Amartya Sen's theory of entitlement to determine appropriate policy responses. In particular, the promotion by the UK Department for Transport of accessibility planning is examined. Although this initiative is not totally without merit, the resulting analysis may be too aggregate, both spatially and socially. The weakness of such an approach is that transport-related social exclusion is not always a socially and spatially concentrated process. Instead we suggest a matrix of area accessibility, area mobility and individual mobility as a possible schema for identifying concentrated and scattered manifestations of social exclusion and inclusion and for suggesting appropriate policy responses. This schema helps produce a more spatially and socially differentiated conceptualisation of social exclusion, helps identify policy responses and most critically highlights that the problems of the socially excluded immobile should not be analysed in isolation from the socially included mobile.

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1. Introduction

With the election of the new Labour government in 1997 and the subsequent creation of the Social Exclusion Unit, the issue of social exclusion was placed firmly on the UK policy map. Similar policy trends are detectable elsewhere in the European Union (see, for example, European Commission, 1998) and, in the guise of the Environmental Justice Movement, in North America (Alsnih and Stopher, 2003). Social exclusion has grabbed the attention of transport geographers, with a spate of recent monographs on the subject (Hine and Mitchell, 2003; Rajé, 2004a; Lucas, 2004; Donaghy et al., 2005), as well as special issues of academic journals (see, for example, Hine, 2003).

However, despite all this work, there is no agreement on what the term social exclusion means. The origins of the term are associated with contributions made by French social scientists such as Lenoir (1974) and Lefebvre (1974) who built on Marxist notions of socio-spatial exclusion as a necessary condition of capitalism and examined how new spaces of representation could promote new forms of empowerment. Over the intervening years the term has been largely appropriated by social democrats and somewhat de-radicalised. Nonetheless, there has been continual debate on what social exclusion is (see, for example, Rajé, 2004a, 8). We follow the work of Hine and Mitchell (2000) and Burchardt et al. (1999) as seeing exclusion as more of a process than an end-state (although we acknowledge it can be both) and adopt the following working definition:

> "*Social exclusion is a constraints-based process which causes individuals or groups not to participate in the normal activities of the society in which they are residents and has important spatial manifestations.*" (See also Rajé, 2006, Section 2.4).

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Unlike some (including, to an extent, the Social Exclusion Unit and the European Commission) we do not use social exclusion as a synonym for income-based deprivation. We recognise that transport is a rather blunt instrument to effect income re-distribution and hence if social exclusion was purely about income, the transport-related dimension would be modest. It is our view that an individual can have a high-income level and still be socially excluded. What we are instead focusing on is participation in civil society. In part, this is determined by access to work, education, healthcare, shops, leisure facilities, welfare, finance and housing, not all of which have a material transport dimension. It is also determined by personal contacts, based on familial, kinship and organisational ties, which may (or may not) have a transport dimension. One of the alleged features of post-modern society is the reduced participation in civil organisations (Putnam, 2000). This decline in collectivism and emergence of more individualised, atomistic lifestyles, in part the result of technological developments such as the automobile and the television, arguably increases the risks of social exclusion.

A criticism of social exclusion is that it revives prejudicial notions of an underclass and the undeserving poor (Samers, 1998). In response to this, more recently, emphasis has been placed on the concept of social inclusion. The Centre for Economic and Social Inclusion (2002) highlights that this is "understood as a process away from exclusion, it is a process for dealing with social exclusion and integrating individuals into society". Given that social inclusion is largely the reverse process to social exclusion, we will use the term social exclusion where processes are limiting participation in civil society and social inclusion where processes are encouraging participation in civil society. It is understandable that policy will focus on exclusionary rather than inclusionary processes, and our paper reflects this, but we also contend that one set of processes can not be viewed in isolation from the other.

In order to gain a better understanding of social exclusion, we are drawing on a series of case studies we have undertaken in two projects for the Department for Transport (Rajé et al., 2003; Brand et al., 2004) and a DPhil thesis supported by the Economic and Social Research Council (ESRC), the Office of the Deputy Prime Minister and the Department for Transport (Rajé, 2006). As shown by Table 1, this work has been based on fieldwork in Bristol, Nottingham and Oxfordshire that has involved over 600 participants using a spectrum of quantitative and qualitative techniques. In the course of this fieldwork, we have found plenty of instances of transport problems and social isolation, the latter often exacerbated by lack of familial contacts. However, in both focus groups and in-depth interviews we found participants were very reluctant to describe themselves as socially excluded in any way. This issue was investigated further in an exploratory Q-method study undertaken by one of the authors (Rajé, 2006). This is a relatively new approach in transport: the

Table 1
Fieldwork on transport-related social inclusion/exclusion undertaken at the University of Oxford

Location, date and source	Data collected
Bristol, 2002 (1)	100 interviews/ focus group participants, 66 travel diaries
Nottingham, 2002 (1)	81 interviews/ focus group participants, 71 travel diaries
Cherwell, Oxford and West Oxfordshire Districts, 2003 (2)	221 Hospital questionnaires, 144 GP questionnaires.
Barton (Oxford), 2004 (3) [a]	37 interviews/focus group participants, 5 Q sorts
Charlbury (West Oxfordshire), 2004 (3)[a]	31 interviews/web talk participants, 7 Q sorts

Sources: (1) Rajé et al., 2003 (2) Brand et al., 2004 (3) Rajé, 2006.
[a] Complemented by 34 interviews/focus group/web talk participants and 6 Q sorts collected elsewhere in Oxfordshire.

only published reports of studies using the method in the transportation context which have been found are a Q study of the environmental discourses related to the expansion of Amsterdam's Schiphol Airport (van Eeten, 2000), a study of motives for using the motor car (Steg et al., 2001) and an investigation of medium-distance travel decision-making in the Netherlands (van Exel, 2003). This application of the technique to examining transport-related social exclusion involved 18 respondents rank ordering some 60 statements in terms of the extent to which they agreed with the statements (measured on a nine point semantic scale). Principal Component Analysis was then used to determine a taxonomy of opinions. The dominant discourse was found to be one of social inclusion, which was characterised as that of the 'contented resident'. The minority of participants who might be categorised as suffering from transport-related social exclusion rationalised this as being the result of inevitable processes, such as ageing or motorisation. This was referred to as the discourse of 'the disaffected theorist', although another minority discourse was detected that hinted at social exclusion but for the escape provided by the car. This work confirmed our decision to focus on social exclusion as a process rather than an end-state.

The structure of this paper is as follows. In Section 2 we develop a tentative theory of social exclusion, based loosely on Amartya Sen's theory of entitlement, that helps identify appropriate policy responses. In Section 3, we review the accessibility planning solution that is being promoted by the UK Department for Transport. In Section 4, we postulate a complementary range of solutions derived from a socio-spatial taxonomy based on a matrix of area accessibility, area mobility and individual mobility. In Section 5, we discuss the implications of our work before some conclusions are drawn in Section 6.

2. Towards a theory of transport-related social exclusion

One way of thinking about social exclusion that we have found useful is to rework Amartya Sen's theory of

entitlement (Sen, 1981) in this context. Sen's original work was related to famines and in particular the Bengal Famine of 1943. Sen argued that famines are not caused by lack of food but by lack of access to food. Access to sufficient food is determined by initial endowments and by production (grow your own food), exchange (sell your labour for food) or transfer (such as charitable donations) entitlements. In a simple schema, the trade-off between growing your own food and selling your labour can be envisaged. Sen's analysis suggested that the 1943 Bengal Famine was triggered not by a food availability decline but by speculation given concerns of an impending Japanese invasion. This in turn led to rising prices which reduced exchange entitlements for some groups. In particular, landless labourers were drastically affected as they no longer earned enough to buy sufficient food.

Similarly, we postulate that social exclusion is not due to a lack of social opportunities but a lack of access to those opportunities. This conceptualisation is not new. Sen himself has pointed out that entitlement is a form of social inclusion and capability deprivation is a form of exclusion (Sen, 2000). However, it provides some useful insights.

In order to avoid social exclusion, an individual requires a set of accessible facilities and social contacts, although the composition of these sets will vary across individuals. We suggest that these facilities/contacts may be split into proximate facilities/contacts in which transport times and costs are immaterial and more distant facilities/contacts where transport becomes a factor. Social inclusion can be achieved through either purely proximate facilities/contacts (to the right of point A on the horizontal axis in Fig. 1, with (near) zero transport expenditure), through purely distant facilities/contacts (above point B on the vertical axis, with a minimum transport expenditure of OB) or by some combination of the two (the area above and to the right of the line AB in Fig. 1). The area OAB is what we might term the exclusion set. We now consider

individual C. In the initial situation, C is located above AB and is deemed to be socially included. However, suppose the price of transport increases and C can no longer afford to maintain the full set of distant contacts, as the minimum expenditure required has increased from OB to OD. Individual C is now located below the line AD and could be deemed to have become socially excluded. This simple conceptual diagram suggests at least five policy responses to social exclusion:

1. Reduce transport costs (and times) and hence promote physical mobility (and accessibility). This may be seen as promoting exchange entitlements, as cheap and fast transport permits proximate contacts to be exchanged for distant contacts.
2. Increase social contacts through information technology, by promoting virtual mobility (see also Kenyon et al., 2002). This may also be seen as promoting exchange entitlements.
3. Increase proximate facilities and contacts by, for example, decentralising facilities and hence promoting accessibility through land-use measures. This may be seen as promoting production entitlements, as this increases the number of proximate contacts.
4. Increase incomes so that transport budget constraints no longer apply, hence promoting mobility. This might be achieved through promoting endowment and transfer entitlements.
5. Increase proximate contacts by pro-family/pro-neighbourliness policies. This may also be seen as promoting production entitlements.

The first response is clearly within the domain of the transport geographer, and the second and third responses have increasingly become so. However, the fourth and fifth responses may be considered to be largely beyond the domain of transport geography. Furthermore, there are a lot of problems in making our tentative theory of transport-related social exclusion operational. Our dichotomy of proximate and distant contacts is somewhat artificial, and neglects intermediate contacts. Proximate and distant contacts themselves are difficult to define and quantify, and it is particularly difficult to determine the minimum threshold levels of these variables to define what we have termed the exclusion set.

We sense that Fig. 1 could be made operational if it was customised for individual circumstances – a bottom-up approach. One way this could be done is by adopting an expressed wants approach – by asking individuals about the contacts they want. However, the exclusion set can also be determined by external policy makers – a top-down approach. This is referred to in the literature as the normatively assessed needs approach (see Farrington and Farrington, 2005). It is related to the policy notion that transport is a merit good and that every individual deserves a basic level of mobility. However, this viewpoint fails to recognise that too much private mobility can contribute to
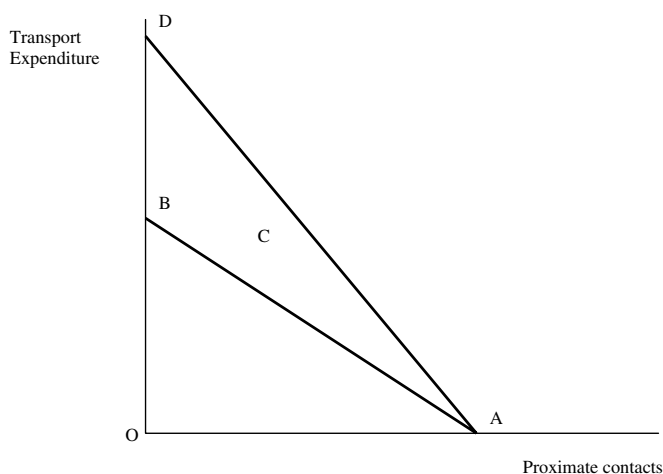
Before Situation: Exclusion Set OAB
After Situation: Exclusion Set OAD

Fig. 1. A tentative theory of transport-related social exclusion.

social exclusion through environmental degradation, adverse public health impacts, high accident rates, declining public transport, changes in land use and community severance. Given this, it is our view that policy makers should focus on ensuring basic levels of accessibility (which we define as ease of reaching) rather than mobility (which we define as ease of moving). However, in determining policy responses, data on both accessibility and mobility will be needed.

3. The accessibility solution?

There has been a long literature on accessibility, recent reviews include those of Handy and Niemeier (1997) and Geurs and van Wee (2004). More recently, the links between social justice, social inclusion and accessibility have been discussed in the contexts of philosophical positions on needs, rights, wants and deserts (Farrington and Farrington, 2005). Partly with this background in mind, the Social Exclusion Unit's main recommended response to transport-based social exclusion has been to promote the concept of accessibility planning (SEU, 2003). Building on research undertaken by consultants DHC (Derek Halden Consultancy), MVA and NERA, as well as the Universities of the West of England and Westminster, the Department for Transport put their guidance on accessibility planning out to consultation in July 2004, with the guidance finalised in December (DfT, 2004). This required framework accessibility strategies to be included within provisional Local Transport Plans (LTPs) by July 2005 and completed accessibility strategies to be submitted within final LTPs by the end of March 2006. The recommended approach, which was criticised by respondents to the consultation exercise as overly detailed and prescriptive, is illustrated by Fig. 2. It involves five key stages: strategic accessibility assessment; local accessibility assessments; option appraisal; accessibility plan preparation; and performance monitoring and evaluation. These five stages are informed by extensive stakeholder involvement and the development of national and local indicators.

At the heart of this process is a GIS based accessibility planning tool. Early versions seemed to be limited to a hot-spotting exercise based on isochrone maps of travel to major trip attractors such as hospitals (in this case East Surrey Hospital), overlaid with Ward level demographic data, with all the aggregation errors that this implies (DfT, 2003 – see Fig. 3). Similar work on mapping public transport and car-based accessibility and mapping transport-related air and noise pollution for the Sparkbrook area of Birmingham was undertaken by the Centre for Transport Studies, Imperial College et al. (2002). Although these mapping exercises identify spatial and social clusters of those adversely affected by social exclusionary processes, they do little to detect more scattered manifestations which research has shown to be important (Hine and Grieco, 2003).
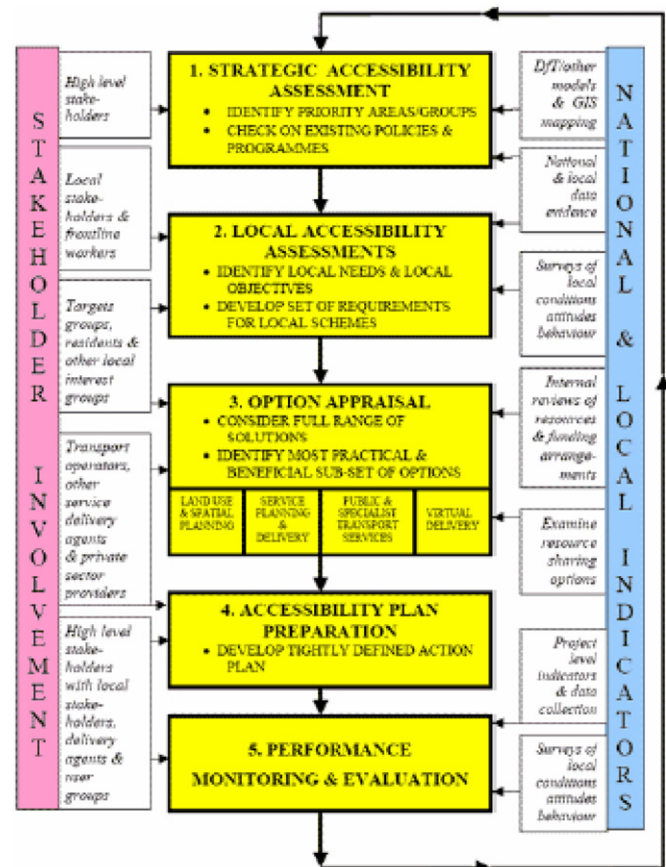

Fig. 2. Accessibility planning process. *Source*: DfT, 2004.

Subsequently, there has been the development of the Accession software suite by MVA and Citilabs, launched in September 2004 and with version 1.2 being issued in May 2005 (see www.accessiongis.com). This is designed to be a flexible database management and mapping tool, with indicators including contour maps and the Hansen and logsum measures of accessibility.[1] However, data availability is a major constraint, with national indicators limited to public transport time based measures. In practice, it seems likely that Accession will be most used for fairly aggregate analysis of public transport service levels. For example in Fig. 4, Accession is used to assess accessibility to doctors and dentists in Bracknell (Berkshire). The darker shading indicates poor accessibility, in this instance located in the south west of the District.

The emphasis on accessibility, rather than mobility, is to be welcomed. Moreover, the approach suggested has some real prospects of promoting joined-up government, involving as it does the Office of the Deputy Prime Minister (now

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[1] In a Hansen index, the accessibility of zone i (A_i) might be expressed as: $A_i = \sum_j [E_j \exp(-\beta C_{ij})]$ where E_j is attractiveness of zone j (e.g. number of employment places for journey to work accessibility) and, C_{ij} is the generalised cost of travel between zones i and j. In a log sum measure, the accessibility of individual i to a range of alternatives j might be expressed as $1/-\beta \ln (\sum_j [\exp(-\beta C_{ij}) E_j]/\sum_j E_j)$ where C_{ij} is now the generalised cost for individual i to reach attraction j (and the (dis)utility of travel is given by $-\beta C_{ij}$).
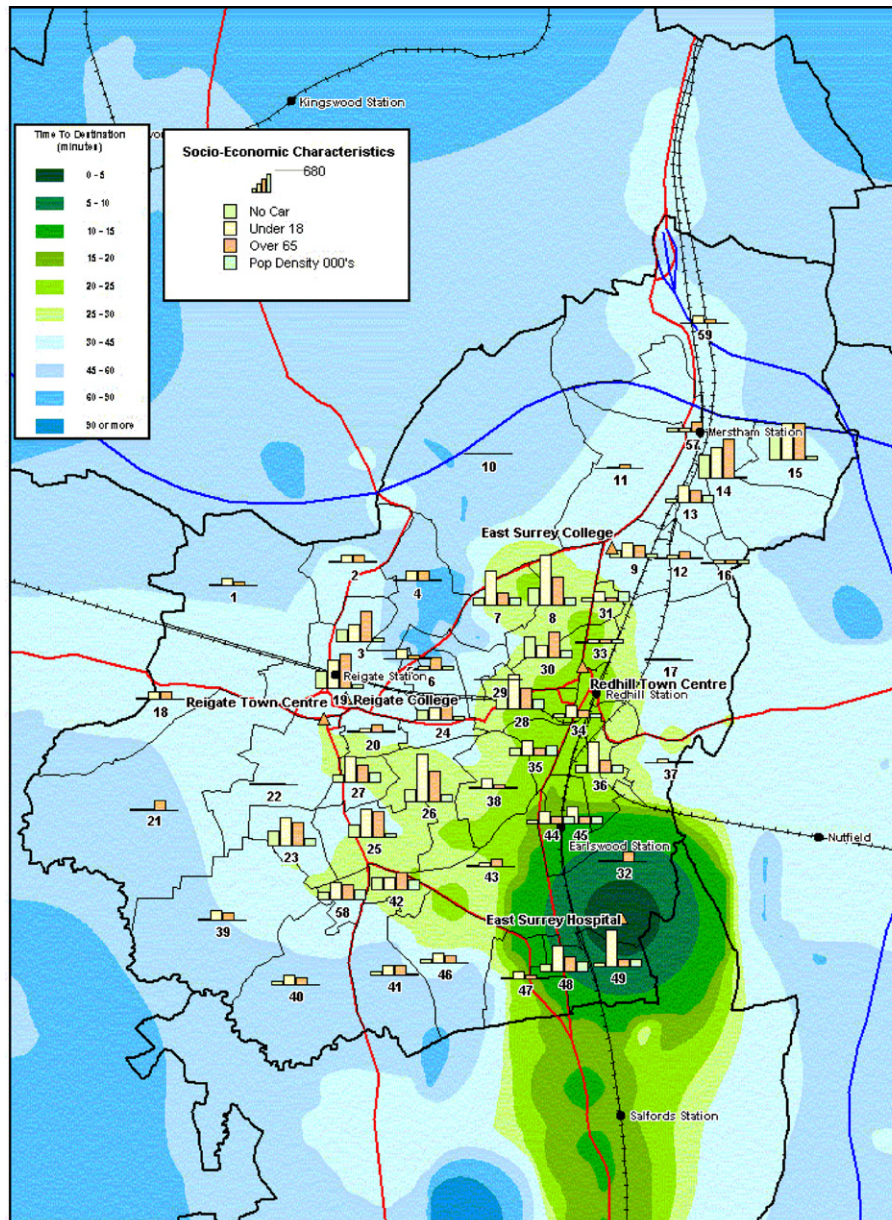
Fig. 3. The DfT's prototype accessibility planning tool. *Source*: DfT, 2003.

the Department for Communities and Local Government), the Department of Health (including Primary Care and Hospital Trusts), the Department for Education and Skills, the Department for Work and Pensions (including Jobcentre Plus), and the Department for Culture, Media and Sports.

However, in our view, a more disaggregate approach would be preferable. This would assist in detecting scattered manifestations of exclusion and in devising bottom-up solutions. Such an approach would normally require extensive surveys of individual travellers. For example, Brand et al. (2004) examined users of primary, secondary and tertiary healthcare facilities in Oxfordshire. These facilities are concentrated in Headington, a suburb to the east of Oxford city centre. For many public transport users this

requires informal interchange in Oxford city centre, resulting in long and expensive journeys (through ticketing is not available). A questionnaire survey enabled the mapping of the origins of a sample of over 200 hospital users using Ordnance Survey raster maps (1:50,000, 1:10,000) and AddressPoint location maps of every address in Oxfordshire. Data was also collected on preferred arrival and departure times and the scope for demand responsive transport was assessed using Mobirouter software. This work identified the scope for three services, serving the Banbury, Bicester and Witney corridors and based on flexible polygonal catchment areas. Fig. 5 illustrates the Witney route.

An alternative approach to carrying out detailed surveys is to simulate synthetic populations from Census and other data. For example, Bonsall and Kelly (2005) have
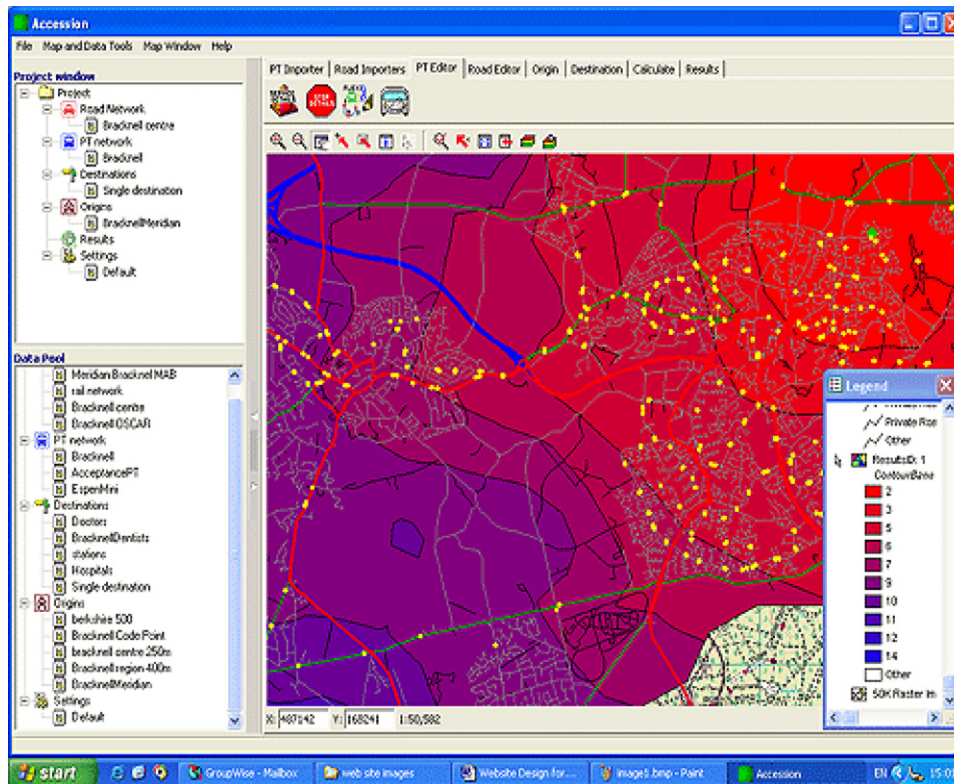
Fig. 4. Example of accession. *Source*: www.accessiongis.com.

developed the Popgen-T methodology that uses iterative proportional fitting and Monte Carlo simulation to generate the characteristics of travellers from data on age, gender, employment status, occupation, income, car availability, disability, household structure and ethnicity. This data is then used with the select-link-analysis and other routines of a standard traffic assignment package (in this case SATURN) to determine which individuals would be affected by a given methodology. This approach has advantages in that it maximises the use of secondary data sources to provide a more disaggregate analysis, but it may still have weaknesses in correctly identifying the unique combinations of attributes that characterise those most affected by social exclusion.

4. A socio-spatial schema of social exclusion processes

From our case studies of Bristol, Nottingham and Oxfordshire (see Table 1), we have identified three criteria that are useful in identifying the degree of transport-related social exclusion and highlighting appropriate policy responses. These are the level of travel in the area as a whole (area mobility), the level of travel made by particular individuals or groups (individual mobility) and the overall accessibility of the area. It is our view that examining the inter-relationships between accessibility and mobility is more rewarding than examining either in isolation. If, somewhat arbitrarily, we assume that each of these three criteria can take two levels (high and low), this leads to

eight categories illustrated by Fig. 6 and discussed in turn below. It can be seen that inclusion is associated with high levels of individual mobility and exclusion with low levels. However, inclusion is not limited to areas of high aggregate (zonal) accessibility nor is exclusion limited to areas of low aggregate accessibility. Instead, more disaggregate measures of accessibility are required and it should be apparent that exclusion is associated with low levels of individual accessibility and inclusion with high levels. For each of the eight categories in Fig. 6, we have also suggested some indicative policy responses. These are largely determined by a normatively assessed needs approach that sees individual accessibility as a merit good, but is mediated by the expressed wants revealed by participants in our field work.

1. High Area Mobility, High Personal Mobility, High Accessibility. On one level this might be considered the transport planner's nirvana. However, too high mobility can have negative effects in terms of congestion, accidents and environmental damage. In our survey work in the inner city suburb of Lenton in Nottingham, we detected a dominant group that fell in to this category. They were of working age, many recent graduates of nearby Nottingham University, who had high mobility levels and diverse trip patterns. Most were employed in the city centre, but a minority drove very long distances, particularly on the trunk road network. We describe this as reflecting a process of concentrated inclusion, which
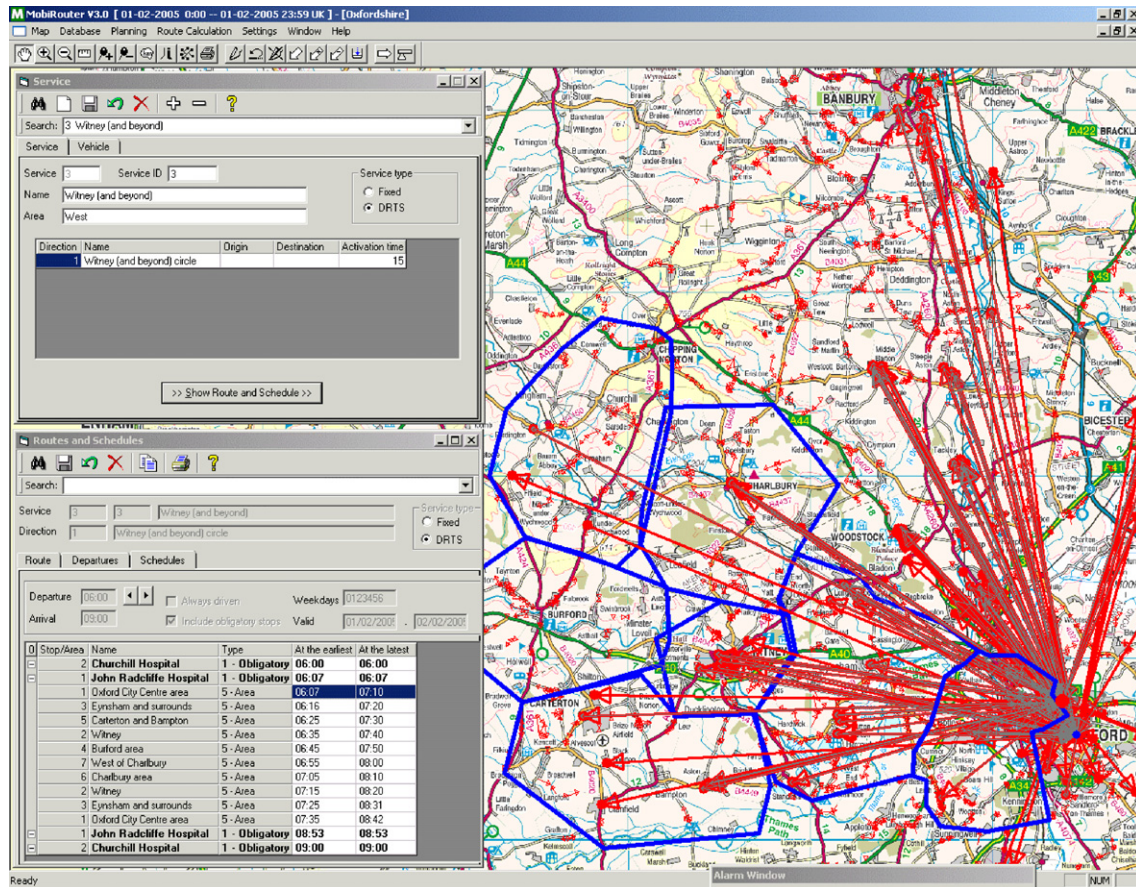
Fig. 5. Example of a demand responsive transport service to hospitals. *Source*: Brand et al., 2004.

Area			Low	Barton	Hartcliffe, Clifton
Mobility			High	Lenton	Charlbury
			Accessibility		
			High		Low
Personal Mobility	High		White Working Aged in Lenton (Nottingham) - Concentrated Inclusion - Charging Car Users in Barton (Oxon.) - Scattered Inclusion - Charging		Moped Boys in Hartcliffe (Bristol) - Scattered Inclusion - Traffic Calming High Income in Charlbury (Oxon) - Concentrated Inclusion - Buses, Trains, Charging
	Low		Asians in Lenton (Nottingham) - Scattered Exclusion - DRT/Taxis Non Car Users in Barton (Oxon.) - Concentrated Exclusion - Bus, DRT/Taxi		Elderly in Clifton (Nottingham) - Concentrated Exclusion - Buses, Trams, DRT/Taxis. Low Income in Charlbury (Oxon) - Scattered Exclusion - Buses, Trains, DRT

Fig. 6. A possible socio-spatial schema of social inclusion and exclusion processes.

might by typical of such gentrifying inner city neighbourhoods, but is perhaps more typical of intermediate suburbs. Given that the main problem resulting from this process is excess mobility then the most appropriate policy response may be some form of road user charging.

2. High Area Mobility, Low Personal Mobility, High Accessibility. Our survey work in Lenton suggested that a substantial minority might fall into this category, particularly from the various Asian communities, with mobility levels among these groups around half that of

the dominant White community.[2] We suggest that such groups may be affected by a scattered form of exclusion. It was also found that trip patterns amongst this group were dominated by circumferential movements, which were badly served by the radial bus network. Moreover, there were cultural and informational barriers to using the bus system. Bus use training courses are a possible measure for overcoming these barriers. Other remedial measures might involve the development of demand responsive transport and taxi and lift sharing. Similar problems were detected in the Easton and St. Paul's districts of Bristol,[3] exacerbated by community severance caused by an urban motorway (the M32). It was found that central area charging would not directly affect such groups as car travel to the CBD was low, with only around one in ten of those surveyed making such trips. However, the indirect effects of congestion and parking migration and bus overcrowding would have to be addressed, possibly through the use of equity audits.

3. Low Area Mobility, Low Personal Mobility, High Accessibility. Our work indicated that the majority of people living on the Barton Estate on the eastern edge of Oxford might fall into this category. This Estate does have some basic services such as a Post Office, a food store, a primary school and a doctor's surgery, although the latter has heavily constrained opening hours. However, it has recently lost some other facilities, including a public house (see below) and a secondary school, whilst access to supermarkets is problematic (for example there is no direct public transport link to the nearest Asda at Wheatley). The estate has relatively good straight-line accessibility[4] to central Oxford, the hospitals of Headington and the employment centres of Cowley. However, more nuanced measures of accessibility would be less positive. Access to the Estate is via a non-prioritised exit off a major junction, with substantial delays, particularly in the morning peak. Pedestrian access is via an unappealing subway under this junction. This junction is being redesigned but with strategic long distance traffic in mind, rather than local access. Therefore, it seems unlikely that community severance will be reduced (Rajé, 2004b). Car ownership on the Estate is low and despite a relatively good bus service (albeit with some limitations in its routing through the Estate), overall mobility rates are low. We believe that this reflects a process of concentrated exclusion. Solutions might involve upgrades to the bus system, particularly in terms of information provision, ticketing and routing. Demand responsive transit

and taxi sharing might also have a role to play, particularly with respect to access to health care facilities.

4. Low Area Mobility, High Personal Mobility, High Accessibility. Our work indicated that this could describe a minority of car owners living on the Barton Estate, particularly, but not exclusively, those living in a new gated community on the edge of the Estate. This gated development, built on the former site of the Estate's only public house, is located next to the A40, with good car access to Oxford and, via the M40, London. We consider this development might reflect a process of scattered inclusion.[5] The high levels of car-based mobility this produces might be best dealt with by charging mechanisms. To an extent this is dealt with in central Oxford by relatively high parking charges that might be supplemented by tolls on the strategic road network. Our work indicated that such charging would have relatively little direct impact on the excluded of the Barton Estate.

5. Low Area Mobility, Low Individual Mobility, Low Accessibility. Our interviews, particularly with the elderly, in Clifton, Nottingham, suggested that this area might fall into this category. This large post-war council estate, located to the south of the city and cut-off from it by the River Trent, has relatively poor accessibility, particularly to health care and retail facilities. This has been exacerbated by the run-down of facilities on the estate in recent years. We consider this area to be affected by the process of concentrated exclusion. Transport solutions being considered include extending the City's tram network to the estate, possibly funded by a workplace parking levy. Buses, demand responsive transport and taxis may also have a role to play.

6. Low Area Mobility, High Individual Mobility, Low Accessibility. Our work suggested that the scooter boys of the Hartcliffe estate in south Bristol might fall into this category. These were young men in their late teens and early twenties living on a peripheral estate with relatively poor bus services. These young men had relatively high levels of local mobility due to moped ownership that allowed them to access nearby manual jobs. This might be seen as an urban, commercial form of the wheels to work programmes that have provided subsidised moped access to young people in more rural areas (e.g. Ripon, North Yorkshire, and Stratford on Avon, Warwickshire). We consider that, at one level, these youths represent a scattered form of inclusion. Traffic calming measures might be considered to curb some of the excesses of this form of mobility, particularly on the Estate itself.

7. High Area Mobility, High Individual Mobility, Low Accessibility. Our work suggested that many high-income residents of the relatively isolated west Oxfordshire small town of Charlbury might fall into this category. To use the terminology of Section 2, the high levels of

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[2] In 2001, the Lenton and Dunkirk ward in Nottingham had a 32% ethnic minority population, with a fairly even split between those categorised as Asian and African–Caribbean. Interestingly, 48% of the ward's population was classified as being students, of which 13% were in employment.

[3] In 2001, the adjacent Ashley, Easton and Lawrence Hill wards of Bristol had 26%, 25% and 32% ethnic minority populations respectively.

[4] For example, Index of Deprivation type measures, based on the straight-line distance to a post office, a primary school and a doctor's surgery, suggest that Barton has good local accessibility.

[5] At least at the meso-level. At the micro-level, the included of the gated community are spatially concentrated.

endowments and exchange entitlements of many residents here more than compensate for the somewhat remote location of this settlement. This town has a direct rail service to London and, despite the high costs of rail travel,[6] there is some commuting. Residents also travel relatively long distances to shop in Oxford and Cheltenham. We consider this to be another manifestation of concentrated inclusion. Suitable policy responses might again focus on charging for access to the central city and the trunk road network.

8. High Area Mobility, Low Individual Mobility, Low Accessibility. Our work suggested that this description might be appropriate for lower income residents in Charlbury, such as those living on Sturt Close and Hughes Close. This area has been designated a Home Zone,[7] but with reputedly little effective consultation with local residents. The scheme appears to have been imposed by the County Council, since it was chosen by them as one of four sites in Oxfordshire for home zones, and then supported by the Town Council. We got the impression that this was a beautification scheme being imposed on what we might term the scattered excluded by the concentrated included who control the County and Town Councils.[8] We found that low-income households in Charlbury had relatively high car dependency but were unlikely to be heavily affected by charging schemes in central cities or on the trunk road network, as many journeys are highly localised. Non car owners/users were adversely affected by changes to the tendered bus service, which has been recently won by Stagecoach at the expense of a local company, with a reported deterioration in service quality. A similar change had occurred with the rail service, which had been transferred from Thames Trains to First Great Western, again with a reported deterioration in service quality.

5. Discussion

A by product of the recent interest in transport-related social exclusion has been the promotion by the Department for Transport of accessibility planning and the accompanying Accession software tool. This initiative has some merit, particularly in terms of promoting options related to land use and spatial planning and to deal with what we have termed proximate contacts, as well as more conventional transport and less conventional virtual solutions to deal with what we have termed distant contacts. However, in practice it is likely that the resulting analysis may be too aggregate, both spatially and socially. As currently presented accessibility planning is not particularly sensitive to issues such as gender, age, disability and ethnicity. The focus may be too much on problem identification rather than the delivery of solutions or where solutions can be identified they are of a corporatist nature.

In particular, in terms of transport solutions, there seems to be a built-in bias towards the provision of more public transport services (largely because of data availability). This is somewhat ironic given that most bus services in Great Britain are outside of local authority control and the prospects for extensive new light rail systems or expansion of existing rail systems are poor. We have argued elsewhere that commercial bus services have a tendency to produce too much service at too high fares and this is not ameliorated by the socially necessary services provided by tendering (Preston, 2003). Accessibility planning seems likely to exacerbate the overprovision of bus services and is unlikely to deliver the lower fares that would promote social inclusion, unless accompanied by Quality Contracts or large-scale extensions to concessionary fares schemes (which in themselves may be a rather blunt policy instrument – see, for example, Rye and Scotney, 2004).

Given the paucity of cost data, it is difficult to envisage how charging mechanisms will be dealt with by Accession, even though with appropriate recycling of the revenue, such schemes may promote social inclusion. It is also difficult to envisage how accessibility planning will encourage micro-level transport improvements that promote walking and cycling or traffic calming measures that reduce accidents, even though these have likely social inclusion benefits. It is also difficult to envisage how softer measure (or smarter choices – Cairns et al., 2004) such as work and school travel plans, car sharing, personalised travel planning and travel awareness programmes will be promoted by aggregate accessibility planning.

One weakness of aggregate access mapping exercises is that transport-related social exclusion is not always a socially or spatially concentrated phenomenon. Our recent work has suggested a matrix of area accessibility, area mobility and individual mobility as a possible schema for identifying concentrated and scattered forms of social exclusion and inclusion and for suggesting appropriate policy responses. This schema may also help identify key differences, for example, between urban, peri-urban and rural social exclusion and in terms of ethnicity, gender, life-cycle and lifestyle. However, such research requires an intensive multi-method approach, using both quantitative and qualitative data, and the resultant schema are still open to accusations of reductionist simplification and an overemphasis on top-down transport solutions. Category based approaches still involve a form of aggregation and tend to loose the richness of individuals' lived experiences. More sophisticated approaches based on individual accessibility (using log sum measures) and personalised travel marketing and transport services are postulated as possible ways forward. However, this would require either additional

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[6] A standard day return from Charlbury to London Paddington in March 2006 was £40.70.

[7] A home zone is a street or group of streets designed primarily to meet the interests of pedestrians and cyclists rather than motorists, opening up the street for social use – see http://www.homezonenews.org.uk/, ⟨Accessed 22 March 2006⟩.

[8] The socially excluded of Charlbury are only scattered at a meso-level, at a micro-level they are concentrated in a few streets.

collection of real data or the simulation of synthetic populations from existing aggregated data.

In addition, top-down, mechanistic planning solutions need to be supplemented by bottom-up community participation. This would enable a detailed assessment of normatively assessed needs against expressed wants. Our fieldwork suggested that the recent re-engineering of the Cowley Road in Oxford, with an emphasis on priorities for bus users, cyclists and pedestrians along with extensive public consultation, may be an example of good practice in this respect.

6. Conclusions

The key point that has emerged from our analyses is that the problems of the immobile socially excluded should not be analysed in isolation from the mobile included. Accessibility planning should not be limited to analysing social exclusion. In particular, charging mechanisms targeted at the included should also be examined as they can provide funding streams to promote personalised travel marketing and transport services that may more effectively deal with exclusion. An evidence base of good practice is beginning to be build-up (see, for example, DfT, 2004, Appendix B). However, there is still plenty more work (and thinking) to be done. In particular, realistic evaluations are required that determine the generative mechanisms that make policies to prevent exclusion work and better understand the different contexts of exclusion (see, for example, Pawson, 2002).

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