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Understanding mobility related exclusion and investigating the possibility of promoting inclusion through virtual mobility

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This paper highlights the mobility dimension of social exclusion, suggesting a strong correlation between a lack of mobility and lack of access to social networks, facilities, goods and services. This correlation, it is suggested, exists as both a cause and consequence of social exclusion. An increase in mobility to promote accessibility and thus inclusion is, however, contrary to government policy, which urges reduced mobility for environmental ends and can hamper community development, an essential element of efforts to reduce exclusion. This paper reports on research into the nature of mobility related exclusion, identifying the influence of lack of mobility upon other dimensions of social exclusion. The paper discusses the possibility that virtual mobility – access and participation via the Internet – will promote inclusion.

Introduction

The concept of ‘social exclusion’ originated in the social policy discourse of the French socialist governments of the 1980s, with the aim of describing the alienation and detachment not only from the economy, a state characteristic of poverty, but also from society, experienced by individuals and groups, with particular reference to the debate regarding access to the system of social insurance. The term has since grown to encompass reference to all individuals and groups on the margins of society and has been embraced both by individual governments and by multinational institutions across the globe (Bhalla and Lapéyre, 1997, Percy-Smith, 2001, Room, 1995).

The ubiquity of the term ‘social exclusion’ in policy documents and mission statements has not, however, increased the clarity of meaning. ‘Social exclusion’ is understood in different ways by different practitioners and is endlessly redefined, yet the concept remains vague, its interpretation motivated often by political expediency or misunderstanding. This paper seeks to increase understanding of social exclusion in relation to transport and the interpretation offered below is presented from this standpoint. The paper firstly discusses the concept of poverty, before identifying the dimensions of social exclusion and discussing the mobility dimension of social exclusion. The paper then turns to discuss proposed future research in this area.
Thinking about poverty

Before seeking to define social exclusion, it is useful to consider definitions of poverty. In observing the changing understandings of poverty, it is possible to trace the origins of ‘social exclusion’ as a concept which seeks to overcome the limitations of the poverty discourse. The key differences between the two concepts can also become clear.

There is a long tradition within European social policy of concern for the alleviation of poverty, from Bismarkian introduction of social security in Germany in the 1880s to British Liberal concerns at the start of the 20th Century, which moved from Victorian moral and economic notions of self-help and laissez-faire towards state provision of education, housing and public health. This change was moved both by changing understandings of poverty, provoked by the landmark poverty studies by Charles Booth and Joseph Rowntree, which suggested that there may be structural causes of poverty, challenging traditional perceptions of the morally delinquent and undeserving poor and by enlightened self interest in response to national and international political, economic and defence concerns at the turn of the 19th Century (Peden, 1991).

In his 1901 study, Rowntree’s definition of poverty was of ‘absolute’ poverty – a focus upon income poverty and the identification of a minimum level of income necessary for subsistence: ‘an income just sufficient to buy what was absolutely necessary for the maintenance of physical efficiency’ (Peden, 1991:10). Absolute poverty is a measure that is still used today. The United Nations defines absolute poverty as ‘a condition characterised by severe deprivation of basic human needs’ – the lack of food, drinking water, sanitation facilities, health, adequate shelter, education and access to a benefits safety net (cited BBC, 2001).

Absolute measures remain attractive to policy makers because of the ease with which they define and measure poverty and the benchmark that they provide, against which success and failure of policy can be judged. Where poverty is narrowly defined, as in measures of absolute poverty, it can be more easily defended as a measure of true poverty, rather than taste or a personal lifestyle preference (Piachaud, cited Desai, 1986).

The key weakness of an absolute definition of poverty is that it ‘assume(s) that there is always a fixed level of basic needs and an income which is insufficient to provide these needs defines the poverty line’ (Foley, 1999:3). It fails to recognise the differing circumstances and therefore income needs of different members of the population. In addition, ‘latching on to one or a few items as basic necessities risks overlooking others’ (ibid: 4) – the restrictive focus of absolute definitions excludes many from concern.

By the time of his second study in the 1930s, Rowntree had incorporated a revised definition of poverty – the concept of ‘relative’ poverty, where people are viewed as poor not in relation to a subsistence standard but to the standard of living experienced by others in the society in which they live (Burden, 2001).

The poor shall be taken to mean persons, families and groups whose resources (material, cultural and social) are so limited as to exclude them from the minimal acceptable way of life in the member states in which they live.

EU, cited Foley, 1999:4
This relative measure allows different definitions of poverty for individuals with different circumstances and, crucially, living in different times (Townsend, 1986). Thus, lack of access to a car is considered to be a characteristic of poverty today, featuring in the majority of deprivation indices (including the DoE Index of Local Conditions, Townsend Material Deprivation Score, Carstairs and Morris Scottish Deprivation Score, Forrest and Gordon’s MATDEP index (Foley, 1999; PAT 18, 2000)), because the majority of households in society today have access to a car, with the result that the car is an essential tool for modern day living. Car ownership would not have been an appropriate measure thirty years ago, when car ownership was more restricted, the lack of access to a car less stigmatising and public transport and the urban environment were less influenced by the assumption of mass car ownership, such that car ownership was not a necessary instrument of inclusion.

More recently, definitions of poverty have been expanded further, to consider the multiple deprivations facing the poor. In his 1979 report, Townsend redefined poverty in this way, as exclusion from the practices and style of life of society as a result of the denial of access to resources:

> Individuals, families and groups in the population may be said to be in poverty when they lack the resources to obtain the types of diets, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged or approved in the societies to which they belong. Their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities.
> Townsend, cited Golding, 1986:7

Development practitioners have further expanded the notion of poverty, controversially expanding poverty to Western ideals of economic, social and political development. Sen (in Bhalla and Lapeyre, 1997) discusses the political and social dimensions of poverty, recognising that poverty damages civic participation and thus the healthy functioning of political institutions. The United Nations now works towards the elimination of ‘human poverty’:

> … poor health and education, deprivation in knowledge and communication, inability to exercise human and political rights and the absence of dignity, confidence and self respect. There is also environmental impoverishment... [and] the grim reality of desperate lives without choices.
> UNDP, 1997:iii

Absolute and relative definitions of poverty have in common their economic focus upon the minimum income standard necessary to fulfil material needs. They differ in their perceptions of ‘need’, from subsistence nutritional needs to material needs relative to others in society. Their policy solutions therefore focus upon raising income standards to allow purchase of material needs. The poverty discourse therefore focuses upon outcomes: the inequality and disadvantage that exists as a result resource deprivation.

Poverty and social exclusion

The poverty discourse has more recently moved closely towards what is now termed ‘social exclusion’ – indeed, Townsend’s definition of poverty is ubiquitously used in texts discussing the concept (for example, Foley, 1999; Levitas, 1998; Solomon, 2001). However, the poverty
discourse retains a focus upon income. The extension of the concept of poverty from subsistence to more ‘socially perceived necessities’ (Joseph Rowntree Foundation, 2000) incorporates an understanding and recognition of the consequences of lack of income but does not have these consequences as its focus.

Poverty and social exclusion differ in this fundamental respect. Whilst discussion of poverty focuses upon resources, with policy prescriptions to increase income as a response to the consequences of low income (the identification of low income as cause of multiple deprivation), social exclusion refocuses the debate upon the effects of deprivation upon the individual’s place in society and their citizenship rights (CDF, nd; Percy-Smith, 2001). The distinction between poverty and social exclusion is that poverty centres upon the outcomes of unequal access to material resources. Social exclusion centres upon the processes of unequal access to participation in society (Duffy, 1998), removing the focus upon inequality of material resources (Levitas, 1998). Whereas poverty is primarily distributional, focussing upon alienation from the market, social exclusion is relational, with a focus upon resource and power relationships between individuals, groups and the state, thus upon alienation from society (Dibben, 2001; Judge, 1995; Room, 1995). Policy prescriptions to alleviate poverty focus upon the disparity between the top and bottom in society, moving people up from down; social exclusion’s focus is upon moving those who are excluded from participation in society from out to in (Bhalla and Lapeyre, 1997; Duffy, 1998).

<table>
<thead>
<tr>
<th>Poverty</th>
<th>Social exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material resources</td>
<td>Participation in society</td>
</tr>
<tr>
<td>Distributional</td>
<td>Relational</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Processes</td>
</tr>
<tr>
<td>Economic rights</td>
<td>Citizenship rights</td>
</tr>
<tr>
<td>Up from down</td>
<td>In from out</td>
</tr>
</tbody>
</table>

Table 1. Some important distinctions between poverty and social exclusion

An important distinction

This distinction between poverty and social exclusion allows for a recognition that poverty does not necessarily lead to exclusion; and that one can be excluded without being in poverty (Levitas, 1998; Oppenheim, 1998), creating space for debate regarding the non-income causes of deprivations. The distinction also raises awareness of non-material deprivations and an understanding that exclusionary factors are not necessarily related (Foley, 1999), allowing separate analysis of and responses to exclusionary factors. It is essential to recognise that the terms poverty and social exclusion are not synonymous, to allow exclusion to be seen in a wider context than the redistributive poverty debate allows.

Defining social exclusion: uncoupling poverty and exclusion

Many definitions of social exclusion retain a focus upon material deprivations, incorporating the poverty discourse, to differing extents. Bhalla and Lapeyre (1997) state that income is
necessary (although not sufficient on its own) to ensure social inclusion, allowing access to goods, services and social goods. This ‘redistributionist discourse’ within the social exclusion debate (Levitas, 1998), exemplified by Townsend (cited above) focuses upon resource deprivation leading to exclusion from the community’s style of living, suggesting that without sufficient income, one will necessarily become excluded. It:

… is not only about shortage of money. It is about rights and relationships; and about how people are treated and how they regard themselves; about powerlessness, exclusion and loss of dignity. Yet the lack of adequate income is at its heart.
Church of England, cited Foley, 1999:4

Whilst this discourse broadens from economic exclusion to include consideration of social, political and cultural exclusions, linking these to the concept of reduced citizenship as a result of exclusion (Lister, cited Levitas, 1998:13), the emphasis upon poverty as the prime cause of exclusion implies that a reduction in income poverty through redistribution is the solution to exclusion. Such a definition fails to acknowledge non-income related exclusionary factors, positing that poverty necessarily results in exclusion, that the income-rich cannot be excluded and assuming that exclusionary factors are interrelated.

Levitas’ ‘social integrationist discourse’ is interesting in that it emphasises the centrality of paid employment to the reduction of exclusion, linking income and exclusion but extending understanding of the consequences of unemployment to recognise its negative social, cultural, status and self-esteem implications. The centrality of paid work to the reduction of social exclusion (Cahill, 1994; Sen, cited Bhalla and Lapeyre, 1997; Mulgan, 1998; Oppenheim, 1998; Silver, 1995) recognises the secondary benefits of employment – the status and social legitimacy that paid work can confer, the social contact and the personal and business networks that arise – without which one can become more excluded from society and is an important step towards recognising the non-income dimensions of exclusion. However, this discourse again posits one cause and thus one solution to exclusion, masking the multiple causes of exclusion and linking the dimensions of exclusion to one causal factor. The discourse suggests that all people who are unemployed are excluded, failing to recognise the primary and secondary values of unpaid work; and that those in paid employment cannot be excluded – two assertions which can easily be challenged.

To understand social exclusion, it is necessary to uncouple poverty and exclusion and to recognise both the income/material and the non-income/non-material causes and consequences of exclusion. Exclusion has not only economic, but multiple dimensions and characteristics (Joseph Rowntree Foundation, 2000) (expanded below):

[We regard] social exclusion as a more comprehensive formulation which refers to the dynamic process of being shut out, fully or partially, from any of the social, economic, political and cultural systems which determine the social integration of a person in[to] society. Social exclusion may, therefore, be seen as the denial (or non-realisation) of the civil, political and social rights of citizenship.
Walker and Walker, 1997:8

Exclusion, then, can be viewed as a process of reduced citizenship with multiple dimensions and characteristics. It is a heterogeneous concept, with interrelated causes and components which can, however, be experienced independently of each other and at different times, to different extents, by different individuals and groups.
Denial, or inability?

In this paper, we define social exclusion as:

The denial of access, to an individual or group, to the opportunity to participate in the social and political life of the community, resulting not only in diminished material and non-material quality of life, but also in tempered life chances, choices and reduced citizenship.

This definition, in highlighting the denial of access to opportunity, places emphasis upon the structural constraints to participation, removing the emphasis upon individual culpability that is implied by definitions suggesting an inability to participate in society (Duffy, 1998; Walker and Walker, 1997). The emphasis is upon being forcibly shut out, highlighting the powerlessness of many people who are socially excluded. The denial of choice inherent in the social exclusion discourse clearly prevents extension of the concept of exclusion to those who self-exclude (for an opposing viewpoint, see Judge, 1995), for in the process of self-exclusion, such people are exercising the power of choice which is denied to the majority of people experiencing social exclusion.

Measuring exclusion

Exclusion is a more complex concept than being poor, or possessing a set of characteristics which together make one excluded. Exclusion is very specific to the individual or group being affected by exclusion – and the exclusion experienced by individuals within the excluded group is likely to differ. The exclusion experienced by an individual in society is likely to be as a result of a unique interplay between the dimensions and characteristics of exclusion that are specific to the circumstances of the individual. In addition, many of the exclusionary factors leading to social exclusion are non-quantifiable (Oppenheim, 1998) – for example, powerlessness, self esteem, isolation and perceptions of choice.

In recognising the unique experiences of exclusion it is possible to appreciate that exclusion cannot necessarily be measured in a composite way. Whilst it may be possible to judge the severity of the effects of one characteristic of exclusion, it would not be possible to suggest that one person or group is more or less excluded than another person or group in the quantitative way in which poverty can be measured.

Composite indices of deprivation and poverty (detailed in PAT 18, 2000), are useful in measuring ‘the proportion of households in a defined small geographical unit with a combination of circumstances indicating low living standards or a high need for services, or both’ (Bartley and Blane, cited PAT 18, 2000). They are limited, however, in that they cannot indicate the deprivations and poverties experienced by individuals within the group and in their focus upon deprivation and poverty, which, as we have highlighted above, is distinct from exclusion. The individuals within a geographical area will not necessarily be homogeneous in character or in experience of exclusion; and exclusion is not a single, additive quality in which dimensions and characteristics are necessarily related (Bhalla and Lapeyre, 1997; Foley, 1999; PAT 18, 2000).

In his appraisal of existing indices, Foley writes:
[There are] ... a number of distinct and separate dimensions of social exclusion... The significant finding is that none of these characteristics have anything to do with one another... The inevitable conclusion is that the future development of measures of social exclusion must rely on separation rather than consolidation. The search for a single measure of multiple deprivation is in vain, since deprivation and social exclusion are not single, identifiable, homogeneous constructs.’

Foley, 1999:43

Foley’s conclusions reinforce the need to accept social exclusion as a non-quantifiable, non-composite concept, uniquely experienced by the individual or group. Whilst this conclusion could be seen to confuse the concept, the ability to perceive exclusion as a combination of characteristics affecting the individual allows analysts to place the person before the characteristics, avoiding generalisation and assumptions regarding an individual’s experiences. This conclusion places the individual at the centre, detailing and defining their experiences of exclusion, allowing an individual-centred approach to action against exclusion.

Dimensions of exclusion

Whilst it may not be possible to measure social exclusion, through the development of an understanding of the dimensions and characteristics of exclusion it is possible to create a framework of understanding of the concept. The framework below highlights the key areas, or dimensions, of exclusion, alongside which the characteristics, or potentially exclusionary factors, are listed. It can be suggested that an individual or group is more likely to feel excluded where they experience one or more of these factors to be exclusionary (Percy-Smith, 2001:7).

Many authors discuss the political and social, as well as the economic, dimensions of social exclusion (including authors…), both in relation to economic exclusion and as dimensions which stand alone. The table below expands beyond these dimensions, to highlight nine dimensions of exclusion, including a temporal (Cassell, 1993) and mobility dimension (discussed below), which, although linked, can usefully be distinguished.
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Potentially exclusionary factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>Income poverty&lt;br&gt;Unemployment&lt;br&gt;Lack of access to ‘safety net’ credit facilities&lt;br&gt;Access to technology?</td>
</tr>
<tr>
<td>Societal</td>
<td>Crime&lt;br&gt;Homelessness&lt;br&gt;Poor housing&lt;br&gt;Family breakdown&lt;br&gt;Education&lt;br&gt;Equality&lt;br&gt;Social rights</td>
</tr>
<tr>
<td>Social networks</td>
<td>Breakdown of formal networks&lt;br&gt;Breakdown of informal networks&lt;br&gt;Loneliness&lt;br&gt;Isolation&lt;br&gt;Information?</td>
</tr>
<tr>
<td>Organised political</td>
<td>Ability to influence decision making at an organised level:&lt;br&gt;Disenfranchisement (low turnout/registration)&lt;br&gt;Low participation in groups and organisations&lt;br&gt;Denial of citizenship rights and freedoms&lt;br&gt;Lack of representation&lt;br&gt;Ability to participate in the exercise of authority</td>
</tr>
<tr>
<td>Personal political</td>
<td>Ability to make decisions over own life:&lt;br&gt;Powerlessness&lt;br&gt;Restricted choices&lt;br&gt;Attitudes</td>
</tr>
<tr>
<td>Personal</td>
<td>Impairment&lt;br&gt;Gender&lt;br&gt;Ethnicity&lt;br&gt;Religion&lt;br&gt;Culture&lt;br&gt;Sexuality&lt;br&gt;Class&lt;br&gt;Health&lt;br&gt;Skill levels/educational achievement</td>
</tr>
<tr>
<td>Living space</td>
<td>Neighbourhood, including safety&lt;br&gt;Housing&lt;br&gt;Environment&lt;br&gt;Community&lt;br&gt;Geographical distances to services and employment – accessibility&lt;br&gt;Local services, including transport, education</td>
</tr>
<tr>
<td>Temporal</td>
<td>Time poverty</td>
</tr>
<tr>
<td>Mobility / accessibility</td>
<td>Available transport&lt;br&gt;Access to social networks, facilities, goods and services</td>
</tr>
</tbody>
</table>

Table 2. Dimensions and potential exclusionary factors of social exclusion

The dimensions can better be displayed in a graphical format, to illustrate the interplay between each dimension and the cross-dimensional nature of many potentially exclusionary factors.
Diagram 1. The dimensions of social exclusion

A mobility dimension to exclusion

The above diagram introduces a mobility dimension to exclusion. It can be suggested that lack of mobility is a contributory factor within each dimension and towards many exclusionary factors. Thus, mobility is depicted, in diagram 1, as an overarching dimension of social exclusion.

Mobility related exclusion is the process by which people are prevented from participating in the economic, political and social life of the community because of reduced accessibility to opportunities, goods and services, due in whole or in part to insufficient mobility in a society and environment built around the assumption of high mobility. Mobility related exclusion does not refer to the transport related poverty indicators used in many deprivation indices (car ownership), but to spatial, temporal, financial and personal constraints (DETR, 2000b) upon the level of mobility necessary to enable participation in society.

At the launch of the Social Exclusion Unit in 1997, the Prime Minister, referred to transport as one of the major causes of exclusion:

[The purpose of the SEU is to address]… the damage dome [sic] by poor housing, poor education, lack of decent transport and above all, lack of work.

Tony Blair, cited Root, 1998, emphasis added

Since this statement, the link between transport and social exclusion has been highlighted by the government. Both the white paper on integrated transport (DETR, 1998) and the ten year plan for transport (DETR, 2000a) highlight a relationship between social exclusion and (lack of) transport, a link made clear in the policy document, ‘Social Exclusion and the Provision and Availability of Public Transport’ (DETR, 2000b). In these documents, it is suggested that, if transport is to be ‘better for everyone’, the transport system must consider the social implications of travel and restricted mobility (Hine and Mitchell, 2001). In conflict with the government’s environmental aims, which seek to reduce motorised mobility, the conclusion drawn from studies into the links between exclusion and transport indicate a need for increased
mobility to fulfil social needs and a role for transport in the creation of a fairer and more inclusive society (Church, Frost and Sullivan, 2000:12):

Enhancing social mobility requires more physical mobility… some people need both to be able to travel more and to accept the need to travel more if they are to be socially ‘included’.
DETR, 2000c: 5. See also Lucas and Simpson, 2001:11

Understanding the mobility dimension of exclusion

The cultural and political assumptions of car ownership in the developed world have resulted in a culture and a landscape in which mobility is both expected and necessary to participate in society. Changes in the location of employment, education, healthcare, leisure, shopping and other services and facilities, in response to changes in land use planning and political priorities, have challenged the sustainability of localised existences. Increases in car ownership, alongside changed political priorities, have led to the decline, terms of the ‘affordability’, ‘availability’, ‘accessibility’ and ‘acceptability’ (DETR, 2000b:93) of public transport. In both the urban and rural environments, access to services and facilities has become, at the least, problematic and often, impossible, without access to a car. In consequence, people with inadequate transport can face reduced equality of opportunity and a reduction in the ability to participate in civic life (Dibben, 2001; DETR, 2000b; Lucas and Simpson, 2001; Torrance, 1992).

Low levels of accessibility can be experienced at the neighbourhood and the individual level (Church et al, 1999). Poor neighbourhoods – urban and rural areas with a high incidence of income poverty, low employment, poor health, crime, poor housing and a concentration of people experiencing multiple exclusions (SEU, 1998) – tend to have low levels of motorised mobility – low levels of car ownership alongside poor public transport links. Public transport often bypasses these areas, as a result of fear of crime and low perception of a business case amongst private public transport operators, particularly in rural areas, with the result that the neighbourhoods become ‘no go’ and ‘no exit’ communities (Murray, 1998). The residents of these communities find their exclusion reinforced as a direct result of the availability (the lack of routes and inconvenient timing), unreliability and affordability of public transport serving their area (DETR 2000b:16) and the time consuming nature of travel by public transport.

Those without cars usually need more time, greater effort and pay a higher marginal cost to reach the same destinations as people with cars.
DETR 2000b:18

Poor neighbourhoods and their residents are often the most affected by the negative community, environmental, health and safety effects of increased car use (DETR, 2000b: chapter 4; Grayling, 2001:4/5). ‘Children from low income families are five times more likely to be killed or injured on the roads compared to those from affluent areas’ (Root, 2000:460); new roads are more likely to be built through poor neighbourhoods than affluent areas, due in part to the powerlessness and disenfranchisement experienced by many people in these areas (Berman, 1982:292/3; Torrance, 1992:49).

Of course, not all people living in poor neighbourhoods will be experience mobility related exclusion, nor will all people who experience mobility related exclusion live in poor
neighbourhoods, or be income poor. Mobility related exclusion is not only clustered within poor neighbourhoods, but also scattered amongst individuals within the population (Grieco, Turner and Hine, 2000), disproportionately affecting people experiencing other exclusions (Torrance, 1992:55) – children, people with disabilities, ethnic minorities, lone parents, older people, women, unemployed people and people who are income poor (DETR, 2000b: chapter 6; Whitelegg, 1997). The low levels of public transport services at off-peak times, poor facilities and accessibility of and at interchanges and onboard, the public transport environment, which is often perceived to be unsafe and the cost of public transport are among the barriers to its use, reinforcing low levels of accessibility.

Non-motorised mobility – walking and cycling – can be time consuming, unsafe and unhealthy. ‘Modern landscapes seem to be designed for forty year old healthy males driving cars’ (Ralph, cited Freund and Martin, 1993:45), creating an alienating environment for pedestrians, who must cross busy roads, walk around or walk beneath them in subways, each potentially dangerous activities, with accessibility, health and safety concerns (Wajcman, 1991).

There is a danger in assuming that the mobility dimension of exclusion cannot affect those with access to a car. The increasing costs of motoring (including the rising cost of fuel insurance) affect those heavily reliant upon the car who cannot necessarily afford to meet these costs without making sacrifices in other areas of their lives (Root, 2000:457; Lucas and Simpson, 2001:10). The reliance upon the car can itself be seen as an exclusionary factor, necessitating long periods of time in isolation and curtailing social interaction, contributing to difficulties in the formation and maintenance of social networks. The denial of choice regarding accessibility and mobility options, because of the ‘spatial hegemony’ of the car (Gorz, 1979:74) is disempowering for all sectors of the population.

Facilitating access

Accessibility is a key component of exclusion, influencing many dimensions of the social exclusion discourse. For people with income or time constraints or constraints upon physical mobility, because of physical or mental health impairment, travelling with children or luggage or who are unable to access information to facilitate travel, the viability of accessing many opportunities and services, by non-motorised means, public transport and, sometimes, by car, is severely reduced.

Transport difficulties are a key barrier to employment, constraining the ability to travel to interview and to find out about employment opportunities, influenced by the location of job centres outside of areas with high unemployment. The spatial concentration of unemployed people in areas with poor public transport reduces the potential contact with the employed, who are often sources of information about potential employment. The choice of job, in terms of location and working hours, particularly for jobs with off-peak working hours (for example, part-time or shift work, which tend to be low skilled and low paid, with a predominantly female workforce), can be constrained by mobility difficulties:

Choice of job, or even the possibility of taking a job at all, is thus positively correlated with the ability to travel... In an Audit Commission study (1999) of job seekers, 52% said that lack of private transport
inhibited them from getting a job, and 23% said that they had been prevented from getting a job due to poor public transport.
DETR, 2000b:16, 50

The lack of accessible, affordable and available transport can directly prevent access to educational and training opportunities and choices. Access to leisure activities, hobbies and pursuits, important forms of relaxation and social interaction, often requires mobility, particularly with the (re)location of leisure facilities on the outskirts of towns and cities (Tomlinson, 1986; Torrance, 1992). The centralisation of health and other social services results in a requirement of mobility for accessibility. Access to out of town shopping facilities is dependent upon mobility, without which shoppers are reliant upon local shopping facilities, which have a reduced level of choice of goods and charge higher prices (Murdock, 1986).

The social function of mobility

Mobility has an important function in enabling access to social goods. It can be viewed as a social service (Cahill, 1994:22), facilitating social interaction and participation, whether at the destination, in allowing access to leisure, activities and social networks, or during the journey, creating:

… either directly or indirectly, shared social ‘space’, formed by spatial and interpersonal relations. In other words, they facilitate a ‘public’ (that is, shared and participatory) culture’.  
Root, 2000:437

Lack of mobility can reduce access to formal and informal social networks, increasing isolation and separation not only from goods and services but from activities, family and friends (Dibben, 2001).

Constrained choices

Denial of access to mobility can be seen to act as a direct constraint on choice: of job, school or institute of further education, leisure pursuits, social relations, healthcare services and other facilities (Solomon, 2001). The choice of when and where to travel, indeed, whether or not to travel and what to do with time and income is denied, not only to people with transport difficulties but to all citizens, whose lives are shaped by the need for mobility to access the goods, services and social networks that facilitate participation in society.

Mobility and accessibility

In response to the challenge of mobility related exclusion, a number of commentators have discussed a right to mobility (DETR, 2000b:74; Torrance, 1992:55), as people have a right to other dimensions of inclusion, for example, economic rights, including adequate income, social rights, including housing and political rights, for example, the right to vote. An increase in mobility has been posited as a solution to mobility related exclusion, either through increased car ownership, or the provision of adequate public transport to meet mobility needs. However, increased car use is impractical, not only because it is contrary to government transport and
environmental policy, but also because the assumption of car ownership is in part responsible for many exclusions, as detailed above. Public transport is unlikely to ever meet all of the mobility requirements of all of the population and, whilst an improvement in the affordability, accessibility, acceptability and availability of public transport could increase use (DETR, 2000b:70; Grayling, 2001:16/7, 27) and thus decrease, it is unlikely to represent a solution, to the mobility dimensions of exclusion, particularly where social exclusion is experienced by scattered, as opposed to clustered, populations (Grieco et al, 2000).

The function of mobility is to give accessibility, to facilities, services and social participation. Where mobility is inadequate, accessibility is denied and exclusion can occur. In this sense, lack of mobility is a causal factor and lack of accessibility is the consequence. Perhaps, therefore, it is more useful to think about increasing accessibility, rather than increasing mobility and, in turn, to consider the viability of non-mobility related ways of accessing facilities, services and social participation.

**Accessibility through virtual mobility**

The Internet is already being used with the aim of influencing travel. The provision of up to date traveller information aims to enable people to better plan their journeys, possibly enabling greater use of public transport; real time information aims to allow people to save time wasted in congestion or in waiting for public transport; and transport can become more responsive, with car sharing, car pooling and community mobility assistance schemes going online to allow faster matching of available service with mobility need. Virtual mobility is distinct from this traveller information.

‘Virtual mobility’ is a shorthand term for activities that, traditionally, require physical mobility, but which can now be undertaken online via the Internet, without recourse to physical travel by the individual undertaking the activity. Thus, virtual mobility creates accessibility opportunities, both substituting for physical mobility and enabling access to services and social networks where previously there was an accessibility deficit.

Examples of virtual mobility include: working from outside of the office (teleworking, or ‘e-lancing’ (E-lancentric, nd)); conducting business online; creating new and maintaining old social networks online, in virtual communities and networked communities, via email and personal web pages; online banking; accessing health care and advice; both formal and informal education; and shopping for goods online (teleshopping).

**Inclusion and virtual mobility**

There is the possibility that virtual mobility could influence some of the potentially exclusionary factors in each of the dimensions of exclusion identified, above.

**Economic dimension**

The lack of access to information about job opportunities is a significant barrier to employment and can be influenced by lack of mobility (detailed above). The access to information online could enable the search for employment. Jobs can be posted online and people who are unemployed can post their curriculum vitae. In addition, the informal networks through which
much employment is gained could be recreated online, as could support networks for the unemployed, to boost morale, offer careers and training guidance and provide the contact with employed people that people in neighbourhoods with a high incidence of unemployment may lack. Physical access to interviews and the jobs themselves could be made easier, through online traveller information and car sharing schemes.

Alternative forms of credit could also be accessed online, for example, community credit unions (Little, Holmes and Grieco, 2000) and local exchange and trading schemes (LETS) (Carter and Grieco, nd), where individuals can use their skills as credit, to ‘buy’ the skills, goods or co-operation of other members of the community – for example, trading a skill (baby sitting) for a good (freshly baked bread), or co-operating in building a community service (for example, LETSystems, nd). The Internet could also provide a boost to the informal economy, allowing individuals to access markets, more easily trading goods and services, through local or national auction portals, for example, Ebay¹ and CQout.com².

**Social dimension**
The Internet’s prime value in affecting factors in the social dimension of exclusion is likely to be in increasing access to information and in extending the ability to contact officials and support groups. Information about housing, health, or groups for people affected by crime, family breakdown, or homelessness, could help to support people affected by the negative social effects of exclusion. Importantly, the Internet could provide access to officials, enabling people to discuss problems and solutions without physically attending a meeting – often prevented by mobility, income and time constraints. Through the Internet, people who are homeless can have a stable ‘address’ through which communication can be directed. Carter and Grieco (nd) postulate the possibility of community policing online, allowing community members to inform about crime with reduced fear of reprisal.

Lack of access to services, including healthcare, childcare, education, leisure and shopping, is a characteristic of many poor neighbourhoods, in both urban and rural areas. The Internet could assist access to these services, not only informing people about available services, but also placing people in contact with others to allow the development of reciprocal services (e.g., childcare, transport) and providing these services online (e.g., healthcare).

**Social networks dimension**
Virtual mobility could provide access to social networks, without the need for physical mobility, helping to reduce loneliness and isolation.

Through the use of bulletin board systems and chat rooms, it is possible to move between social spaces without physical mobility (Jones, 1995), gaining information support, esteem support and social companionship (Pleave, Burrows, Loader, Muncer and Nettleton, 2000). This form of social support could be useful not only for people who find it physically difficult to access social networks, because of personal characteristics, economic or spatial difficulties, but also for people who find communication difficult, because, for example, of low self esteem or confidence. The stigma of accessing social support (Mickelson, 1997) can be overcome

¹ http://www.ebay.com
² http://www.cqout.com
online, as people access information to enable self-help, or anonymously ask for support and assistance.

Through the Internet, families and friends can keep in touch (Age Concern, 2001; Cyberatlas, 2001). New contacts can be made and sustained in virtual communities – non-geographical communities of people who have met on the Internet (Rheingold, 2000; Wellman, 1999). Geographical communities can be revived in networked communities, through:

… the development of a local web sites providing tailored local information on jobs, training opportunities, local bus and rail information, labour market trends, childcare provision and so on, and involving the development of Community Centre Web pages for information exchange, dissemination of good practice, local advertising.
Robson, 2001

There are numerous examples in the literature of the success of both virtual and networked communities in reducing exclusion through the provision of access to social support networks. Rheingold (2000) gives examples of the social support given by members of ‘the WELL’, a virtual community in America, most graphically the support given to the parents of a child with Leukaemia and the support network which arose within the virtual community following the suicide of a fellow WELL member. Wellman (1999) discusses the reciprocal relationships between virtual community members, defending the use of the term ‘community’ to describe a non-geographical entity thus:

… the principal defining criterion for community is what people do for each other and not where they live.
Wellman, 1999:xiv

The revival of community as a result of the introduction of online centres, providing access to the Internet and, through this, to community care, activities, support, advice, information and, most importantly, a community forum, is documented by authors including Harris and Dudley, 2000, Mele, 1999 and Shearman, 1999, illustrating the power of IT in reducing isolation, broadening the horizons and empowering communities and thus the individuals within.

Organised politics dimension
In giving access to information and to officials, communities can become empowered to shape direction of local development. Through virtual mobility, people can be given a voice and can express their views, gain information and participate in debate without the need for physical attendance at official council or party/pressure group meetings. Shearman (1999:18) suggests that this could ‘change the power relationship between citizen and state’, changing the opportunities to express opinions, giving access to both like-minded and opposite-minded people and allowing people to express their views in ways in which they could be more confident.

The increased opportunity for participation in democracy and the exercise of authority as a result of the removal of the physical mobility barrier was postulated by Day and Harris (1997) and Jones (1995) and has since been observed. Mele (1999) details the fight by the citizens of Jervay to gain control of the redevelopment of their housing estate, gaining access to decision makers, to information and to support from people fighting similar battles in other
neighbourhoods, to sympathisers offering skilled support and to other members of the affected community, without recourse to physical mobility.

Personal politics dimension
Through access to information, individuals could become empowered to shape their own future, including their own health and social care and support (Burrows, Nettleton, Pleace, Loader and Muncer, 2000). Through access to self help and support groups, people could become aware of choices without having to access libraries or meet with officials.

Personal characteristics dimension
Through virtual mobility, some physical and mental health impairments which act as constraints upon physical mobility and thus access to social networks, goods and services could be overcome. The discrimination that is inherent in social attitudes, which is inherent in social attitudes, affecting equality, could be masked by recourse to virtual mobility (Baym, 1995). Online learning can allow people to improve their educational achievement and skills, without having to travel, a potential barrier to learning because of lack of confidence, transport difficulties, personal circumstances (Robson, 2001; Shearman, 1999).

Living space dimension
Ultimately, the power of virtual mobility is in giving access without recourse to physical mobility. Thus, despite the spatial limitations inherent in geographical living environment, virtual mobility could give access to the community, social networks and the information and contacts necessary to overcome or change the constraints inherent in the personal living space.

Temporal dimension
Whilst virtual mobility cannot create time, it could enable people to use time more effectively, eliminating the need to travel to work, to access social networks and to access goods and services, for example, shopping, or care support.

Accessing virtual mobility
Access to virtual mobility has the potential to be as problematic as access to physical mobility.

Online centres, supported by the UK government (DoEE, 2001) provide computer and Internet facilities, often free of charge, at a central location within a community (for evaluations of existing online centres, see Day and Harris, 1997; Robson, 2001; Shearman, 1999; Stepulevage and Thomas, 2001; Wilcox, nd). Physical mobility is necessary to access these facilities, which may, in combination with other factors, reduce accessibility of the centres:

... for many people, the cost of a bus fare or the lack of confidence in using schools, libraries or other formal environments prevents take up of free ICT training.

Harris in Wilcox, nd

An alternative mode of access is through wiring up individual homes, for example, Redbricks3, or self-financed connection. There is a clear financial barrier to in-home connection, not only

3 http://www.redbricks.org.uk
in terms of initial purchase of hardware and software, but in paying for and sustaining telephone line connection. For some households, gaining credit approval for line rental, which often demands that the user has a bank account and available credit, is impossible. In home access could also create problems because of the lack of on-hand technical support and training, available in online centres. The influence of other dimensions of exclusion, including temporal and financial constraints, plus personal factors, such as lack of confidence, mentioned above, or of childcare, may represent barriers to gaining the skills needed to participate in virtual mobility. In addition, there may be low awareness of the benefits of new technologies – it is unlikely that people will attend online centres or invest in new technologies without education in the benefits of these technologies.

The accessibility of the technology used to facilitate virtual mobility is an issue for concern. Many people who are excluded from physical mobility could be excluded from virtual mobility, exacerbating disadvantage, if the technology is not designed for all.

Finally, there are concerns about the community and social effects of virtual mobility (Adams, 2000), concerning the decline of offline community, as membership of online communities grows. Whilst some commentators emphasise that community is not a ‘zero sum game’ (Wellman, 1999:348), where membership of one community necessitates withdrawal from another, the extent to which social networks can be sustained online and to which virtual mobility will exacerbate isolation and neighbourhood decline, rather than alleviating it, as people withdraw from local communities, is an important area of debate.

Conclusions and forthcoming research

The above discussion of the potentially negative effects of virtual mobility highlights the danger in assuming that virtual mobility could be a panacea to people experienced mobility related exclusion. The section discussing the possible influence of virtual mobility upon the dimensions of exclusion is speculative, highlighting possible benefits of the use of new technologies to reduce exclusion related to accessibility difficulties. It is not suggested that all exclusion is related to accessibility difficulties; nor that the promotion of a different kind of accessibility could alleviate exclusion for all people in all dimensions. The paper has, rather, sought to highlight a dimension of exclusion that has been neglected in the literature and to suggest the use of new technologies to enable a new mobility and a new accessibility as an alternative to an increase in physical mobility, with its inherent negative environmental and social implications.

Future research, to be undertaken at the University of Southampton by the Transportation Research Group, with the Centre for Human Services Technology, aims to examine the possibility of reducing mobility related exclusion by promoting non-mobility related accessibility via the Internet. The research will clarify the understanding of mobility related exclusion, before examining the potential influence of virtual mobility on the dimensions of exclusion, identified above.

It is intended that a small one day workshop will be held, with invited representatives from the care, local government, academic and online communities sectors will be held to discuss the concepts of virtual mobility and social exclusion. The active participation of people in the
social situations that we wish to study is essential if a true understanding of the dimensions of social exclusion and their relation to mobility is to be gained (following participatory research methodology discussed by authors including Cornwall, 2000; Masters, 2000; Mumford, 2000; and Turkle, 1986). Initially, it is intended that six focus groups with people from a range of different personal and community backgrounds will be conducted, to gain an overview of their experiences of exclusion and inclusion and of their mobility needs. It is hoped that individual discussion will be possible, through informal meetings in community groups, such as parent/toddler groups and pensioner coffee mornings. There is not time in the initial phase of research to allow individual profiling. It is hoped that this will be possible if continuation funding for the research (initially a one year feasibility study) can be gained.

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