



Further copies of this report are available priced £5.00. Cheques should be made payable to The Stationery Office and addressed to:

The Stationery Office  
71 Lothian Road  
Edinburgh  
EH3 9AZ

Order line and General Enquiries  
0870 606 5566

**The views expressed in this report are those of the researchers and do not necessarily represent those of the Department or Scottish Ministers.**

© Crown Copyright 2001

Limited extracts from the text may be produced provided the source is acknowledged. For more extensive reproduction, please write to the Chief Research Officer at the Central Research Unit, Saughton House, Broomhouse Drive, Edinburgh EH11 3XA.

# CONTENTS

	<b>Page</b>
<b>1. DEFINITIONS OF SOCIAL EXCLUSION</b>	<b>1</b>
<b>2. DIMENSIONS OF SOCIAL EXCLUSION</b>	<b>5</b>
<b>3. TRANSPORT RELATED DIMENSIONS OF SOCIAL EXCLUSION</b>	<b>8</b>
<b>4. INDICATORS OF THE TRANSPORT DIMENSION OF SOCIAL EXCLUSION</b>	<b>11</b>
<b>5. EVIDENCE FOR THE CONTRIBUTION OF TRANSPORT TO SOCIAL EXCLUSION</b>	<b>14</b>
<b>5.1 Areas of social activity</b>	<b>14</b>
5.1.1 labour markets and employment	14
5.1.2 welfare markets and poverty traps	16
5.1.3 exclusion from financial circuits and public utilities	16
5.1.4 education	17
5.1.5 health	17
5.1.6 housing markets	17
5.1.7 neighbourhoods	17
5.1.8 social networks	17
<b>5.2 Transport related exclusion mechanisms</b>	<b>17</b>
5.2.1 physical	17
5.2.2 economic	18
5.2.3 temporal	18
5.2.4 spatial	19
5.2.5 psychological	19
<b>5.3 Rural Transport</b>	<b>20</b>
<b>6. SOLUTIONS</b>	<b>21</b>
<b>6.1 Needs based transport</b>	<b>21</b>
<b>6.2 Taxis</b>	<b>22</b>
<b>6.3 Service routes</b>	<b>22</b>
<b>6.4 Co-ordinated services</b>	<b>22</b>
<b>6.5 Subsidies and concessions</b>	<b>23</b>
<b>6.6 Non-transport solutions</b>	<b>24</b>
<b>6.7 Community Initiatives</b>	<b>25</b>
<b>7. CONCLUDING REMARKS AND RECOMMENDATIONS</b>	<b>26</b>
<b>REFERENCES</b>	<b>30</b>

## 1. DEFINITIONS OF SOCIAL EXCLUSION

The term social exclusion originated in French social policy in the late 1980s and has since acquired considerable salience in research and policy debates throughout Europe. The emergence of the concept, and its growing usage, has been attributed to the growing inadequacy of traditional forms of explanation such as poverty, deprivation and inequality that, it has been argued, fail to incorporate or encompass a full understanding of the massive changes to the world we live in (Littlewood, 1999). There is agreement that social exclusion represents a conceptual shift from the traditional forms of explanation and should not be considered equivalent to the older terms and definitions previously applied to individuals, groups and processes considered to exist and operate outside a certain social norm – such as poverty, deprivation and the underclass (Balla & Lapeyre, 1997; Lee & Murie, 1999). To avoid confusion it is necessary to clarify the meaning of these terms.

Poverty is generally taken to mean a low level of material welfare (particularly lack of income) and exists as a narrower concept than that of social exclusion. Church et al. (1999) Atkinson (1998) and de Haan (1999) all caution that social exclusion should not be confused with either poverty or unemployment for while they are related, being poor or unemployed does not necessarily mean that one is socially excluded or vice versa. Church et al. (1999) argue that the term ‘poverty’ implies an absolute or relative lack of access to material welfare while social exclusion refers more broadly to the loss of “ability [by people or households] to both literally and metaphorically connect with many of the jobs, services and facilities that they need to participate fully in society” (p.3). In this view, social exclusion is considered a cumulative process in which progressive detachment from jobs, services and to some extent their social networks makes it increasingly harder for people to reconnect and problems spill over from one sphere into another (Church et al., 1999; McCormick & Leicester, 1998). De Haan (1999) indicates that many different processes cause and contribute to exclusion and that it can occur at all levels of society.

Spicker (1998) also warns against equating poverty with exclusion and sees the latter “as a problem not just of lack of resources but of social relationships” and further argues that excluded people are not just unable to participate fully in society but also that their social ties are of an intrinsically fragile nature often – but not always - characterised by stigmatisation (based on physical or economic differences) and social isolation.

It is interesting to note at this point, that the *Poverty and Social Exclusion (National Strategy) Bill* of 1999 (House of Commons, 1999) does not make a distinction between these two concepts and always cites both together.

Deprivation “is best viewed as a lack of access to resources and denial of opportunities in areas which most affect people’s life chances (particularly, education, employment, housing) and ultimately, an inability to participate in those lifestyles, customs and activities which define membership of society” (Folwell, 1999; 5). Townsend (1993) used the idea of ‘relative deprivation’ to expand upon traditional definitions of poverty in industrialised countries to a state of observable and demonstrable disadvantage compared to the community, society or nation an individual or group belongs to. He broadens the idea of poverty from an economic concept by distinguishing material deprivation (from food, clothing, housing etc.) and social deprivation (family, recreational and educational). Although such a definition of poverty

through the two types of deprivation is a closer approximation of what is described by other authors to be social exclusion, it still leaves the question of whether an individual or group would be considered poor if they were deprived of only some of the factors mentioned. The danger is that the traditional understanding of poverty as a predominantly economic phenomenon would prevail. Using social deprivation as an equivalent for social exclusion on the other hand would mean disregarding the potential economic elements of exclusion implied by Church et al. (1999) and Spicker (1998).

The notion of an *underclass* is used in reference to certain groups, who are increasingly occupying the lowest paid, least secure and most unpleasant occupations. It is often discredited as being too restrictive in terms of associated culture and value. Kleinman (1998) argues that social exclusion is in fact of greater value as an explanatory and analytical concept and that the term “underclass” should no longer be used in debate or analysis. Lee & Murie (1999) suggest that the concept is a rather conservative one and that it tends to apportion blame to those it describes in terms of their different parenting, labour market and criminal behaviours without looking at the structure and processes of society as a whole.

A distinction is sometimes made between marginalisation and exclusion (Spicker,1998) with those, who are marginalised seen as having very limited access to the networks and facilities society offers for the majority of people, while those, who are excluded, have no access to them at all.

Generally, however, social exclusion is seen as a process which fully or partially excludes individuals or groups from social, economic, political and cultural networks and facilities and has been linked to the idea of citizenship (Lee & Murie,1999). The term citizenship has been argued to be inherently exclusive, though, as it is related to immigration policies (Somerville,1998) and while the idea of British or European citizens can be used to describe a grouping within which socially inclusionary projects should operate, foreign or non-EU nationals would automatically be excluded.

Burchardt et al. (1999) circumvented this problem by defining social exclusion as follows:

*An individual is socially excluded if (a) he or she is geographically resident in a society and (b) he or she does not participate in the normal activity of citizens in that society (p.230)*

Here the potential for, or right to, participation in a society is defined through geographical residence and the concept citizenship is used merely to describe the level of involvement an individual or a group could potentially attain.

It is sometimes argued that certain groups or individuals might consciously decide not to participate in certain, most or all activities of the society they live in but in the above definition this element of choice was deliberately disregarded (as was people’s self-assessment of their situation – people might be excluded from certain activities but not actually care that this is so). It was felt that including these elements would create complications when dealing with social exclusion at an aggregate level as too much detailed information on individuals would be required. Furthermore, as Barry (1998) has stressed, the idea of voluntary self-exclusion always needs to be considered with great caution. Choices are dependent on alternatives and the fact that a certain option is considered preferable to the alternatives known and open to a

group or individual in a particular situation could say more about the alternatives than it does about the choice made.

Nevertheless, the above definition does present the problem of determining “normal activity”. Normal might be equated with average but then one needs to look more closely at the parameters considered to be involved in social exclusion, what constitutes the average and how far a diversion from it would be considered exclusion. Burchardt et al. (year) explore this question and it is further discussed in section two.

Atkinson (1998) suggested three key elements, which recur in discussions focussing on social exclusion and which can help do define social exclusion more clearly. These are *relativity*, *agency* and *dynamics* - or *an element of process* as Somerville (1998) has termed it. Whether or not a person or a group of people is excluded depends on events and activities elsewhere in society and is thus *relative* to their nature and occurrence. Exclusion further implies an act and thus agents or *agencies*, which could be excluded groups or individuals as much as societal institutions or groups. The third key aspect, that of *dynamics* or *process*, relates to the idea that social exclusion does not simply arise out of a person or group’s current status but is connected to their background and past and depends on how a situation and circumstances develop or are expected to develop. An unemployed person for example is not necessarily automatically socially excluded (McCormick & Leicester, 1998) - most people are unemployed at some point in their lives - but long term unemployment and decreasing prospects of finding a job together with other factors could lead to social exclusion over time.

The absence of a commonly accepted definition of social exclusion might be considered problematic. But rather than suggesting that the concept is imprecise and thus not a useful analytical tool or basis for policy making, a thorough review of the literature suggests in fact the opposite. The processes and phenomena dealt with under the heading of social exclusion are so varied and complex that other terms, such as poverty, marginalisation or deprivation are in fact insufficient to cover the whole spectrum and that a fairly open definition is needed if the concept is not to be narrowed down so much as to become restrictive. Littlewood (1999) writes that “one might well be tempted to jettison such a confusing term in the interests of clarity, but that would be like shutting one’s eyes in the futile hope that what can’t be seen isn’t there” (p. 11). Alternatively, he suggests that it is better to stop seeking the ‘right’ or ‘best’ meaning as... “on questions as socially and politically sensitive as poverty and exclusion, sociologists must first of all recognise the impossibility of finding exhaustive definitions. These concepts are relative, and vary according to time and circumstance. It is unreasonable to expect to find a fair and objective definition, which is distinct from social debate, without falling into the trap of putting unclearly defined populations into clumsily defined categories” (Littlewood, 1999; 4).

A working definition is needed at this point, however, to clarify the approach taken by this project. The definition put forward by Burchardt et al. (1999) seems useful for this purpose as firstly, it avoids terms such as poverty or unemployment which have been shown to be problematic and secondly, includes Atkinson’s idea of *relativity* (exclusion being relative to the normal activities of a society’s citizens). The idea of *agency* is implied because the definition does not state the causes of non-participation (the agents or agencies could thus be either the excluded or the groups or institutions, which are causing the exclusion). However, the definition lacks the idea of process and also fails to mention that it is not just individuals but also groups or even communities, who can be excluded. As these two are considered

important for the purpose of this project, the working definition employed in this investigation is as follows:

*Social exclusion is a process, which causes individuals or groups, who are geographically resident in a society, not to participate in the normal activities of citizens in that society.*

As has been stated already the idea of *normal activities* requires closer examination and it will be necessary to look in more detail at the factors which are considered to be part of social exclusion.

## 2. DIMENSIONS OF SOCIAL EXCLUSION

As there is no common definition of social exclusion itself, there is also no common definition of the dimensions and factors involved in it. But in both cases, the approaches taken by various authors, though different in detail, broadly overlap. In recent years, social policy research has become preoccupied with developing or defining indicators that can determine levels of social exclusion in order that they can be monitored over time and in order to assess how far the introduction of new policies impact upon these levels.

In UK government policy documents social exclusion has been defined as “a shorthand label for what can happen when individuals or areas suffer from a combination of linked problems such as unemployment, poor skills, low incomes, poor housing, high crime environments, bad health and family breakdown” (Vidler and Curtis, 1999). In a research paper published for use by MSPs the authors prioritise the establishment of measures which could mark a scale of social exclusion and provide indicators against which the promotion of social inclusion might be measured. Vidler and Curtis (1999) suggest 16 indicators developed from existing data sources and organised within six themes: low incomes; access to employment; housing quality and availability; education; health and fertility; and citizenship and community participation.

Other sources take a more concrete approach to defining dimensions of social exclusion. The Scottish Office definition of Social Exclusion included in the Social Inclusion Draft Strategy (1998) identifies it as a process that deprives people of the opportunity to participate in society in the form of employment, training or education; family and social networks, collective leisure activities; community activities and to live in confidence and without fear for personal safety. Examples of factors which can lead to such deprivation of opportunity include lack of local job opportunities, lack of available childcare, general deprivation of the local area, ill-health and fear of crime – all of which can be indirectly linked with transport issues.

The Inclusive Communities Report presented to the Scottish Social Inclusion Network (Strategy Action Team, 1999) stresses the complexity of social exclusion and its operation on a variety of levels by “limiting access to the basic necessities of life (food, clothing, shelter); compounding ill health and morbidity; denying essential services; preventing participation in leisure, recreational and cultural activities, disaffecting interest in school and continuing education; alienating participation in decision making processes and the political arena” (p.9).

In their literature review on social exclusion conducted on behalf of the Scottish Office Central Research Unit, Lee & Murie (1999) identified eight areas under which social exclusion could be discussed and examined. These are

- labour markets and employment
- welfare markets and poverty traps
- exclusion from financial circuits and public utilities
- education
- health
- housing markets
- neighbourhoods
- social networks

They went on to discuss current understanding of how these areas relate to social exclusion and which processes within them create elements of exclusion (for example the reluctance of employers to take on job applicants who had been unemployed for a long time). Although transport might be expected to play some part in most of these areas (getting people to and from work and establishing or maintaining connections between people and facilities and services, particularly those they do not find within easy distance of their homes) the authors only found restricted evidence for this, and only in connection with access to healthcare facilities. The only other mention of transport is in connection with neighbourhoods and the problems which arise in rural areas through remoteness and long distances from urban centres.

Balla and Lapeyre (1997) propose a conceptual approach, which encompasses the economic, social and political dimensions of social exclusion. They argue that the cause for exclusion from facilities such as employment, health care or education can often be found in more than one of these dimensions and that such exclusion can have a bearing on more than one such dimension for any group or individual. Exclusion from work can have both economic and social impacts for example, in terms of income, status and social networks. Balla and Lapeyre (1997) argue that it can be caused by what they term political factors (a lack of equal opportunity) as well as social ones, such as not belonging to a certain group or network within which inside information about employment opportunities is available. While it is certainly useful to bear these multidimensional aspects of cause and effect in mind it may be difficult to apply them too rigorously as the overlap is often large and the move from one to the other might be so subtle as to be virtually indiscernible.

Burchardt et al. (1999) have themselves developed a dimensional framework, and their approach is intended to define more closely the areas of “normal” activity of citizens within a society, which they use in their definition of social exclusion (quoted above in section one). These dimensions are considered to be relevant to people in Britain in the 1990’s - such frameworks obviously vary depending on the society and time period examined – and are as follows:

- Consumption activity – the ability to consume at least to a certain level the goods and services considered normal for the society
- Savings activity – the ability to accumulate savings and pension entitlements and/or to own property, both as way of fulfilling individual and social aspirations (such as home ownership) and to provide security for periods outside the labour market
- Production activity – the ability to engage in an economically and/or socially valued activity (incl. paid work, education, training, retirement over state pension age or looking after a family), which helps the individual to gain or maintain self-respect for being engaged in an activity valued by others and makes a direct or indirect economic contribution to society
- Political activity – the ability to engage in some collective effort to improve or protect the immediate or wider social and physical environment (including voting, membership of political parties and or campaigning groups)
- Social activity – the ability to engage in significant social interaction with family or friends and identifying with a cultural group or community (social isolation and denial of cultural rights are considered significant factors in social exclusion)

The factors, which affect an individual's – and thus a group's – ability to participate in these dimensions is determined by a wide range of variables, which the authors classify as follows:

- The individual's own characteristics (e.g. health or educational qualifications)
- Events in the individuals life (e.g. partnership breakdown or job loss)
- Characteristics of the area he or she lives in (e.g. physical environment, transport links)
- Social, civil and political institutions of society (e.g. racial discrimination, welfare state)

Clearly both participation in the five dimensions outlined as well as the factors influencing it are inter-linked. For example, participation in productive activity will influence participation in consumption activity or similarly, an individual's health might be determined by the characteristics of the area he or she lives in. The authors argue, though, that if it is the effects of social exclusion, which are under investigation, rather than its causes, each dimension could be treated as a separate measure of social exclusion.

As the aims of this study to find out more about the reciprocal relationship between transport and social exclusion in terms of cause as well as effect. Assessing the impact of transport will thus require the identification of the types of activity from which a person is excluded, which of the determining factors is or are responsible for this exclusion and to what extent transport is implicated in these. Clearly such an approach would be circuitous and important detail may be lost. It would be helpful to examine previous work, which has concentrated on the connection between transport and social exclusion and the approaches that have been taken to establish which links have already been examined and verified.

### 3. TRANSPORT RELATED DIMENSIONS OF SOCIAL EXCLUSION

Strikingly, although the existence of a link between transport and social exclusion has been widely recognised (Barry, 1998; Oppenheim, 1998; Callan et al., 1996; Pacione, 1995) an international conference on *Mobility and Social Implications* held in France concluded that there was a lack of clear and reliable data (Guidez, 1994). There has been little progress made since that statement made in 1994.

The most recent study on the subject carried out by Church et al (1999) on behalf of London Transport concluded that the subtle relationship between transport and social exclusion could not be fully appreciated in light of the relative paucity of empirical data currently available on the issue and that more direct research into the transport element of social exclusion was required.

Since transport is generally considered to be a means to an end, the authors argued that it was in fact accessibility of services, facilities and social opportunities as well as mobility of the socially excluded, which were under investigation. Transport related variables could, however serve as indicators of these. Their study proposes three types of processes, which would influence accessibility amongst residents and households in neighbourhoods with high levels of social exclusion (although presumably these processes can be observed in any type of neighbourhood). These processes were:

- the nature of time space organisation in households. That is the interaction between household members and other individuals (e.g. friends and relatives) and the manner in which this affects their time-space budgets and their choices relating to travel;
- the nature of the transport system defined in terms of cost, network accessibility, issues relating to safety and public space;
- and, the nature of time-space organisation of facilities and opportunities that individuals are seeking to access.

The nature of these will differ according to gender, age, cultural background, level of ability and economic circumstances.

Church et al (ibid.) further suggested the following seven categories of sources of exclusion connected to transport:

**physical exclusion** – barriers that inhibit accessibility of services; such barriers affect many groups of people such as children, the elderly, people with shopping or prams, the mobility or visually impaired, people with hearing impairments or those who do not speak English

**geographical exclusion** – peripheral, poor transport provision and resulting inaccessibility can create exclusion not just in rural areas but also in areas on the urban fringe or in smaller towns and cities

**exclusion from facilities** – distance of facilities (shopping, health, leisure, education) from people’s homes, making access, especially without a car difficult; this problem is exacerbated by the growing popularity of out of centre facilities and “flight” of facilities (post-offices, banks, shops and supermarkets) from problem areas

**economic exclusion** – high monetary and temporal costs of travel can prevent or limit access to jobs and thus income

**time-based exclusion** – difficulties pertaining to the organisation of childcare and other caring commitments while allowing adequate time to travel given transport network constraints

**fear-based exclusion** – worry, fear and even terror influence how public spaces and public transport are used, especially by women, children and the elderly

**space exclusion** – security and space management strategies can discourage socially excluded individuals from using public transport spaces

There is clearly an overlap between some of these categories, which could be considered large enough to call into question the reasons for keeping them separate (e.g. fear based and space based exclusion) particularly as they may be difficult to distinguish in the analysis of empirical data. Furthermore the categories do not distinguish between characteristics of the transport system, which prevent access to the transport facilities themselves (i.e. mobility) and those, which prevent access to travel destinations (accessibility).

Church et al. (ibid.) pointed out that although the above factors had been identified as having an impact on social exclusion, it may be that their effect is peripheral compared to non-transport related factors. These would need to be addressed first and foremost if exclusion was to be reduced in the situation under investigation. For example, the nature and success of job searches is influenced by the availability of transport but evidence suggests that improving public transport will only play a minor role in enhancing employment opportunities compared to an adjustment in labour demand and supply; an increase in unemployment benefits or the provision of childcare facilities.

The report suggested the following five questions, which would need to be answered in future research, if current uncertainties were to be removed and relevant empirical data to be collected:

Is it necessary to be mobile to be socially integrated?

How do the travel patterns of socially excluded people differ from those of others?

To what extent does the existing public transport network meet the needs of socially excluded people in London? (this question could of course be applied to any area or country)

Other than network coverage, what are the factors which constrain mobility of socially excluded people?

How important is lack of mobility as a contributor to social exclusion relative to other factors?

These questions would provide a useful approach to any investigation focusing on transport and social exclusion but to be able to address them it is necessary to decide which parameters or indicators it is appropriate to measure.

#### 4. INDICATORS OF THE TRANSPORT DIMENSION IN SOCIAL EXCLUSION

Clearly a set of indicators for social exclusion in general is required in order to identify groups and areas at which social inclusion policies should be targeted and to enable monitoring of any measures implemented. Also, as has been stated before, the concept of social exclusion does not merely embrace the existence, characteristics and changes in exclusion but also the processes which contribute to it (De Haan, 1999).

It must further be remembered that although characteristics and processes of social exclusion are closely related they might require different indicators and that a consultative approach should be adopted. Development of indicators both for social exclusion itself and for analysing the link between social exclusion and transport will need to identify and include views of residents, community groups and organisations who work with the socially excluded.

In reality, little work has been carried out in this area. Church et al. (1999) therefore concluded that “*there are relatively few [social exclusion studies] which directly attempt to assess levels of transport or accessibility as part of their indicators*” (p.2) and that the justification of a choice of indicators for any project or policy will thus be problematic. This absence of reliable empirical data is reflected in the relative variability of sets of indicators of social exclusion, which a variety of agencies and organisations have compiled - although most of these do contain some element of transport.

The United Nations Human Development Report 1998 (UNED UK,1998:) sets the goal of “access for all to safe and low-cost transport services – essential for access to education, health services, employment, markets and community life”.

At national government level, the Scottish Office Social Inclusion Strategy (Scottish Office, 1998) contains a section on transport (paragraphs 7.11-7.14) in which it is stated that “*the sustainability of a community will also depend on access to good transport links, particularly by bus, and particularly with sites where jobs are available*”. However, the Evaluation Framework Action Team of the Scottish Social Inclusion Network (established under the Social Inclusion Strategy) presented a report in 1999 in which it identified 48 indicators of social exclusion including ‘% of working age people who are economically active’, ‘fear of selected crimes’, ‘rates of breastfeeding’, ‘rate of births to girls under age 16’ and ‘adults who smoke’. But only one of the 48 related to transport and this was ‘% of households without a car’.

This corresponds with the DETR’s *Index of Local Deprivation* (Social Exclusion Unit, 1998:178) which currently uses indicators based on unemployment, income support recipients, health, education and housing. Twelve of these are disaggregated to district level and another six to both ward and enumeration district level. The latter group includes ‘households with no car’. Although this category was originally used as an indirect indicator of household income it has subsequently become valid as a measure of household unity or interaction in terms of transport (Church et al. 1999) – albeit a somewhat crude one. The same indicator for poverty is used in the Scottish Area Deprivation Index (Duguid, 1995) and recent revisions of this index maintain it as a census based proxy (Gibb et al., 1998).

Obviously assessing areas purely according to the number of households without a car is meaningless if some measure is not also obtained about the alternatives available. Some socially disadvantaged areas may still be served relatively well by public transport or might be in a comparatively central location while others are less well connected.

A study in France used a set of indicators designed to give a better picture of the overall mobility levels in 400 disadvantaged urban areas (Guidez, 1994). In addition to car ownership, these included numbers of pedestrians, levels of mechanised mobility, levels of car mobility (not just ownership, thus accounting for the number of members of one household who can potentially use a car) and levels of public transport mobility. The indicators were analysed relating both to the conurbation as a whole, and the study areas in particular, to obtain a picture of relative differences in mobility. Unfortunately the source does not explain, how exactly the different levels of mobility were measured but suitable measurements can easily be formulated.

Church and his co-authors (1999) suggest that the development of indicators linked to GIS databases would present a further promising route to enabling researchers and policy makers to disaggregate data at unit postcode level (such a scheme is currently being piloted in the London Borough of Hackney). This would also allow better identification of the particular characteristics of deprivation in an area under review and thus better targeting of policies.

The scheme in Hackney uses the Index of Deprivation complimented by measures of social exclusion which were seen to be of particular importance locally: poverty, crime and public access to services. Church et al. (1999) suggest that a GIS based system should provide a locally based view of access mapping (by address) the location of facilities such as post offices, shops and transport infrastructure (bus stop, rail station) which would allow calculations of the average time required for travel to these locations from within the area investigated. A cumulative indicator could then identify the total time taken to access a specified range of services and facilities. This would allow the identification of localities suffering from access problems; the extent to which areas characterised as excluded through other indicators suffer from poor access to facilities and services; and could possibly also provide a means to assess the impact of transport measures implemented to address these access problems.

Several authors have argued that area based initiatives to solve exclusion problems should receive increased attention as in many cases they would be more effective than mainstream national programmes targeting particular groups of people (Glennister et al., 1999; Smith 1999). Brennan et al (1998) stated that the need for area targeted regeneration programmes has never been greater; postulating that funding should be targeted both at the areas with the greatest need as well as areas in which problems are emerging. They do not advocate the replacement of investigations into the needs of particular groups (such as 16-18 year olds not in education, the homeless or teenage parents) currently carried out by the Social Exclusion Unit but argue that the resulting policies should be better integrated with area based initiatives.

In line with this thinking the UK Government's Social Exclusion Unit has set up a number of specific policy groups. One of these, Policy Group 18, received the specific remit of identifying how to overcome the barriers to obtaining quality small area information and of

drawing up an action plan with targets for achieving this. The report on this work was expected in December 1999.

However, Church et al. (1998) point out that area based indicators say nothing about the relative importance of transport and mobility for individuals or households suffering from or threatened by social exclusion. Individual and household data would thus also be required.

At a regional level Merseytravel have produced a Community Links Strategy (1998). This uses indicators, which overall are measures of sustainable transport (e.g. air quality at bus & rail stations) but a group of indicators defined as measuring social sustainability of an area are as follows:

- Proportion of households within 400 m of a bus stop
- Proportion of households within 800 m of a railway station
- Proportion of major facilities (incl. hospitals, retail parks, multiplex cinemas, city parks, recreation areas, major centres of employment) within 400 metres of a bus stop or 800 metres of a rail station
- Proportion of rail stations which are fully accessible to wheelchair users
- Proportion of buses which are fully accessible to less able members of society
- Proportion of concessionary passes issued to and used annually by those eligible

These indicators could certainly help to provide some understanding of the level of transport related exclusion in an area but they would need to be compared to a baseline such as the corresponding data at city, regional or national level. It is also questionable, whether these indicators would provide the most appropriate description of transport related exclusion as for example the decision to record retail parks and multiplex cinemas rather than local surgeries, shops, cinemas and libraries seems surprising.

## **5. EVIDENCE FOR THE CONTRIBUTION OF TRANSPORT TO SOCIAL EXCLUSION**

As has already been commented, actual empirical evidence for the contribution of transport to social exclusion is scant. Most papers discuss circumstantial evidence but very little empirical data has been found. The existing evidence appears ambiguous on the relative importance of transport in social exclusion.

For example, the original policy of Merseytravel's approaches to social exclusion, which had made little mention of transport, was amended after community consultation exercises identified it as one of the key issues perceived as important (see Church et al., 1999). Yet, a report on "Experiences of Social Exclusion in Scotland" (O'Connor & Lewis, 1999), which set out to identify the processes that create exclusion and to understand the main barriers to 'mainstream' society faced by the 'excluded' makes little mention of transport. The study was based on a series of focus groups and interviews and divides the socially excluded into two main groups: those who are discriminated against based on difference (ethnic, sexual, etc.) and those, who are socially isolated following a crisis in their lives. Barriers to, and gaps in, services were identified as a problem for certain groups but these were not to transport issues, nor was social isolation. The only group recorded as feeling excluded in relation to transport provision were disabled people in rural areas.

In recent months there appears to be a growing focus on the relationship of transport to social exclusion. The government recently funded an initiative to introduce interest free loans for the purchase of cars to assist the long term unemployed back to work. In their research programme for 2000-2001, the DETR have commissioned a further two studies on the relationship between social exclusion and transport. Save the Children, Scotland (2000) recently released the findings of a study on children on their views on transport which included a section on transport and social exclusion. This section explored the extent to which transport plays a role in hindering or enhancing the ability of young people to participate in society and take up opportunities. The study found that 'secondary school pupils and young trainees expressed awareness of employment, educational and personal horizons being reduced by costly and inaccessible transport services' (Tyrell, 2000).

In the review of literature providing evidence of the contribution of transport to social exclusion, the studies identified were generally either, concerned with the area of activity from which people were excluded or, discussed the transport related mechanisms which created a problem. The evidence falling into these categories will therefore be examined in turn; the former according to the categories suggested by Lee & Murie (1999) and the latter following those provided by Church & Frost (1999).

### **5.1 Areas of social activity**

#### **5.1.1 Labour markets and employment**

McGregor and McConnachie (1995) cite a shortage of local jobs coupled with poor transport access to employment opportunities in the wider urban labour market as two of nine factors

contributing to the concentration of unemployment in disadvantaged housing areas. However they also caution against assuming that this is the case in all disadvantaged urban neighbourhoods. They do not point to any empirical evidence for this cause and effect relationship but stress that one important strategic measure needed to address the problem would be an emphasis on the creation of new employment opportunities within low income neighbourhoods. The authors' claims are supported, however, by a study on barriers to obtaining employment carried out in the London Borough of Hackney and Islington (Green, 1998). There lack of local jobs and no transport were listed among the main factors preventing employment.

A research project for the Scottish Office on *Regeneration areas and barriers to employment* (McGregor et al., 1998) found little evidence of people leaving a job for travel reasons or of reluctance to seek work outside a certain area. However, the study did find a perceived problem connecting travel, child care, low wages and part-time work. The recruitment standards of some potential employers were also found to discriminate against applicants on travel to work grounds.

A report to the House of Commons on barriers to employment for lone parents (Select Committee on Education and Employment, 1998) also cited evidence for travel constituting a barrier to getting to work: only 35% of lone parents have access to a car (compared to 90% of all couples with children) and use of public transport was considered to be time consuming and expensive. This problem was also identified by McGregor and McConnachie (1995), who stated that many unemployed people who had completed training and found a job discovered that they could not afford to take it (although again, no evidence is cited). The House of Commons report recommended that lone parents entering low-paid work should be offered initial travel subsidies.

A study on rural accessibility (Moseley, 1979) found that mobility deprivation affected mostly women due to their gender specific roles. In households with a car, the male partner would normally have use of it, while child care and shopping were tasks carried out by the female partner but often made very difficult by a lack of adequate bus services. Another problem was the inability to take up part-time employment even if a suitable job could be found.

Other authors have explored the relatively low mobility levels women – in both rural and urban areas - due to their gender specific roles as housewives and mothers. Pickup (1989) identified three groups of women. The first had chosen these roles and the associated limitations in mobility, while the second group had not consciously chosen their role but regarded it as a fact of life. Members of the third group, however, considered employment a necessary part of their lifestyle – mostly for economic reasons – and the additional burden of childcare and domestic duties made economic activity more difficult for this group. This subdivision does not make it clear, whether the third group covers those who would need paid employment for economic reasons but are unable to find or accept it due to other factors (such as transport problems). However, like others Pickup points out that previous studies had not taken sufficient account of the finer details of time and space in women's behaviour patterns and that therefore their specific needs and problems had only been defined very broadly.

A study in England also found that people in rural areas frequently could not take up jobs, because they did not have access to a car and the public transport service was inadequate or non-existent (Monk et al, 1999). Another study established that the possession of a driving

licence increased the chance of both men and women aged between 18 and 24 of finding work (Stafford et al, 1999) – although the reason for this correlation was not necessarily thought to be the ability to travel to work. The authors suggested that employers might simply require employees, who hold a licence or that the licence is seen as a proxy for competence or motivational factors.

The literature examining the connection between unemployment and transport in Britain thus appears to suggest that the link between the two is strongest in rural areas, for women and in single parent families (which again are mostly women and their children).

However, it has also been suggested, that the mismatch between existing public transport networks, which mostly serve radial routes into urban centres, and the creation of new jobs away from these centres contributes to exclusion from job opportunities of those, who have to rely on the public transport system (Zhang & Dickson, N.D.). Although this observation was made in the USA, where geographical dimensions are different, it will also hold true for the larger urban areas in Scotland.

#### 5.1.2 Welfare markets and poverty traps

If transport presents a barrier to reaching certain locations, then it can be expected that travel to job centres, Social Security offices and even post offices, where welfare or pension cheques can be cashed, can be fraught with difficulties. Public transport might not operate at the right time, involve long waiting times or – in extreme cases – it may not be available at all. It might prevent travel by people with prams and pushchairs or those in wheelchairs and the elderly and infirm might also find it difficult to use the system. However, no study investigating this particular aspect of transport and social exclusion was found during this review.

#### 5.1.3 Exclusion from financial circuits and public utilities

The availability and accessibility of financial services depends on both socio-economic and geographic factors. Leyshon and Thrift (1995) discussed the different mechanisms of financial exclusion and although they did not specifically refer to transport, they showed that people living in disadvantaged areas do not only find it more difficult to obtain a loan, a mortgage or even a bank account, but they also have greater difficulties in physically accessing financial services. After a boom in the financial market in the 1980s, the following financial crisis of the early 1990s saw selective branch closures concentrated in rural and poorer urban areas.

Such trends make it significantly more difficult for people without access to private transport and limited time budgets to physically reach financial outlets and receive personalised advice. For many this may be important as often, the formalities of opening and maintaining a bank or building society account present difficulties. However, it is not known, how significant physical accessibility is relative to the socio-economic characteristics of an individual in determining participation in the financial market. It does not seem likely that exclusion from public utilities would be caused by the characteristics of the transport system alone and such a connection is not referred to anywhere in the literature.

#### 5.1.4 Education

A conference held in Glasgow in 1998 discussed ways of widening participation in Higher Education. Some speakers identified rural isolation as a barrier for some potential students (SOEID, 1998); improving transport provisions was not discussed as a potential factor in improving participation and attendance in higher and further education institutions.

#### 5.1.5 Health

In their literature review on social exclusion Lee and Murie (1999) found that lack of affordable transport had proven a barrier to accessing healthcare facilities in both Canada and the UK.

Young (1999) focusing on women's health related behaviours, in particular, found that the gendered nature of transport mobility in some households could negatively affect a woman's ability to access routine healthcare. And that many women, especially those in low-income groups and without access to a car, struggled in an emergency to obtain treatment for their children, particularly if other children were also at home and if local public transport services were infrequent and did not directly connect with healthcare facilities. This study also concluded that women in general were likely to neglect their own health if constraints in time-space budgets forced them to prioritise.

#### 5.1.6 Housing markets

No evidence was found of transport excluding people from housing markets. It is conceivable that people are prevented from moving into better quality or larger dwellings if that would take them away from their jobs or perhaps dependant relatives, which they could then not access owing to a lack of suitable transport facilities. But this link has not been studied separately nor was it shown in any of the studies discussed earlier which looked at barriers to employment.

#### 5.1.7 Neighbourhoods

The socio-economic profile and associated characteristics of certain neighbourhoods could exclude people on economic or other grounds but these are unlikely to be connected to transport other than in the way described in the previous section.

#### 5.1.8 Social networks

The important role of social networks in social inclusion is stressed repeatedly in the literature (Lee and Murie, 1999) but the link between transport or mobility and the existence and quality of social networks in urban areas appears not to have been studied.

### **5.2 Transport related exclusion mechanisms**

5.2.1. Physical – where physical barriers are encountered by individuals in their use of public transport (i.e. transport facilities are theoretically available but inaccessible due to their nature)

A study in Northern Ireland showed that people over 65 travel half as much as those below that age (Lavery et al., 1992). This difference is caused in particular by a very low level of use of public transport by elderly people. The research showed that many experienced a confidence barrier when faced with using buses in particular and concluded that technological improvement of the vehicles (such as low floor access) would not necessarily address this problem. Confidence building and ensuring punctual services were considered potentially more important.

### 5.2.2 Economic –where monetary constraints affect the use of existing transport facilities

A study investigating the effects of bus deregulation following the 1985 Transport Act (Perrett et al., 1989) found that bus patronage in the English metropolitan areas dropped by four times as much as in the rest of the country (16% compared to 4%) in the space of two years and concluded that some of this decline could be attributed to fare increases (but also to the initial unreliability of the new services; see also Hopkin and Oxley, 1989). However, the study did not examine further how the behaviour of those who no longer used the bus had altered, whether they had simply found better alternatives, had to actually adapt their activity patterns or even suffered real hardship.

However, a different study, which looked specifically at the effect of deregulation on low income families on Merseyside (Donald & Pickup, 1991) concluded that fare increases following deregulation were the single major cause of reduced bus use in the area investigated. The affected households were found to cope with travelling less by bus but had to accept a reduction in their mobility. Travel by bus was often substituted by walking and it was mostly social and recreational trips, which were being cut out. The study concluded that low income families needed public transport fares to be provided at pre-deregulation levels and discounted season tickets and travel-cards were found to be important facilitators of public transport use.

### 5.2.3 Temporal – where individual time constraints and the projected or actual journey time limit, or where provision existing transport facilities is restricted at certain times of day

It has been shown, that reduction in bus services in urban areas can seriously affect individuals. A study looking at two bus services in Oxford and Manchester, which were reduced in frequency on weekdays (from 30 to 60 minutes and 15 to 30 minutes respectively) concluded that this had caused inconvenience to many users and forced them to develop alternative travel behaviours, which in some cases meant buying a car. However, although evidence of hardship was rare, one woman participating in the study had to give up part-time employment as she could no longer get to her job at the times required and one man was sacked due to repeated lateness but this was attributed more to the lack of reliability than the frequency of the service. If individuals have to budget their time around a service known to be unreliable, though, this can also lead to temporal exclusion so should not be disregarded.

Other studies relating to the gender specific restrictions on time budgets experienced by women have already been discussed. Obviously such restrictions would apply equally to men carrying out the same tasks, i.e. child care combined with general household chores. These tasks often require complicated trip chaining (Turner et al., 1998), which may in some cases be impossible due to the lack of suitable means of transport or the discrepancies between personal and transport schedules. Gaerling et al. (1998) pointed out that the associated time pressures and stress caused by multiple and potentially conflicting demands (particularly

salient for those without recourse to the use of a car) can bring with them additional adverse health effects, thus exacerbating the effect of exclusion, which limitations in mobility are already imposing.

#### 5.2.4 Spatial – access to existing transport facilities is difficult due to their geographical location

Lack of transport accessibility caused by distance is an obvious problem in rural areas but applies equally in the urban context. It is important to bear in mind, also, that distance is a relative concept and that a train station or bus stop, which is perfectly accessible on foot for a healthy adult may be impossible to reach for someone with small children, heavy loads to carry or with a mobility handicap.

Lavery et al. (1992) pointed out that dwellings for elderly and disabled people should be located in proximity to public transport services and that stops and stations should not be separated from housing by steep steps, sloping paths without handrails or high kerbs. Such requirements are often overlooked, however, and as a result some journeys become impossible for those with a mobility handicap.

#### 5.2.5 Psychological

Fear is known to be a major barrier to mobility and this seems to be particularly true for the freedom of movement of women in towns and cities. A study of the British Crime Survey (Atkins, 1989) and other data sources carried out a decade ago established that a majority of women avoided going out on their own at night (63%) and 30% never travelled at all after dark. This behaviour was partly related to general fear of attack but also to the fact that certain modes of transport (especially trains and the underground) were felt to be unsafe and that waiting at a bus stop was also considered to be a risk to personal security.

A study of women's fear of crime in different parts of Edinburgh (Pain, 1997) showed that fear of sexual attack lead 71% and 85% of women to respectively avoid or choose certain types of transport. Most women who had access to a car or money for taxis preferred these modes although some felt unsafe in a car as they would be alone if they were stopped or broke down. The preferential use of the car also applied to transport for children, whom many women said they would always drive to their activities or not let them go at all. Clearly such strategies for coping with perceived risks are not available for women, who do not have access to a car, and it is thus likely that both they and their children are more limited in their activities, especially as Pain showed that the fear of crime is equal in all socio-economic classes.

Looking at the health related behaviours of women, Young (1999) found that the fear of unsafe spaces could temporarily prevent access to prescribed medication for themselves or members of their family as they would not go to the late night chemist, even if they had access to a car. Another two more recent studies explore the impact of fear and concerns for personal security in relation to the mode of transport used (Crime Concern, 1999a; Crime Concern 1999b).

### **5.3 Rural transport**

This report is concerned with the contribution of public transport to social exclusion in urban areas. However, a review of the literature reveals that the issues of transport and accessibility have been discussed and studied since a much earlier date as the problems of mobility in remoter areas are perhaps more obvious and affect everyone living there to some degree. For the sake of completeness some of the key sources found are mentioned here very briefly.

Moseley (1979) looked at the issue of accessibility in rural areas over two decades ago and research consistently shows transport provision as a major issue in rural areas (Herbert, 1996). In Scotland in particular the remoteness of many dwellings and communities presents obvious problems, especially for individuals with limited or no access to a private car or communities not served well by public transport (Farrington et al, 1998; Pacione, 1995).

Cloke et al. (1997) showed similar problems in England, which does not have areas as remote and sparsely populated as the northern Highlands but where car ownership is nevertheless seen as an almost essential part of rural living, no matter how weak a household is economically.

## **6. SOLUTIONS**

There is general agreement, despite the lack of empirical evidence, that transport disadvantage or deprivation can induce or exacerbate the conditions that lead to the 'exclusion' of individuals or communities. The literature supports the assertion that there is a clear role for transport to facilitate access to the areas of social activity where participation is considered to be indicative of social inclusion. Much of the literature consulted focuses on 'exclusion' from a particular area of activity (for example, employment, education, health services or social networks); it is important to consider what role transport plays in this exclusion. The identification of transport related exclusion mechanisms, in the previous section, accentuates this point as it highlights the possible barriers and obstacles that can exist for individuals in their access to or usage of public transport. An increasing knowledge and awareness of the potential barriers has led to the development of policies and approaches designed to limit the impact of such barriers upon public transport usage. These initiatives are the subject of the following section where various studies will be considered in relation to the transport related mechanisms identified previously. The literature tends to be drawn from the 'special needs' area of transport research and has to date not been brought into direct contact with debates surrounding social exclusion and transport.

Public transport usage is (potentially) restricted for individuals and groups of people who are frail, disabled or who experience temporary mobility impairment (e.g. children in pushchairs). An increasing awareness of the impact of physical barriers upon transport usage, the promotion of equal opportunities and recent technical innovations have signalled a change in attitude and have brought about the means (and the impetus) to limit or reduce such restrictions.

### **6.1 Needs based transport**

Traditionally 'needs based' transport has taken the form of specialist services such as 'dial a bus' or door-to-door services. The concept of 'dial a bus' originated with the voluntary sector and was a minibus, demand response service aimed at providing for widely dispersed travel patterns and traditionally low density suburban areas. As a general service the system failed to generate a significant level of demand and proved too costly (DETR, 1999). However the system has survived as a means of providing accessible transport for mobility impaired people where there were already expensive transport needs. The wide variation in the administration and operating characteristics of different schemes, primarily as a result of schemes being developed on a reactive basis without any coherent strategy makes it difficult to compare and assess different scheme attributes (DETR, 1999). Some studies praise the efficiency of the 'dial a bus' service and indicate its improved quality and reliability with computer scheduling techniques (SERADAP, N.D.; Speller & Mitchell, 1975). However others cast a doubt on its efficiency as the most convenient mode of transport for the elderly and mobility impaired suggesting it is too expensive to run and that it does not offer the flexibility and immediacy of services provided by taxis (Beuret, 1994).

There has been little or no work which has explored the contribution of needs based transport initiatives to weakening exclusion mechanisms and assessing their impact on time-space organisation of individuals, households and facilities.

## **6.2 Taxis**

Taxis and volunteer car drivers have traditionally provided what has been described as a 'door-to-door' service. Initially voluntary car schemes were almost exclusively concerned with transporting people for social services, health and education purposes but in recent years have expanded into more shopping and leisure based trips (DETR, 1999). These schemes have been effective although funding and volunteer resources do dictate their availability which is restricted according to specific eligibility criteria (DETR, 1999). Some argue that taxis represent the most flexible door-to-door service available operating 24 hours a day, seven days a week (Beuret, 1994). However although they overcome the shortcomings of a designated door-to-door service they are more expensive and their design is not fully accessible to a range of different disabilities. For example, the accessibility of taxis has improved in recent years for wheel chair users however the adaptation of taxis for wheel chair use does not necessarily make it more accessible to all people who are mobility impaired (Harbert, 1994). This raises questions on how appropriate policies are on the universal introduction of taxis compliant with wheel chair use. Some suggest private hire companies should be encouraged to adapt their vehicles for use by disabled people with the inclusions of features such as swivel chairs and grab handles in order to maximise access and use of taxis (Harbert, 1994).

## **6.3 Service Routes**

The 'service route concept' originated in Sweden and has been implemented in different countries specific to the demands on their particular local transport systems (McLary et al, 1993; Evans and Smyth, 1997). Traditionally bus routes are usually constructed in the form of straight radical lines that quickly connect different residential areas with downtown centres whereas the service route concept places priority on bringing the bus service as close as possible to the residents (McLary et al., 1993). Routes are chosen on the basis of areas with high proportion of people with mobility handicap (for example, in areas with a large elderly population) and the key destinations vary (residential homes, health centres, libraries, and post offices (Evans and Smyth, 1997). These schemes are generally considered to be a cost-effective and efficient means of promoting independent travel amongst the mobility impaired.

## **6.4 Co-ordinated Services**

Other studies emphasise the benefits of the better management and co-ordination of specialised services with the regular transport service as an efficient and effective means of widening access for previously excluded passengers (SERADAP, nd.; Taylor, 1993). Taylor lists the benefits of better co-ordination as: a more fully accessible bus services; financial savings; improved quality; better bus service patronage; more professional tendering; centralised vehicle management; and normalisation. Advances in technical innovation have made such normalisation possible. For example, the use and integration of low floor buses (DETR, 1999a; Evans and Smyth, 1997; DETR, 1999b) within the existing public transport networks alongside the adaptation of the network infrastructure (Vaughan, nd; Evans and Smyth, 1997) have ensured the feasibility of such an integrated transport policy. The combination of a hydraulic kneeling mechanism with improved internal features such as wider door ways and aisles have made it easier for passengers with physical disabilities or those laden with luggage to board and alight. The effectiveness of the introduction of low floor

buses has been increased in some areas with the adaptation of network infrastructure such as creating bus boarders with raised platforms to give level access to buses and the upgrading of bus shelters (Vaughan, nd.). Other enhancements have included clearer marking of stopping positions, new high visibility bus stop signs (including time tables), the altering of kerb heights to reduce the slope of a deployed ramp and access to bus stops was assisted by restricting parking along the route and actively enforcing the regulations (York and Balcombe, 1997). McKee (1997) argues similar considerations and enhancements are necessary to improve the accessibility of the rail system to wheel chair users and the mobility impaired in general.

Other authors argue that transport systems can benefit from the integration of specialist schemes designed for a specific purpose. For example, Newsom et al.(1993) document a series of initiatives established to facilitate the employment of persons with disabilities. The schemes included a co-ordinated commuter van (minibus) service, a vans vehicle purchase program, transportation loan guarantee program and an extended driver education program.

Often limitations or pressures on time dictate which mode of transport is used to travel however the reliability of existing services and the duration of travel to a key destination may also dictate what a person chooses to do or not to do. One study evaluates a scheme introduced to improve bus services in terms of journey time and reliability in Salford, Manchester. The improvements introduced included sections of with-flow bus priority; changes to the layout of key junctions to give priority to buses; the creation of bus boarders with raised platforms to give level access to buses; the upgrading of bus shelters; and the introduction of low floor buses. Although such a scheme has other benefits in terms of increasing the physical accessibility of services, the fulfilment of this objective also reduces the overall journey time as passengers are able to board and alight easier and consequently quicker. The combined measures achieved improvements in overall journey times and improved the regularity and reliability of services. (Vaughan, nd).

## **6.5 Subsidies and Concessions**

Scottish Association for Public Transport considers that one of the main priorities for increasing the accessibility of public transport is to reduce the cost (SAPT, 1998). Public transport subsidies arguably redistribute income to the less well-off and improve the mobility of the transport disadvantaged. These can either take the form of a general subsidy or a targeted subsidy. Their effectiveness has been the consideration of many studies. In a literature review of such studies, Starrs and Perrins (1989) consider whether subsidies redistribute income in a progressive manner and whether the mobility of transport disadvantaged groups is improved by the existence of public transport subsidies. While recognising the difficulties and problems of measurement and definition in general, the studies reviewed appeared to agree that there is only limited evidence to suggest that the relatively immobile and the poor benefit from general transport subsidies. These groups were seen to benefit more from target subsidies such as concessions and no fare travel on public services.

Targeted subsidies exist in the form of concessionary fares or budget passes. Concessions are most often granted to the elderly, registered disabled and school children although policies vary between local transport providers. Budget passes are provided to the frequent traveller in the form of multi-journey passes or multi-modal passes. Specific small scale studies have analysed the relative effectiveness of different concessionary schemes (O'Reilly 1989; O'Reilly

1990; Bonsall and Dunkerley, 1997). There appears to be a general consensus that the research findings indicate that people with concessions travel either more often or further than similar people without concessions because the concession has made it cheaper for them to do so (O'Reilly 1989). Although concessions are considered to be an effective means of generating travel amongst groups of travel disadvantaged, the schemes often exclude groups of people who are often understood to be socially excluded. For example, the unemployed are seldom included in such schemes and the eligibility for disability concessions is often decided at the discretion of the local transport provider.

Where access and usage of transport is dictated by financial or economic constraints there is a considerable barrier to accessing facilities and opportunities. The recognition of this has informed the development of initiatives and schemes designed to increase the affordability and hence the accessibility of employment for former welfare recipients. Various US studies document community (FTA, 1999) or employment initiatives (Zhang & Dickson, nd; Newsom et al, 1993) which involve the pooling of resources. For example, the USA Access Coalition has facilitated increasing assistance from specific employers in St Louis, Missouri. These exist in the form of transit passes to new employees and the provision of a van service providing transport to and from work (FTA, 1999). Other studies evaluate the success of community initiatives in facilitating van pools (Zhang & Dickson, nd.), car sharing and ride sharing (anon) where public transport is unaffordable or unavailable. Other programmes are designed to enable participants to purchase or drive their own car (Newsom et al, 1993). These schemes are actively promoted in US government policy where there is an eagerness to increase the accessibility of employment for the unemployed or under employed (Transport Equity Act 1998) and have proven to be successful in increasing the numbers of people able to take up employment.

Taxis are often considered to be a costly mode of travel. However the concept of a shared taxi scheme and the provision of taxi-cards are two methods of reducing the costs of travel by taxi. One study studied the viability of a shared taxi scheme and concluded that it would be possible to design a shared taxi scheme for Ipswich (Balcombe and Finch, 1990). Taxi-card schemes exist as a taxi subsidy system, funded by either the public transport authority or a local district council, and is usually limited to a certain number of trips a year. The taxi-cards are normally available to the disabled and have proven to be a cost-effective means for travel (Trench & Lister, 1994). Others argue that it is necessary to look at ways to increase the use of taxis in general as they are an economical mode of transport particularly where more than one person is travelling (Beuret, 1994). He argues there is a need to overcome the psychological barriers and perceptions (particularly of cost) that limit people's use of taxis (Beuret, 1994; Balcombe & Finch, 1990).

## **6.6 Non-transport Solutions**

Some work has been undertaken on non-transport solutions to the pressures on time budgets. New communication technologies are often heralded as a medium designed to reduce the pressures on time use. Carter & Grieco (1998) suggest that "new information technologies can 'return' time lost under conventional arrangements to single mothers" (p6) where women would be able access electronic brokerage systems on client and service availability. The example used is to change a health service appointment (Carter & Grieco, 1998). Other examples provided are the use of the internet to access resources providing information on

travel timetables and routes allowing for better projection of time expenditure. One community pilot project, 'Interconnecting Digital Communities (Intercom)' in Devon, has information sharing and dissemination as an explicit objective. The purpose of Intercom is to widen access to information on travel, distance learning, council services, tourism, childcare, jobs and small business support through community located PC's connected to the County Council's web-site (Anon, web). Although new technology is potentially useful, it in itself does not resolve issues about skills and labour market demand and supply; new technology is potentially useful it merely offers another avenue through which opportunities arise to organisations and individuals.

## **6.7 Community Initiatives**

Geographical location often inhibits the accessibility to transport facilities; this is most often true in a rural context. However, the isolation of a community may result from poor or insufficient links to resources and facilities. Better planning and the improvement of transport links can increase employment and social opportunities of (geographically) disadvantaged communities. For example, the pilot bus link scheme from Castlemilk, a peripheral estate characterised by high unemployment, to East Kilbride, an area with higher employment, has generated increased and better employment opportunities for Castlemilk residents (Blake-Stevenson, 1994; TAS Partnership, 1995). Similar community initiatives have increased social and economic opportunities for geographically disadvantaged communities in Liverpool and Merseyside (Mills, 1998; Mersey Travel, 1998). Clearly transport has a role in linking disadvantaged communities with areas of high employment and flourishing economic activity. Recognition of this role is evident in the American 'Job access and reverse commute initiative' where inner city areas with poor employment opportunities are linked to suburbs with better employment through improved and varied transport systems (FTA, 1999). Similarly the 'Tracer (Transportation Corridor for Economic Renewal)' programme in Missouri focuses on investment opportunities in the Metrolink light rail corridor where the line runs through 18 miles of the urban core passing flourishing employment centres, older abandoned industrial zones and communities with extremely high unemployment (FTA, 1999).

## 7. CONCLUDING REMARKS AND RECOMMENDATIONS

The key findings of the literature review are briefly summarised in this section and recommendations for the second stage of the study are made. The focus groups and in-depth interviews undertaken as part of this study will also have a strong bearing on the second stage of this work. The conclusions from all the aspects of this first stage report of the research will be drawn together into a final report of stage one.

### 7.1 Summary

This review has raised several issues, which it will be important to consider in the following investigation of the effects of transport on social exclusion in urban Scotland. Importantly the review has established that little actual evidence exists concerning the role of transport in social exclusion. Despite this, a variety of organisations, agencies and bodies have assumed this link to exist. This assumption is often made by those organisations and individuals with an everyday experience of working with disadvantaged communities.

The concept of social exclusion has no single accepted definition. A variety of definitions were addressed in the review and a suitable working definition of exclusion was identified for the purposes of this study. We concluded that the working definition put forward by Burchardt et al (1999) seems useful for the purposes of the project:

*Social exclusion is a process, which causes individuals or groups, who are geographically resident in a society, not to participate in the normal activities of citizens in that society.*

This will require a closer examination of the idea of normal activities and the factors that are considered by different groups and individuals to be a part of the exclusion process.

The review also identified the many dimensions associated with social exclusion (Balla and Lapeyre, 1997; Burchardt, 1999; Lee and Murie, 1999). It is clear from this work that the factors, which affect an individual's - and thus a group's - ability to participate in different activities is determined by a range of variables. These can be classified as:

- an individual's own characteristics (e.g. health and educational qualifications)
- events in the individual's life (e.g. job loss)
- characteristics of the area he or she lives in (e.g. physical condition of the area, transport links)
- social, civil and political institutions (e.g. the nature of the welfare state)
- labour and welfare markets
- exclusion from financial circuits and public utilities
- housing markets
- neighbourhoods
- social networks

Assessing the impact of transport on exclusion will require identification of the types of activity from which a person is excluded, which of the determining factors is or are responsible for this exclusion and to what extent transport is implicated in these.

The review identified work that had focused on the link between transport and exclusion. A recent study of transport and social exclusion in London (Church et al, 1999) concluded that the relative paucity of data on the issue meant that the subtle relationship between transport and social exclusion could not be fully appreciated. This work identified seven sources of exclusion and proposed three types of processes that influence this relationship between exclusion and transport. They were: (1) the nature of time-space organisation in households; (2) the nature of the transport system and (3) the nature of time-space organisation of the facilities and opportunities individuals are seeking to access.

The seven categories of exclusion suggested by Church et al, connected to transport are:

- *physical exclusion*
- *geographical exclusion*
- *exclusion from facilities*
- *economic exclusion*
- *time-based exclusion*
- *fear-based exclusion*
- *space exclusion*

The overlap between these categories is problematic and it may be difficult to identify measures of these categories of exclusion that could be readily used in a household survey. It may also be that their effect is peripheral when compared with non-transport factors associated with exclusion. There is a clear need for any survey of the role of transport in social exclusion to address these issues.

Church et al (1999) suggested five questions that need to be addressed by further research and the collation of appropriate data:

- *Is it necessary to be mobile to be socially integrated?*
- *How do the travel patterns of socially excluded people differ from those of others?*
- *To what extent does the existing public transport network meet the needs of socially excluded people?*
- *What are the factors that constrain the mobility of socially excluded people?*
- *How important is the lack of mobility as a contributor to social exclusion relative to other factors?*

There is a clear need for a selection of indicators to be identified that reflect the processes linked to social exclusion and in particular, the role of transport in that exclusionary process. This review has shown that little work has been carried out in this area.

## 7.2 Recommendations

A number of recommendations emerge from this review of the literature with regard to future research directions. Social exclusion and the role of transport is recognised as an extremely complex problem with many (potential) constituent elements. Some of these elements may be transparent and easily identifiable other aspects or components of exclusion may be harder to define, identify and difficult to operationalise in any empirical work. For the household survey we recommend the following basic approach:

1. Research should address these different elements and assess their relative contribution to the process of exclusion itself. This is a two stage process:

Firstly, there is a need to identify the areas of activity where transport could have an effect. These activities are:

- *labour markets and employment*
- *welfare markets and poverty traps*
- *exclusion from financial circuits and public utilities*
- *education*
- *health*
- *housing markets*
- *neighbourhoods*
- *social networks*

Secondly, if transport has an effect in any of these activity areas, there is a need to identify which transport related mechanisms of exclusion create this effect. Possible factors that should be examined are:

- *Physical*: where physical barriers are encountered by individuals in their use of public transport
- *Economic*: where monetary constraints affect the use of existing transport facilities
- *Temporal*: individual time constraints and projected journey time limit usage of existing transport facilities
- *Spatial*: where access to existing transport facilities is difficult due to their geographical location
- *Psychological*: fear or stress relating to any stages of a journey which inhibits the propensity to travel

2. Research will also be required to examine individual and group characteristics (e.g. gender, age, health, position within the household) that could potentially affect the ability of an individual to participate in the ‘normal activities’ of society.

Examination of an individual’s characteristics would assist in understanding the three types of processes (in particular the first) linked to accessibility that were identified in the review. These processes are:

- The nature of time-space organisation in households taking into account the interaction between household members and other individuals; and the manner in which this affects their time-space budgets and choices relating to travel
- The nature of the transport system (both perceived and actual) in terms of cost, network accessibility, safety and public space
- The nature of time- space organisation of the facilities and opportunities individuals are seeking to access

It is important that the research places transport in this context in order to assess its relative contribution to social exclusion and the potential for transport based solutions to ameliorate or reduce exclusionary processes.

3. Our recommendation is, as far as is possible, for the research to also address the research questions identified by Church et al (1999):

- *Is it necessary to be mobile to be socially integrated?*
- *How do the travel patterns of socially excluded people differ from those of others?*
- *To what extent does the existing public transport network meet the needs of socially excluded people?*
- *What are the factors that constrain the mobility of socially excluded people?*
- *How important is the lack of mobility as a contributor to social exclusion relative to other factors?*

Due to resource constraints and the nature of the case study areas selected for the household survey, within the parameters of this study, it will be difficult to assess how the travel patterns of socially excluded people differ from those of others.

We recommend that for each area selected for the household study that car users, those with differential levels of access to a car, and those using public transport will be selected to identify and contrast the different patterns of travel behaviour and life experience. This approach will also aid the identification of possible agents and the processes of exclusion that result from transport disadvantage in a particular location.

The research, for each selected location, will also seek to identify levels of current transport provision for all modes of transport.

## REFERENCES

Anon (No date) *Interconnecting Digital Communities (InterCom)*. Devon, UK. [online]. Available: <http://www.eltis.org/data/116e.htm> [13-3-2000]

Atkins, S. (1989) *Women, Travel and Personal Security* in Grieco, M., Pickup, L. and Whipp, R (1989) *Gender, Transport and Employment: the impact of travel constraints*, Aldershot: Gower.

Atkinson, A.B. and Hills, J. (eds) (1998) *Exclusion, Employment and Opportunity*. London: London School of Economics and Political Science, Centre for Analysis of Social Exclusion.

Balcombe, R.J. and Finch, D J (1990) *Shared Taxi Schemes in Britain. Lessons Learnt in Ipswich*, Research Report 292. Crowthorne: Transport and Road Research Laboratory.

Barry, B. (1998) *Social exclusion, social isolation and the distribution of income* London: Centre for Analysis of Social Exclusion, London School of Economics.

Beuret, K. (1994) *Taxis: The Neglected Mode in Public Transport Planning*, in Provision for Accessible Transport Services. Proceedings of Seminar F held at the PTRC European Transport Forum. London: PTRC Education and Research services Ltd

Bonsall, P. and Dunkerley, C. (1997) *Use of concessionary travel permits in London: results of a diary survey* in Public Transport Planning and Operations. Proceedings of Seminar G held at the PTRC European Transport Forum . London: PTRC Education and Research services Ltd.

Blake Stevenson Ltd. (1994) *Evaluation of Castlemilk to East Kilbride Pilot Bus Link Project*, Castlemilk Economic Development Agency (CEDA) and Glasgow Development Agency

Bhalla, A. and Lapeyre, F. (1997) *Social exclusion: Towards an analytical and operational framework*, Development and Change, Vol.28, No.3, pp.413-433

Brennan, A., Rhodes, J., and Tyler, P. (1998) *New findings on the nature of economic and social exclusion in England and the implications for new policy initiatives* Cambridge: Department of Land Economy, University of Cambridge

Burchardt T.; Le Grand, J.; and Piachaud, D. (1999) *Social Exclusion in Britain 1991—1995 in Social Policy and Administration*, Vol. 33, No. 3, pp.227-244

Carter, C.and Grieco, M. (1998) *New Deals, no wheels: social exclusion, teleology and electronic ontology*, [online] . Available: [http://www.geocities.com/margaret\\_grieco/working/wheels.html](http://www.geocities.com/margaret_grieco/working/wheels.html) [13-3-00]

Chamberlayne, P. (1996) *Social Exclusion in Comparative Perspective: SOSTRIS Working Paper 1*, Dagenham : Centre for Biography in Social Policy, University of East London.

Church, A. and Frost, M. (1999) *Transport and Social Exclusion in London: Exploring current and potential indicators*. London: London Transport Planning

Church, A., Frost, M. and Sullivan, K. (Unpublished) *Transport and Social Exclusion in London - Report Summary* London: London Transport Planning

Cloke, P., Milbourne, P. & Thomas, C. (1997) *Living life in different ways? Deprivation, marginalization and changing lifestyles in rural England* Transactions of the Institute of British Geographers, Vol 22 (2), pp. 210-230

Crime Concern (1999a) *Personal Security Issues in Pedestrian Journeys*, London: Department of Environment, Transport and the Regions

Crime Concern (1999b) *Young People and Crime on Public Transport*, London: Department of Environment, Transport and the Regions

DETR (1999a) *Low Floor Bus Trials in a Rural Area*, [online] Available: <http://www.mobility-unit.detr.gov.uk/lowfloor/execsum.htm> [2-11-99]

DETR (1999b) *Review of Voluntary Transport*, [online] Available: <http://www.mobility-unit.detr.gov.uk/rvt/report/1.htm> [2-11-99]

Donald, R.G. and Pickup, L. (1991) *The effects of local bus deregulation in Great Britain on low income families: the case of Merseyside* in Transportation Planning and Technology, Vol.15 (2/4), pp.331-47

Duguid, G. (1995) *Deprived Areas in Scotland: results of an analysis of the 1991 Census* Edinburgh: Central Research Unit

Evans, D. S. and Smyth, A. W. (1997) *Fully scheduled or dial-a ride? The future direction of accessibility policy for local public transport* in Public Transport Planning and Operations. Proceedings of Seminar G held at the PTRC European Transport Forum, London: PTRC: Education and Research services Ltd

Farrington, J., Gray, D., Martin, S., and Roberts, D. (1998) *Car dependence in rural Scotland: Challenges and policies* The Scottish Office: Central Research Unit

Federal Transit Administration (FTA) (1999) *Welfare-to Work (Job Access and Reverse Community Initiative)*, [online] Available: <http://www.fta.dot.gov/wtw> [11-1-00]

Folwell, K. (1999) *Getting the Measure of Social Exclusion*. London: London Research Centre, Demographic and Statistical Studies

Gaerling, T., Gillholm, R. and Montgomery, W. (1998) *Computer simulations of consequences of time pressure for activity/travel choices Paper 458* World Conference of Transport Research, Antwerp, Belgium, July 1998

Gibb, K., Kearns, A., Keoghan, M., MacKay, D. and Turok, I (1998) *Revising the Scottish Area Deprivation Index. (Volume 1)* The Scottish Office: Central Research Unit

Glennerster, H. (1999) *Poverty, social exclusion and neighbourhood: studying the area bases of social exclusion* London: Centre for Analysis of Social Exclusion, London School of Economics

Green, A. E. (1998) *Social Exclusion, the journey to work and ethnic minorities (Overheads of a presentation for a workshop on Social Exclusion & Transport at the University of Manchester on 26th November, 1998)* [online] Available: <http://www.art.man.ac.uk/transres/socexclu1.htm> [11-1-00]

Guidez, J.M. (1994) *Urban Transport and Exclusion* in Public Transport Planning and Operation: Proceedings of Seminar E held at the 22nd PTRC European Transport Forum, London: PTRC Education and Research Services

De Haan, A. (1999) *Social exclusion: towards an holistic understanding of deprivation* London: Department for International Development

Harbert, W (1994) *Taxis. Are Infirm and frail People being left behind. The Case for Swivel Seats* in Provision for Accessible Transport Services. Proceedings of Seminar F held at the PTRC European Transport Forum. London: PTRC Education and Research services Ltd.

Herbert, S. (1996) *New ideas in rural development No 2: Action on Scottish Rural Transport - helping local communities tackle their transport problems* The Scottish Office: Central Research Unit

Hopkin, J. & Oxley, P. (1989) *The effects of bus service reduction in urban areas: case studies in Oxford and Manchester Crowthorne*: Transport and Road Research Laboratory

House of Commons (1999) *Poverty and Social Exclusion (National Strategy) Bill* (as presented to the House of Commons on 10<sup>th</sup> February 1999) [online] Available: <http://www.parliament.the-station.../cm199899/cmbills/045/1999045.htm> [4-11-99]

Kleinman, M. (1998) *Include me out: the new politics of place and poverty* London: Centre for Analysis of Social Exclusion, London School of Economics

Lavery, I, Davey, S., and McKenna, O. (1992) *Transport Deprivation and marginalisation of people with a mobility handicap in Northern Ireland* in Transport for People with a Mobility Handicap. Proceedings of Seminar F at PTRC 20th summer annual meeting, London: PTRC Education and Research services Ltd

Lee, P. and Murie, A. (1999) *Literature review of social exclusion* Edinburgh: Central Research Unit

Leyshon, A., and Thrift, N. (1995) *Geographies of financial exclusion: financial abandonment in Britain and the United States* in Transactions of the Institute of British Geographers, Vol. 20, No. 3, pp.312-341

Littlewood, P. and Herkammer, S. (1999) 'Identifying Social Exclusion. Some Problems of Meaning' in Littlewood, P. (ed.) *Social Exclusion in Europe: Problems and Paradigms*. Aldershot: Ashgate Publishing Ltd.

- McCormick, J. and Leicester, G. (1998) *Three nations. Social exclusion in Scotland* [online] Available: <http://www.scottishpolicynet.org...blications/paper3/contents.shtml> [12-1-99]
- McGregor, A., Fitzpatrick, I. And Glass, A (1998) *Regeneration areas and barriers to employment* Edinburgh: Central Research Unit
- McGregor, A, and McConnachie, M. (1995) *Social exclusion, urban regeneration and economic reintegration* in *Urban Studies*, Vol.32, No.10, pp.1587-1600
- McKee, C (1993) *Making Rail Vehicles accessible to disabled passengers* in *Transport for People with a Mobility Handicap*. Proceedings of Seminar J held at the PTRC Transport, Highways and Planning Summer Annual Meeting, London: PTRC Education and Research services Ltd
- MacKenzie I, (1993) *The evolution of "specialised schemes" and their contribution towards the provision of needs based integrated accessible passenger transport services*, in *Transport for People with a Mobility Handicap*. Proceedings of Seminar J held at the PTRC Transport, Highways and Planning Summer Annual Meeting. London: PTRC: Education and Research services Ltd
- MerseyTravel (1998) *Community Links Strategy* Liverpool: MerseyTravel
- Monk, S., Dunn, J., Fitzgerald, M. and Hodge, I. (1999) *Finding work in rural areas: barriers and bridges* York: Joseph Rowntree Foundation
- Moseley, M. J. (1979) *Accessibility: the rural challenge* London: Methuen
- Murray, S. (1998) *Social Exclusion and Integrated Transport* (Paper presented to the Transport Seminar Series held on 2 December 1998 at the University of Manchester) [online] Available: <http://www.art.man.ac.uk/transres/socexclu5.htm> [2-11-99]
- Newsom, T.J., Petty, D.M. and Henderson, C. (1993) *Transportation service demonstrations to facilitate the employment of persons with disabilities*, in *Transportation Research Record* (1378), pp10-15
- O'Connor, W. and Lewis, J. (1999) *Experiences of Social Exclusion in Scotland. A Qualitative Research Study* Edinburgh: Central Research Unit
- O'Reilly, D. M. (1989) *Concessionary Fares and Children's Travel Patterns: An Analysis based on the 1978/1979 National Travel Survey*. London: Department of Transport: (Research Report 203)
- O'Reilly, D.M (1990) *An Analysis of Concessionary Bus Fare Schemes for OAPs using the 1985/86 National Travel Survey*. London: Department of Transport (Research Report 291)
- Pacione, M. (1995) *The geography of deprivation in rural Scotland* in *Transactions of the Institute of British Geographers*, Vol. 20, No 2, pp. 173-192

Pain, R.H. (1997) *Social geography of women's fear of crime* in Transactions of the Institute of British Geographers, Vol 22, No. 2, pp.231-244

Perrett, K., Hopkin, J., Pickett, M. and Walmsley, D. (1989) *The effect of bus deregulation in the metropolitan areas* Crwothorne: Transport and Road Research Laboratory

Pickup, L. (1989) *Women's travel requirements: employment, with domestic constraints* in Grieco, M., Pickup, L. and Whipp, R (1989) *Gender, Transport and Employment: the impact of travel constraints*, Aldershot: Gower

SAMPLUS (1999) *Samplus: Demand Responsive Transport* [online] Available: <http://www.Europrojects.ie/samplusmainweb> [2-11-99]

SAPT (1998) *Access and Social Inclusion: a response to the Scottish Office Consultation paper on social exclusion*, Glasgow: Scottish Association for Public Transport

Scottish Office Education and Industry Department (SOEID) (1998) *Widening Participation in Higher Education: Report of National Conference at Glasgow Caledonian University* The Scottish Office

Scottish Social Inclusion Strategy Action Team (1999) *Inclusive Communities Scottish Executive: Social Inclusion Division*

Scottish Social Inclusion Network (1998) *Social Inclusion Draft Strategy*, [online] Available: <http://www.scotland.gov.uk/inclusion/ssin10anx.htm> [2-11-99]

Select Committee on Education and Employment (1998) *Education and Employment -7th report: Overcoming Barriers to paid employment for lone parents* [online] Available: <http://www.parliament.the-stationery-office.co.uk/pa/cm199798/cmselect/cmduemp/646/64602.htm> [2-11-99]

Smith, G. R. (1999) *Area-based initiatives: the rationale and options for area targeting* London: Centre for Analysis of Social Exclusion, London School of Economics

Social Exclusion Unit (1998) *Bringing Britain together: a national strategy for neighbourhood renewal* [online] Available: <http://www.cabinet-office.gov.uk/seu/1998/bbt/nrhome.htm> [2-11-99]

Somerville, P. (1998) *Explanations of social exclusion: Where does housing fit in?* in Housing Studies, Vol.13, No.6, pp.761-780

Speller, B.E. and Mitchell, C.G.B (1975) *The Harlow Dial-a-Bus Experiment*, London: Department of the Environment (Supplementary Report 127UC)

Spicker, P. (1998) *Housing and social exclusion: a discussion paper* Edinburgh: Shelter Scotland

Stafford, B., Heaver, C., Ashworth, K., Bates, C., Walker, R., McKay, S. & Trickey, H. (1999) *Young men's experience of the labour market* York: Joseph Rowntree Foundation

TAS Partnership (1995) *Public Transport Development in Castlemilk: Summary Report*. Preston: TAS Partnership

Taylor, J. (1993) *Co-ordination of Accessible Transport Services*, in Transport for People with a Mobility Handicap. Proceedings of Seminar J held at the PTRC Transport, Highways and Planning Summer Annual Meeting. London: PTRC: Education and Research services Ltd.

Trench, S and Lister, A (1990) *Changes in taxi Services – Can New Developments help people with a mobility handicap?* in Public Transport Planning and Operations. Proceedings of Seminar D held at the PTRC Transport and Planning Annual Meeting. London: PTRC: Education and Research services Ltd

Turner, J. & Grieco, M. (1998) *Gender, transport and the New Deal: the social policy implications of gendered time, transport and travel (Presented at the Social Policy Association conference, Lincoln, July 1998)* [online] Available: <http://www.art.man.ac.uk/transres/spconf2.htm> [2-11-99]

Tyrell, H. (2000) *Going My Way: What Children and Young People say about transport*. Edinburgh: Save the Children.

United Nations (1998) *Human Development Report: Changing today's consumption patterns – for tomorrow's human development*. United Nations Development Programme

United States Department of Transportation (1999), *Transport Equity Act* [online] Available: <http://www.fhwa.dot.gov/tea21/pubs.htm> [2-11-99]

Greater Manchester PTE (No date) *Bus Service Improvement in Salford City Council* [online] Available: <http://194.7.159.227/GEDdata/1999/10/13/00000001/1310991d.htm> [3-11-99]

Vidler, G. and Curtis, S. (1999) *Measuring Social Exclusion*. Edinburgh: The Scottish Parliament Information Centre, Research Paper 99/11

York, I O and Balcombe, R J (1997) *Accessible bus services: UK demonstrations* in Public Transport Planning and Operations. Proceedings of Seminar G held at the European Transport Forum Annual Meeting. London: PTRC: Education and Research services Ltd

Young, R. (1999) *Prioritising family health needs: a time-space analysis of women's health-related behaviours* in Social Science and Medicine, Vol.48, No.6, pp.797-813 122

Zhang, J. & Dickson, C. (No date) *Evaluation of the Phase Two JOBLINK Demonstration Projects: Connecting Welfare Recipients to Employment 223 (Unpublished)*