

Gender and time poverty: the neglected social policy implications of gendered time, transport and travel.

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Abstract

Women have different transport and travel patterns to men in the developed world. Women are involved in poorly resourced, highly complex, multiple purpose trips (trip chaining), men make single purpose trips on higher cost and superior modes of transport. These differences in transport and travel patterns are generated out of the differential accesses of the genders to economic resources, social resources and time resources. Women are time poor as a consequence of the disproportionate level of household tasks they are required to perform within present social structures.

Within the UK, new social policy programmes such as the American derived 'welfare to work programme targeted at reducing the welfare dependence of single mothers are being put into effect without any consideration of the difficulties faced by single mothers in

attempting to coordinate work, domestic responsibilities, crisis caring, and escorting children to child care centres in the context of inferior access to transport. The simplistic assumption is being made by the UK Government that the provision of child care centres on their own will free single mothers to be reliable members of the workforce. The extent to which circumstances such as a child's illness or the poor reliabilities of the inferior forms of transport experienced on low income estates will generate scheduling difficulties for single mothers and consequently generate unreliable work profiles has not been given proper technical consideration.

New technologies are now available that could be used to assist single mothers in entering the workforce in line with the new welfare to work approach which would generate higher levels of reliability. Home scheduling technologies could be used to access demand responsive public transport. A smart card with an authentication code could be used to call transport from home to the home or from call points at key civic locations such as hospitals, shopping centres, clinics etc. Similarly, a mother at home with a sick child could call through a home scheduling technology for a replacement to attend her place of work from a bank of similarly trained workers. Such services are necessary and sensible extensions of the welfare to work ideology.

Intelligent society can target services to those in most need with lower administrative costs and more effective functioning than was ever previously possible. It is important that new technologies be used positively as a means of enabling and empowering those with low incomes and consequently to produce greater equity within society. Home scheduling technologies can change positively patterns of time use and alter historic patterns of workplace unreliability for those groups which have traditionally been disadvantaged in access to time and transport resources.

This paper will identify gaps in current social policy development around getting single mothers from welfare into work. It will suggest a range of information technology based solutions which could assist single mothers in accomplishing the complex coordinatory task set them by the new policy, solutions which need to be accompanied by improvements in the transport circumstances of this low income group if the new found welfare to work policy is to be successful.

1. Womens movement and welfare to work: the need for appropriate transport policies.

Womens movement is different to that of men. A long tradition in transport studies has demonstrated that women have different transport and travel patterns to men in the developed world. A key difference in the developed world is the propensity of women to combine a set of activities relating to their extensive range of household tasks within the overall structure of one journey period (**trip chaining**) whereas men are more likely to make a single purpose trip.

These differences in transport and travel patterns are generated out of the differential accesses of the genders to economic resources, social resources and time resources. The

evidence is clear from a wealth of sociological studies that in most cultures, women are **time poor** as a consequence of the disproportionate level of household tasks they are required to perform within present social structures (Jones et al.1983; Grieco et al., 1989) as compared with men. The increasing number of single parent households operates to increase the time poverty of women: and female headed households are typically poorer with less financial resources available to them to buy in assistance to reduce the burden of their time poverty.

Female headed households in low income areas in the United Kingdom often have their time poverty compounded by the poor quality of public transport services in low income areas (Grieco, 1995). Not only are such services often unreliable in terms of frequency, vehicles themselves rarely are designed to fit the needs of mothers with accompanying infant children. Routes are often circuitous in order to minimise the cost of providing access to the greatest number of passengers with the consequence that route journey times fit poorly with childrens, and indeed older persons, toilet requirements.

Research in Liverpool indicated that in order to meet their journey requirements, women from low income households often joined forces (Grieco, 1995) and exchanged time favours. In order to enable a neighbour or a friend to undertake her shopping, one woman would take care of the children of two households. When she in turn needed to 'borrow time in order to meet a hospital appointment or undertake her shopping, she would call in the 'time debt. Whilst this may seem an ideal relationship on first sight, in fact it complicates household decisionmaking for poor women and, for example, poor women will very often fail to attend their own medical appointments rather than borrow time from other women.

Research into the transport and travel difficulties of low income women has produced an abundance of evidence of the very real constraints which these women face in the context of their low wage context, their high dependence on low quality public transport and the scarce availability of appropriate local child care provisions. These patterns are now sufficiently documented to inform social policy in respect of programmes such as the new suite of '**welfare to work** programmes for single mothers in the UK. However, these new social policy programmes are being put into effect without any consideration of the difficulties faced by single mothers in attempting to coordinate work, domestic responsibilities, crisis caring (such as childrens sickness events) and escorting children to child care centres in the context of inferior access to transport. Such women typically have insufficient income to secure superior access to transport (for example, taxis) in crisis conditions, when routine transport provisions fail (the bus does not turn up on time) or when **crisis circumstances** (a sick child has to be dropped off at a child minders on the way to work) necessitate shifting to another mode if reliability is to be maintained. Currently, the simplistic assumption is being made by the UK Government that the provision of child care centres on their own will free single mothers to be reliable members of the workforce - the extent to which crisis circumstances such as a childs illness or the poor reliabilities of the inferior forms of transport provision experienced on low income estates will generate **scheduling difficulties** for single mothers and

consequently generate unreliable work profiles for this category has not been given proper technical consideration.

New technologies are now available that could be used to assist single mothers in entering the workforce in line with the new welfare to work approach which would generate higher levels of reliability. **Home scheduling technologies** (in-home networked terminals which connect with public information and reservation systems such as transport and health services) could be introduced for this heavily targeted social policy group which enabled them to have access to demand responsive public transport - public transport which is designed for transporting children from home to child care centre, a journey which is at the heart of the new social policy. A smart card with an authentication code could be used to call transport from home to the home or from call points at key civic locations such as hospitals, shopping centres, clinics etc. Similarly, a mother at home with a sick child could call through a home scheduling technology for a replacement to attend her place of work from a bank of similarly trained workers - much in the way that nursing banks operate at present in the UK. It has been recognised by a minister from the UK Department of Transport that:

'transport policy must be intergrated with social policy
Glenda Jackson MP, Transport conference, April 1998

Therefore, enabling low income mothers to obtain reliable public transport for their journeys to deposit children at child care and to work and providing a proxy or replacement worker facility to cover their absences from work due to crisis circumstances are necessary and sensible extensions of the welfare to work ideology.

'Intelligent society can target services to those in most need with lower administrative costs and more effective functioning than was ever previously possible. The effective use of information technology in social service provision has received some attention in the United States where 'electronic money has been used in the payment of benefits but in the main the purpose of the new technology use has been coercive and designed to constrain behaviour. It is important that new technologies not be used simply as a means of controlling the behaviour of those on welfare but rather be used positively as a means of enabling and empowering those with low incomes and consequently to produce greater **equity** within society. Home scheduling technologies can change positively patterns of time use and alter historic patterns of workforce unreliability for those groups which have traditionally been disadvantaged in access to time and transport resources.

This paper will explore the implications of these by now well documented gender differences in time, transport and travel for social policy. In particular, it will identify gaps in current social policy development around getting single mothers from welfare into work. It will suggest a range of information technology based solutions which could assist single mothers in accomplishing the complex coordinatory task set them by the new policy, solutions which need to be accompanied by improvements in the transport circumstances of this low income group if the new found welfare to work policy is to be successful.

2. A technical revolution: domestic tools for reducing womens time poverty.

Womens greater domestic responsibilities coupled with their weaker access to household resources have significant consequences for their transport and travel status. The lower the income of a household the more probable it is that women within that household will experience greater transport deprivations as compared with men. Transport deprivation may take the form of womens use of inferior modes of transport as compared with men or it may take the form of womens journeys having multiple purposes and thus generating greater anxiety in the travel context as to whether all purposes or goals can be met within the schedule.

Women are to be found as the users of the less expensive and slower modes of transport when their intensive household schedules would be better served by access to faster modes. Traditionally, income constraints (or put differently womens weak bargaining position for household resources) have placed the most flexible transport forms outside of womens routine reach whilst the urban planning practices of society have increasingly centralised vital local services and moved them to disparate locations within the city. Women encumbered with children wait at the bus stops to travel first in one direction to the school, then in another to the shops, then in yet another to work and in yet another to the doctors or chemists and organise their round of journeys to escort children back from the school to the local area.

As neighbourhood based facilities gave way to centralised welfare and urban services, women were the urban losers. Their schedules became more complex and yet went largely unstudied, neglected and rarely regarded as a fit topic of interest for transport planners. This may seem a harsh argument but at present, new hospitals get built without any gender analysis of accessibilities. Yet it is women who are the major escorts of patients to hospitals. Indeed as a profession, transport planners have failed to produce systematic methodologies which incorporate gender analysis for the purpose of urban development and planning. At present it would be fair to argue that there are no systematic gender inclusion procedures for transport either in terms of the training of professionals, in terms of the participation of users or in terms of the design and planning of transport systems, transport services and transport equipment.

Yet new informatic technologies are available which readily permit the capture and harnessing of gender data for transport and travel systems which better service women and most particularly low income women. Instead of standing and waiting with children at poorly serviced and poorly supervised unsafe busstops, low income women could through new technology call demand responsive services to get them to hospitals in time with efficiency benefits for the overall urban system. Only because we do not cost for womens wasted time travelling to overcentralised urban facilities or because we do not cost for the imposition of poor health on those who are discouraged by the epic quality of low income transport journeys do we arrive at costings which favour large hospitals on the periphery of urban space, hospitals which rarely have any customised transport to service routine low income needs.

Within the transport sector, there are new fleet management technologies which have been developed on the basis of state of the art information and communication technology which permit a greatly expanded flexibility in the routing and unit load size characteristics of commercial loads. Within the commercial sector, new technology has brought the instantaneous matching of customers with loads to transport and transport operators who can move those loads (within a system where goods are continuously tracked by tagging technologies): intelligent commercial delivery systems are now a common feature of reality.

The matching of public transport passengers and public transport vehicles could, if the policy vision were suitably applied, operate along similar intelligent principles matching passenger journey requirements with vehicle availabilities within the system. Historically, customers went to common collection points to join the motorised public transport system - an arrangement which emerged in a period when intelligent communications with their capability for making real time matches between customers and operators were not yet available. The advent of new intelligent technologies creates an opportunity for a differently designed system - or at least for the redesigning of a part of the public transport system so that it can better meet the needs of women with young children, older persons and the disabled. For these target groups, new intelligent technologies similar to those used for the transportation of commercial loads could be brought into use in the public transport system so as to provide the journey flexibility, including home pick ups, required by the least mobile categories of society.

No European municipality has yet investigated the possibility of creating such a demand responsive public transport provision on any scale to service the needs of these least mobile sectors of the community. There have been however three developments which demonstrate that there is potential for such an approach in the European domain. Firstly, in the rural areas of Perugia public transport customers can summon a bus to collect them by placing their smart card in the unit provided on bus stops; secondly, in Angouleme in France, public transport passengers can tell the exact time at which a bus will next arrive at the bus stop nearest to their residence through the information screen on the technology within their home; thirdly, a new residential area is about to be built on the Greenwich millenium site in Britain which will have networked terminals in each home, terminals which connect with local transport providers real time information services.

These three developments taken together show us a path through which the development of in-home communication technologies connected to the services of local public transport operators could help reduce the time poverty of low income women. In-home networked terminals have very low communications costs; they would permit women to make reservations, on both routine and crisis services, giving exact details of the journeys which they need to make to meet their survival needs. Within an intelligent system, these requirements can be rapidly aggregated and integrated with similar journeys to be made by others: there is no need for efficiency to be lost, indeed efficiency may be gained. For example, the availability of in-home scheduling or communication technologies for low income mothers would permit the better integration of hospital appointments, the access

transport necessary to reach those appointments and the reservation of the child care provision necessary to meet those appointments.

At present in-home networked terminals are viewed as a feature to be developed in higher income homes so as to enable the remote control of the domestic environment by professionals who enjoy frequent, long distance travel. However, the exact same technologies could very well service the needs of those who are on low income with restricted mobility. We commenced this section with drawing attention to the way in which urban development had dispersed vital local functions over the greater urban space as a consequence of centralisation; we noted that women were losers in this arrangement and that those with the greatest need to be in the greatest number of locations and to access and perform their business in these locations quickly were the very group which were confined to the slow modes. Intelligent communications via the in-home domestic scheduling technology mode give us a new solution to this problem: the tele-strategy solution. Tele-strategies are fast solutions to womens time problems: womens local constraints can be greatly ameliorated by access to the information highway. Functions which could only previously be performed by being physically present in dispersed urban locations can now be accomplished by communicating through information technology: reserving medical appointments and cancelling them with the immediate print out of the information in hand; electronic banking and money transfers; electronic shopping and delivery of goods; tele-working; virtual conferencing with school authorities; electronic voting; electronic distance education for sick or disabled children. At present, there has been no major policy agency involved in investigating how the various functions performable through new technology can be integrated into a format that better serves the time poor woman; but clearly the potential is there.

Single mothers who can work through new technology from home, who can summon safe transport to service their childrens health and educational needs, who can make vital reservations, cancellations and purchases from within their own home save themselves the zig-zag of multipurpose journeys through ill designed urban space. The ability to interact with welfare services electronically rather than through the time expensive face to face modes of present organisation can release time for single mothers which can greatly benefit both their own welfare and that of their children.

3. Intelligent societies: the societal and institutional benefits of tele-strategies.

In order to reduce single mothers dependence on welfare, we would argue, it is necessary to take active steps to reduce their time poverty: whilst low income, single mothers are time poor because of their heavy domestic task load and their lack of access to appropriate, timely and efficient transport, their ability to perform as reliable employees is impaired and the long terms prospects of removing them from the welfare roles is diminished.

The keys to the alleviation of womens time poverty in the UK are twofold: the ability to substitute tele- journeys for real journeys and the ability to summon low cost flexible and responsive transport on demand. The current vogue in urban planning is to try and reduce

the volume of motorised journeys in order to meet the problems created by congestion and environmental pollution (Grieco and Jones, 1994); enabling low income women to join the information revolution and make use of tele-strategies would assist in meeting these environmental goals, similarly, providing appropriately flexible transport for low income women may very well reduce the number of journeys they are required to make by providing them with better control over their schedules in the context of the extensive range of their tasks.

The technical instruments which would enable low income women to organise and undertake tasks necessary for the survival and welfare of their households from within their own homes are already existent: at present, the tools have been put to use for the benefit of other groups - fleet management techniques for commercial transport; networked terminals for intelligent homes for professional communities; real time transport information for particular pilot communities in Europe; internet reservations of travel facilities by long distance travellers, etc. Whether these different components are brought together by social policy agencies and civic authorities in a way that makes them amenable to use by low income women is now the issue.

End notes:

1. In particular, the Oxford activity approach has generated studies and data sets which demonstrate this difference. Jones, Dix, Clarke and Heggie (1983) *Understanding travel behaviour*. Gower, Aldershot.
2. Recently, there has been a body of work which demonstrates that gender differences in transport and travel patterns are also an important social and economic feature of the developing world (Fernando, 1997; Malmberg-Calvo, 1994; Sasakawa, 1997). Within Africa for example, women are more likely to be the bearers of head loads than are men: whilst headloading women are likely to be carrying children strapped at their backs whilst men are not (Grieco, Apt and Turner, 1996).
3. Such a system works in the rural areas of Perugia though not specifically designed for single mothers.
4. There are often basic telephone links in such civic locations already providing dedicated links to expensive taxi services.
5. Electronic tagging of offenders is one such example which gained acceptance in the United States and is now in use within the UK. Time use patterns, household friction and electronic tagging require a study of themselves.
6. Those with less income have to accomplish those tasks necessary for survival with their own time or exchange time favours with one another. Grieco, M.S. (1995), 'Time pressures and low-income families: the implications for social transport policy in Europe' *Community Development Journal* Vol 30 No 4. pp 347-363.

7. Recent research from the developing world has begun to highlight the complex arrangements that women make between household members, other family members and across generations in order to undertake travel for their survival in the centralised city (Turner and Kwakye, 1996).

8. A national UK supermarket chain has just begun to offer a grocery shopping and home delivery service to anywhere in the country for high-income families connected to the Internet.

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