

**PUBLIC TRANSPORT  
PASSENGER  
SECURITY  
PROBLEMS & POLICIES**

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to inform and contribute to debate of key issues in transport.  
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**SDG ANALYSIS**

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# 1

## Introduction

### INTRODUCTION

Violent incidents on public transport systems grab the headlines around the world. The drama of the Tokyo subway gas attacks and terrorist bombing of Bologna station represent the extremes of violence but have a relatively limited and short term impact on peoples' willingness to use public transport.

However, reporting of more localised and lesser incidents has a very real effect on perceptions of safety in using buses and trains and on their overall travel behaviour. The social costs can be very high, as people who feel at risk voluntarily limit their access to friends and facilities by either curtailing their travel, or using other, more expensive modes of transport on a less regular basis.

Analysis of patterns of bus passenger arrivals and departures in Birmingham City Centre (shown graphically overleaf) highlights the distorting effects of fear and insecurity on travel behaviour. Use of buses by older adults peaks in the morning and declines to a very low level after 6pm. The pattern is also strongly gender related, with a marked decline in bus use by women after 7.30pm.

The phenomenon is not restricted to Britain. Similar analysis of travel patterns in Brisbane, Australia found that whilst females accounted for around 50% of journeys between 8am and midnight, their use of public transport declined to 35-45% between 7pm and 11pm and only 25% after 11pm. The fall in the proportion of female passengers was particularly marked in rail use.

A survey in the Norwegian capital, Oslo, found that among public transport users 12% of women and 7% of men never travelled in the evening by public transport. However, their reasons differed markedly. Whilst none of the men cited insecurity as a reason, 49% of the women said they would feel unsafe. Among womwn who did use the service in the evening over two-thirds felt unsafe at some point on their journey (Stangeby, 1993)

## Graphs

*USE OF BUSES - RETURN TRIP AFTER 19.00  
ONE OR MORE JOURNEYS PER WEEK*

|                            | Proportion of Bus Users<br>Making a regular return trip |
|----------------------------|---|
| Work                       | 17%   |
| Education                  | 14%   |
| Visiting Friends/Relations | 16%   |
| Other Leisure              | 23%   |

Average of five sample areas in West Midlands  
Steer Davies Gleave, 1986

There are significant financial as well as social costs associated with violence, theft and criminal damage related to use of public transport. For the operator, the more tangible costs are associated with assaults on staff, repairs and graffiti removal, and provision of security systems. Less tangible, but also significant from the operator's perspective, is the potential lost revenue from passenger journeys not made.

The haemorrhage of revenue can extend beyond evening journeys, as individuals minimise their personal exposure to risk. Once confidence is lost in using public transport for specific trips, the perceived justification for running a car for all trips becomes stronger.

The loss of potential customers means the commercial viability of services can be undermined at certain times of day, throwing an increased financial burden on to local authorities, where the service is let under tender, and to non-users.

Research in Manchester has highlighted the importance of taxi (including both hackneys and private hire cars) as a mode for evening journeys. Although representing only 4-5% of public transport trips at other times of day, the proportion rises to 25% after 6pm (Cosby, 1992). The same research demonstrated that use of taxis is highest among low income groups without access to a car.

All parties - operators, authorities, passengers and current non-users - have a direct interest in a safe, secure public transport environment.

## Aims

The aims of this report are twofold. The first is to highlight the scale and nature of current problems, and the contributory elements. The second is to identify the ways in which problems can be tackled both in overt measures and by adopting appropriate policies.

## 2

### Exposure to Risk

### PERCEPTION AND REALITY

Establishing the level of assaults on public transport is problematic. Whilst national figures are available for the railway networks through the British Transport Police (shown in the Tables below), there is no centralised recording of incidents in relation to use of bus services. Research for the Department of Transport (by Oscar Faber TPA) based on a sample from 10 police forces provides a partial picture.

In referencing the data from both sources it is necessary to bear in mind that the figures represent the pattern of reporting and do not necessarily reflect the pattern of crimes. Based on the evidence of the British Crime Surveys the figures may under-represent the true number of incidents by between one and three times. The statistics also relate primarily to attacks on the vehicle, although some crimes at bus stations and bus stops have also been identified. The nature of reporting does not allow attacks related to a walk to or from the bus stop to be identified.

A large household survey in Los Angeles indicated that the true incidence of crime related to making a bus journey was 25 to 30 times that identified by the bus operator reflecting crimes taking place off the vehicle or crimes not reported to the police (Levine and Wachs, 1986).

It is also important to note that only officially defined criminal offences are included. Incidents of harassment, unwanted physical or verbal contact, or being followed, which are perceived as closely related to acts of violence are not included.

With these caveats, the volume of reported assaults which could be directly related to bus use ranged from 0.1% to 0.6% of all violent crimes. The actual numbers increased by 13% between 1992 and 1993 although there was no consistent trend between areas. Around 10% of incidents are known to have required hospital attention.

There is a strongly skewed distribution of events by time of day, even more marked if analysed in relation to the volume of passenger journeys. This is shown in the table overleaf and illustrated graphically. A passenger travelling after 7pm is more thirty times as likely to be the victim of an assault as someone travelling in the morning interpeak.



*DISTRIBUTION OF ASSAULTS BY TIME OF DAY*

|                | Physical<br>Assaults<br>n=67 | Sexual<br>Assaults<br>n=27 | Total<br>Assaults<br>n=94 | Patronage<br>by Time |
|----------------|------------------------------|----------------------------|---------------------------|----------------------|
| Before 07.00   | 4%                           | 0%                         | 3%                        | 3%                   |
| 07.00 - 09.59  | 12%                          | 11%                        | 12%                       | 25%                  |
| 10.00 - 12.59  | 3%                           | 4%                         | 3%                        | 17%                  |
| 13.00 - 14.59  | 7%                           | 0%                         | 5%                        | 15%                  |
| 15.00 - 18.59  | 43%                          | 41%                        | 43%                       | 34%                  |
| After 19.00    | 30%                          | 41%                        | 33%                       | 6%                   |
| No time record | -                            | 4%                         | 1%                        |                      |

Sources: Oscar Faber TPA analysis of police returns for Department of Transport

Distribution of patronage from timeband analysis of ticket issues - average of several large urban operators

The analysis of assaults on bus passengers indicated that the number of attacks on males and females were similar (56% against women). This indicates that men were around twice as likely to be a victim if considered in relation to the relative levels of bus use by men and women. On the London Underground males were reported to be three times more likely to be the victims than women, although this may simply be a reflection of the relative rates of exposure to risk.

Young people, under 21 years of age, accounted for 75% of the victims of assaults on bus passengers.

*TRENDS IN CRIME ON PUBLIC TRANSPORT NETWORKS*

| British Rail       |         |         |         |
|--------------------|---------|---------|---------|
|                    | 1993/94 | 1992/93 | 1991/92 |
| Crimes of violence | 1245    | 1237    | 1290    |
| Sexual offences    | 405     | 388     | 438     |
| Indecent exposure  | 353     | 367     | 272     |
| Robbery            | 1074    | 928     | 767     |
| London Underground |         |         |         |
|                    | 1993/94 | 1992/93 | 1991/92 |
| Crimes of violence | 604     | 611     | 663     |
| Sexual offences    | 265     | 279     | 242     |
| Indecent exposure  | 196     | 246     | 237     |
| Robbery            | 496     | 478     | 558     |

**Perceived Risk**

Operators are known to take considerable comfort from the fact that the *overall* perceived level of risk, expressed as a threat to personal security, is generally fairly low. For bus passenger the level of expressed concern remains generally low - of the order of 10 per cent in provincial cities. Similar results are produced by customer satisfaction surveys on the London Underground with satisfaction ratings of around 80% fairly typical, remarkably consistent with those for safety (risk of accidents).

Nevertheless repeated surveys in different parts of the country have shown that, among certain groups in the population, and at particular times of day, perceptions of personal risk do act as a constraint on trip making. Research commissioned by PTEs and British Rail in the late 1980s indicated that 23% of women *never* travelled after dark (Harris, 1988). The problem is compounded because the fewer people who travel, the greater is the sense of insecurity induced.

**Key Groups**

Women make over two-thirds of bus trips and over half of rail trips in overall terms. However, limited account is taken of their own perceptions of vulnerability, particularly for travel after dark.

A survey among the women users of a dedicated service in Leeds (Nightlink), indicated that over two-thirds felt unsafe travelling after dark most of the time, and 80% felt unsafe quite often. Just 6% said that they did not feel at risk but this was because they would avoid putting themselves in a vulnerable position by travelling after dark.

There are different levels of risk associated with particular stages of the journey.

The results of a survey among public transport users in the Wirral (undertaken on behalf of Merseytravel) are shown below.

*ASSESSMENT OF RISK BY STAGE OF JOURNEY*

|                                   | <u>Bus Users - Wirral</u> |      |
|-----------------------------------|---------------------------|------|
|                                   | Female                    | Male |
| Walking to/from stop              | 55%                       | 26%  |
| Waiting at the stop (quiet area)  | 42%                       | 28%  |
| Waiting at the stop (city centre) | 48%                       | 28%  |
| On board the bus                  | 31%                       | 10%  |

|                         | <u>Train Users - Wirral</u> |      |
|-------------------------|-----------------------------|------|
|                         | Female                      | Male |
| Walking to/from station | 40%                         | 35%  |
| Inside station          | 35%                         | 25%  |
| Waiting on the platform | 43%                         | 39%  |
| On board the train      | 31%                         | 25%  |

Source: Home Safe Research undertaken by SDG on behalf of Merseytravel 1993

|                            | <u>Survey of non-users</u>  |                              |
|----------------------------|-----------------------------|------------------------------|
|                            | Leeds<br>Nightlink<br>Users | Wirral<br>Home Safe<br>Users |
| Walking to or from stop    | 72%                         | 62%                          |
| Waiting at the stop        | 64%                         | 55%                          |
| On the vehicle             | 4%                          | 10%                          |
| Changing buses/bus station | 13%                         | 48%                          |

Source: Survey of Nightlink Users, Leeds 1992 and Home Safe Users, Wirral 1993

Research in Leicester indicated a significant level of minority interest in the provision of services offering better penetration of residential areas at off-peak times. Interestingly the demand was strongest not among elderly persons but among younger women. The same survey showed many non-car available individuals in all age groups felt at risk of attack when walking from the bus stop at night.

## Causes

The cause of the perception of being unsafe is related to previous experience of attack in a minority of cases. Among the Nightlink users in Leeds the figure was 8%. Around twice this number cited media reporting as a cause of their anxiety. Almost half (46%) expressed a

## Response

more general fear of being attacked, sometimes by fear of strangers, and perceptions that certain areas were unsafe. Poor reliability of services was cited by only 3% as a contributing factor.

Direct experience causing continued fear need not necessarily take the form of overt violence or physical contact, but includes being followed and verbal harassment.

Media reporting reflects the high level of personal interest in fear of violence. An analysis of coverage in a regional newspaper (Western Daily Press) over a randomly chosen week yielded 21 items with an average daily coverage of 66 column centimetres, outranking any other 'theme'. The effect of this sustained level of attention is to reinforce fears.

A survey of women in Bradford, undertaken in 1990, identified the range of measures which they take to counter perceived risks:

|                           | Bradford<br>(n = 71) |
|---------------------------|----------------------|
| Always travel with others | 45%                  |
| Avoid badly lit areas     | 30%                  |
| Use taxis                 | 10%                  |
| Stay in                   | 1%                   |
| Carry an alarm            | 3%                   |
| Carry potential weapon    | 21%                  |
| Other                     | 14%                  |

Note: Multi-response table

Some typical comments about precautions women took when they did go out on conventional public transport included:

*"Well, I always make sure I've got my spray in my bag and I put it in my pocket and I think, well, if anyone comes for me I will spray it in their eyes."*

*"...I put my purse in my shopping bag because if anyone pinches my handbag at least they won't get my money. I also keep my keys in my pocket."*

## 3

**THE WAITING ENVIRONMENT**

The wait at the bus stop or on the station platform represents a very significant factor in perceived fears and apprehension. Once the service arrives people feel considerably safer.

**Service Frequency**

The average length of time spent at the bus stop depends on two factors - the frequency of the service and its reliability.

Research undertaken in the West Midlands PTE area (Steer Davies Gleave, 1986) indicated that as the frequency of services reduced, so the mode of arrival times at the bus stop in advance of the timetabled departure increased. The pattern is highlighted in the table below. The proportion prepared to turn-up "on-spec" diminishes as service intervals lengthen.

| Service Interval | Time of arrival at stop in advance of scheduled time |          |           |         |
|------------------|--|----------|-----------|---------|
|                  | 1-2 mins   | 3-5 mins | 6-10 mins | >10 min |
| 15 mins          | 18%  | 48%      | 7%        | 1%      |
| 30 mins          | 6%   | 56%      | 22%       | 3%      |
| Hourly           | 3%   | 42%      | 33%       | 12%     |

Average of five sample areas in West Midlands

**Reliability**

It is also essential that efforts are made to ensure the reliability of evening services to ensure the period of anxiety is minimised. As a high proportion of evening services are operated under contract in many areas, there is a role for the local authority to ensure contract specifications demand appropriate levels of time-keeping and efforts are made to effectively monitor compliance.

**Bus and Rail Stations**

Arrangements for the manning and supervision of stations are often optimised for operational convenience and cost minimisation rather than concern for passenger security. The result is that stations are frequently unstaffed at times when travellers feel most vulnerable.

A survey in Guildford Bus Station (on behalf of Surrey County Council) found 90 per cent stating that they would feel frightened waiting alone in the bus station in the evening. The level of concern rose with increasing age. These fears were despite the fact that most users felt that the lighting was adequate.

The situation on many rail stations can seem particularly threatening. The frequency of arrivals and departures is substantially less than at a bus station and there is considerably less potential oversight of activity from people passing by. The design of many stations with alcoves and gaps between platform buildings also creates potential hiding places. Access to platforms may require use of subways which are seen as an especially intimidating environment.

Replacement of station booking office staff by machines for ticket vending heightens perception of risk. People unfamiliar with the workings of the machine may adopt behaviour which invites contact or may not be able to avoid speaking to strangers who, in other circumstances, they might avoid.

Lack of staff to ask for information is a key area of concern. In the evening service levels are usually reduced and routes may even be renumbered. These factors can be expected to increase reliance on timetables. However, around half the adult population is known to have difficulty in interpreting a printed timetable.

*"Batley bus station must be the world's most solemn place. There is no-one to ask...You have got to run round the bus stops to read what bus goes where."*

## Relationship to Street Crime

Feelings of insecurity can become acute outside normal shopping/business hours when the numbers of passengers falls and retail premises close. There is often a close correlation between the level of crime at a station and the character of the neighbouring environment and its level of general street crime. This is reflected in the fact that criminals tend to escape on foot rather than by train or bus (Hoel).

Without adequate safeguards it is possible for a station itself to become associated with high crime levels, although perceptions are often at odds with reality. However, problems which do occur are highly visible and can arise from a variety of undesirable elements. Reported incidents include drug dealing, solvent and alcohol abuse, and associated violent crime.

## Hail & Ride

In some residential areas, bus operators have abandoned conventional bus stops in favour of hail & ride, with the object of improving convenience for passengers. However, whilst the concept certainly benefits passengers who wish to alight near their homes, the lack of a defined waiting point may actually contribute to the sense of isolation and perceived vulnerability to attack.

## Measures

Attention to design can help to reduce potential risks, through providing unobstructed visibility and high standards of lighting.

Closed circuit television (CCTV) monitoring can be a useful deterrent although their impact has been found to be variable. One side effect is that it can actually reduce the level of manned presence perceived by passengers since there is now an opportunity for the supervisor to remain in the office to watch the monitors. CCTV generally has less value in providing reassurance if the station is unstaffed.

There is also concern about the effectiveness of the measure given the likely time between any incident being observed and resulting action. After several publicised incidents reflecting lapses in security there is a widespread scepticism that the system is being monitored, reflected in sentiments such as:

*"I often wonder if they [the cameras] have been switched on."*

Kirklees Integrated Transport Study 1994

London Underground responded to this view among their passengers by construction glass fronted control points with the express aim of ensuring travellers could see security staff watching the monitors.

In the late evening, when service frequencies are reduced and passengers fewer in number, it is helpful for departures to be grouped in a smaller area or for specific waiting areas to be designated on the platform to provide the opportunity for "close supervision", often with the added reassurance of a panic alarm facility.

Montréal's metro system employs around 150 "Safety Agents", trained in policing techniques. Their rôle is to provide visible support passengers in using the system, undertake revenue protection and provide surveillance necessary to prevent vandalism and graffiti, discourage vagrants and the activities of unlicensed traders or professional beggars (Apter, 1995).

Metro, West Yorkshire PTE, employ security staff at their bus stations. They are responsible for safety and security but are also expected to supervise bus movements and provide basic information to passengers. The staff are employed directly at Bradford Interchange and contractors are used at four of their other bus stations. Security contracts are awarded following competitive tender. The authority interviews bidders to assess suitability and takes commitment to service quality into account in awarding contracts.

A survey in Oslo to assess the value of watchmen and emergency telephones on metro stations indicated that, in relative terms, watchmen were valued at twice the level of emergency telephones (Stangeby, 1993). Expressed in terms of "willingness to pay" watchmen were valued at an average of NOK 1.50, although for travel after 8pm the valuation rose to NOK 2.50 per trip.

## ON THE VEHICLE

The capacity and layout of the vehicle and proximity of a member of staff is a key factor affecting passengers' perceptions of personal security. Buses tend to be viewed as inherently safer and friendlier than trains.

The statistics for assaults on bus passengers may be misleading because they represent only a partial sample of events. Of the attributed events 60% of physical assaults on bus passengers and 70% of sexual assaults recorded for 1993 in the survey for the Department of Transport occurred on board the bus. These figures compare with the third of crimes on the London Underground which take place on the train (Swain, 1988). Similar patterns of activity are reported on the Paris Metro with 31% of violent incidents occurring on trains, compared with 27% on platforms and 42% in access areas and corridors (RGI, 1988).

Fully automated, unstaffed systems have a less than enviable reputation. Lille's VAL system of driverless trains and unmanned stations carries just under half of passenger trips in the conurbation but accounts for around three-quarters of incidents.

### Seat Layout

People tend to dislike having to make eye contact with strangers. Seats requiring passengers to sit facing each other are disliked by over half of bus passengers. Their strength of feeling tends to increase with the length of the journey. Strong feelings were expressed by around 1 in 5 passengers making short hop trips of less than 10 minutes, but for trips of over 20 minutes, strong dislike was expressed by over a third (37%) in a survey carried out for London Buses.

### Double Deckers

A survey by SDG for London Buses found that almost 40% of all passengers felt less vulnerable when travelling on single deck vehicles than on double deckers. However, the response differed significantly by age group and gender. The level of agreement increased with age from 30% among 16-24 year olds to 50% for the over 65s. Women were also far more likely to feel vulnerable (46%) than men (30%).

This pattern is reflected in the areas where people prefer to sit on a bus given a choice. Among 16-24 year olds 57% like to go upstairs, falling to less than a quarter (24%) of persons over 65 years, although this is also connected with relative mobility. However, it is notable that males (52%) are far more likely to go upstairs than females (32%).



## Compartments

On trains staff are usually more remote from passengers and may be physically separated in separate compartments. Travellers are therefore concerned about their ability to obtain help or "escape" from a source of threatening behaviour. On the London Underground and Danish Railways (DSB) the presence of carriage end windows, allowing a view into the adjacent car, was a popular feature in refurbishment programmes.

The ability to move through the train is seen as both a potential asset and a hazard. "Steaming", where muggers move from one carriage to another is seen as a particularly potent threat among some individuals.

## Measures

Closed circuit television (CCTV) and video recording systems have been fitted to a significant number of urban buses, following strong indications of their effectiveness in combating graffiti and vandalism on vehicles and deterring assaults on staff or passengers. However, the cost of fully equipping a fleet of buses would be prohibitive and the majority of systems are in fact dummies. The ratio of live systems to dummies is rarely higher than 1:5 although this should allow most likely trouble spots to be covered.

However, more recent research suggests diminishing confidence in the value of such security systems by passengers. This contrasts with the current wide support for town centre cameras, it is suggested because the bus systems are not monitored in real time.

Increased levels of supervision are often desired by passengers with pleas to "*bring back the conductors*". Greater Manchester PTE have responded by requiring double manning of specific late night journeys.

Bus operators have encouraged supervision of their services by providing free travel to police officers wearing uniform. In America the idea has been taken further in some areas by paying off-duty police personnel to ride "shotgun" on particular routes.

## 5

### Specific Problems

### PARKING

Parking associated with public transport systems, whether it be a bespoke Park & Ride service or a typical station car park, have specific problems. The situations are often ideal for criminal activity. Potential criminals can be reasonably assured of their activities remaining undiscovered by the vehicle owner for several hours. Indeed the level of activity at commuter car parks during the day may be minimal.

The car park layouts can lend themselves to crime, occupying large surface areas, often with little boundary activity or oversight from adjacent buildings. Indeed efforts are usually made to screen the car park from its surroundings to minimise the environmental impact.

A long stay multi-storey layout can be an even more threatening environment. Low ceilings, enclosed stairwells and drab decor contribute to a sense of menace.

In reality the most common crimes in station car parks are property theft from the parked vehicle. Less prevalent, but more serious is the safety of individuals walking between the P&R stop or station and their car. As the majority of users of long stay car parks tend to be men, women know themselves to be outnumbered from the outset. Some station car parks are also known to be used for prostitution, causing problems for single women users.

### Measures

To counter the problems, most sites are now equipped with CCTV cameras with real time monitoring. Security staff are overtly on view to deter undesirable activities and reassure users. High standards of lighting are essential to ensure there are no corners in deep shadow which make oversight difficult and can contribute to anxiety of users.

A system of exit barriers which can be controlled by site staff may be required to minimise opportunity for car theft.

*MOTOR VEHICLE OFFENCES IN BRITISH RAIL AND LONDON UNDERGROUND CAR PARKS*

|         | Theft of Vehicle |     | Theft from Vehicle |      | Damage to Vehicle |     |
|---------|------------------|-----|--------------------|------|-------------------|-----|
|         | BR               | LUL | BR                 | LUL  | BR                | LUL |
| 1993/94 | 2615             | 179 | 8675               | 785  | 3653              | 416 |
| 1992/93 | 2561             | 189 | 8636               | 894  | 4390              | 405 |
| 1991/92 | 3238             | 180 | 9710               | 1039 | 4093              | 429 |

Source: British Transport Police Annual Reports

## Vehicle Watch

"Vehicle Watch" schemes are designed to deter car theft by clearly identifying vehicles used by commuters which are regularly parked in station car parks during the day. The vehicle is voluntarily registered in the scheme and stickers are displayed prominently in the front and rear windows. If the car is then seen on the road between 10.00 and 16.00 on weekdays the police are given authority to stop the vehicle to question the driver "on reasonable suspicion" without an offence having been committed. This significantly increases the potential for apprehending car thieves.

Such programmes are now widespread in the United States. The first such scheme in Britain was introduced at Southampton Parkway in August 1991 and subsequently extended throughout the South East and to London Underground car parks.

## 6

### Awareness

## VANDALISM AND GRAFFITI

Vandalism and graffiti gives the impression of a decayed and neglected environment, which adversely affects images of service quality and gives rise to concern for personal safety. The atmosphere can be intimidating for anyone travelling on their own after dark, particularly where they already feel vulnerable.

There is evidence of widespread concern about vandalism and graffiti. A survey in Edinburgh in 1987 (by SDG for Lothian Regional Council) revealed 51% of respondents believing it was a problem on buses, and 69% considering it a problem at bus stops.

A contemporary survey of buses in eight areas, including Edinburgh, found that 97% of vehicles inspected exhibited evidence of graffiti and over three-quarters had slashed seats (Mellor, 1988). However, the distribution of damage on board vehicles is often focused in particular areas. This accounts for the fact that young people, who are more likely to use the upper deck and rear seats, tend to be significantly more aware of the issue (65%) than older people.

Research among London Underground passengers in 1988-89 showed that respondents were more likely to notice graffiti on trains than at stations. Although few respondents said they felt intimidated by it, 35% said they did not like it. It was not the graffiti itself which engendered feelings of fear but the fact that the perpetrators had been allowed to commit the crime unheeded, signalling a general lack of security and a sense that "nobody cares".

A 1992 survey of 69 British Rail and 60 London Underground stations around London found graffiti at over 80% of locations (Focas et al, 1993).

### *INCIDENCE OF GRAFFITI AT STATIONS IN LONDON*

|                 | British<br>Rail<br>n = 69 | London<br>Underground<br>n = 60 |
|-----------------|---------------------------|---------------------------------|
| Graffiti - all  | 84%                       | 82%                             |
| Sexist graffiti | 22%                       | 15%                             |
| Racist graffiti | 29%                       | 29%                             |

Source: Focas, Smith and Chaudrey, 1993

### Patterns

Attention has frequently been drawn to the copycat nature of vandalism and graffiti. An analysis by Scanes demonstrated exponential growth of the costs of dealing with graffiti over a four to five year period as the perpetrators become organised into gangs and more audacious, often overtly tackling security measures and even the police (Scanes, 1991).

### Clean Up

It is widely perceived among operators that the graffiti culture has come to stay and the problem is thus one of management rather than elimination. Graffiti is recognised as a copy-cat crime and one of the

most effective defences against escalation is the rapid removal of any evidence of previous graffiti attacks.

The problem is that whilst it takes only a few minutes for the tagger to do their work, it can take several hours laborious effort to remove it. Cleaning the inside of a vehicle is particularly time consuming because of the variety of surface materials and space restrictions which limit the use of mechanical aids. Efforts must therefore be concentrated on making the clean-up operation simpler and faster.

Barrier agents which facilitate easier removal of graffiti can be painted on to cleaned or repainted walls and ceilings. Specialist vinyls with anti-graffiti coatings can provide an attractive and durable surface, quickly covering over evidence of previous damage. Such material has been used to provide an enhanced image for buses, suburban trains and stations in Denmark. However, there are strict limits on the use of vinyl materials inside carriages or enclosed station areas on railways in Great Britain.

Creating a more interesting environment also appears to help in minimising attacks. It is observed that plain coloured areas appear to attract graffiti whilst all-over advertising vehicles are subject to less graffiti than the rest of the fleet. The lesson is being applied in adding graphic interest to panels, which by distracting from the impact of any overlaid graffiti, tends to reduce the attractions of the "canvas".

## 7

### Assaults on Staff

#### STAFF RESPONSE

Bus operating staff are far more likely to be the victim of assault than their passengers. Almost a third of cases recorded in 1993 related to disputes over fares and a further 19% were connected with traffic incidents.

Proportionately more, and more severe assaults occur in the late evening (after 10pm). Incidents tend to be more frequent on Friday and Saturday nights than during the rest of the week.

There are considerable costs to operators as a consequence of assaults on their staff:

- Lost revenue for journeys not run or withdrawn as a result of industrial action;
- Provision of additional staff to cover for drivers absent as a result of injury;
- Cost of counter measures and training programmes;
- Increased staff turnover;
- Staff time in dealing with prosecutions.

Bus operators have made considerable efforts to deter or prevent assaults on their staff. The figures supplied to the Confederation of Passenger Transport UK and Department of Transport indicate that these have been successful, to the extent that the levels of assault have been held constant against a general background of rising violent crime. Less encouraging is the fact that numbers of bus passengers have been declining, indicating an increase in numbers of incidents per passenger trip.

The general public, whilst concerned for their own plight, often empathise with drivers.

### Protection

Assault screens are fairly widely used by urban area bus operators to protect drivers. Some are permanently fixed but some drivers complain of claustrophobia and difficulty in communicating with passengers. Opening designs provide for more personal contact during the day, but can be locked closed for journeys when trouble is most likely. It is reported that the main requirement is for protection against attack from behind, typically drunks swinging a bottle.

Two-way radios can be used to summon assistance, particularly where trouble is occurring elsewhere in the vehicle. Although some operators have equipped their buses with alarms, they have rarely proved successful, evoking minimal public response.

### Training

In some companies training is given in customer care, focusing on ways of minimising the likelihood of an aggressive reaction and defusing potential conflict situations.

**Attitudes**

Drivers allocated to special projects such as dedicated evening services often indicate a high level of job satisfaction, reflecting in part higher levels of interaction and trust between staff and passengers.

## POLICIES

Local authorities and passenger transport executives (PTEs) are responsible for securing socially necessary but non-commercial services.

Whilst a minority of bus mileage is supported, the services which are operated under contract are concentrated at particular times. After 6pm authorities tend to be responsible for at least a third of services, and often over half of the evening network. They therefore have a direct opportunity to influence the nature of services being offered at times when people feel most at risk.

|                   |         | Proportion of mileage under tender (1994/95) |     |     |
|-------------------|---------|--|-----|-----|
| West Yorks        |         |  |     |     |
| PTE               | MPTE    |  |     |     |
| Mon-Fri Daytime   |         | 18%  | 8%  | 8%  |
| Mon-Fri After 6pm |         | 52%  | 33% | 35% |
| Saturday          |         | 28%  | 10% | 13% |
| Sunday            | 74% 42% | 47%  |     |     |

## Policies

**Merseytravel** has identified security as one of the key areas to address in meeting its objective of "a high quality public transport system that will achieve equality of opportunity for all."

*"All travellers are entitled to expect ... that they are reasonably secure, both on the vehicle or at bus stops or stations. Women, children, those with disabilities and the ethnic minorities are particularly vulnerable, and will be deterred from travelling if they feel unsafe."*

**Centro** (West Midlands PTE) on the other hand has an economics driven approach to the provision of evening supported services. Not only are acceptable frequencies reduced from every 30 minutes to every 60 minutes, but the distance which people are expected to walk to a bus service is extended from 400m to 700m after 7pm. Whilst the policy may be defended as consistent with the needs of people who currently use the services at these times, they could not be worse from the point of view of reinforcing the fears of people reluctant to travel and are inconsistent with promoting equality of access.



***Metro*** (West Yorkshire PTE) also decrease the frequency from two journeys per hour before 6pm to one journey an hour thereafter. However, there is no defined difference in accessibility standards.

***Greater Manchester PTE*** do not specify accessibility criteria but do specify two person operation of late night bus services.

***Kent County Council*** have a policy of liaison with the Police and other organisations to consider ways in which personal security of public transport users can be improved. They recognise that increased use of public transport will help to improve security but suggest that new systems - including "*the encouragement of taxi services*" - may be a better approach (KCC, 1994).

In rural areas in particular the lack of evening services is perceived by young people in particular to have a significant detrimental effect on their quality of life.

## 9

### Policy Implications

## CONCLUSIONS

The market for public transport is being subdivided by a combination of market pressures, economic and social circumstances. Transport operators with commercial remits are obliged to concentrate on the service patterns which deliver high concentrations of passenger demand. Time periods with lower levels of demand can only support services with lower frequencies or require concentration of service on fewer routes with an inevitable reduction in accessibility for some users.

At the same time, overall use of public transport is in decline. Cars are coming to be regarded as an essential means of achieving the level of mobility which people expect. Public transport provides often limited service outside the weekday core hours of 08.00 - 18.00. Failure to adapt services to emerging patterns of social activity have reinforced this trend. The result is a progressive narrowing of public transport use - outside the weekday core period.

Britain is not unique in these patterns and they cannot be attributed solely to deregulation, although a deregulated environment may have accelerated the process. To some extent we are now experiencing many of the trends which have been evident in other parts of Northern Europe for several years.

### Social Impact

The constraints which perceived risk places upon behaviour need to be more thoroughly researched before we can begin to accurately assess the social and economic impacts. At this stage it is simply possible to draw attention to the issues.

The consequent higher concentration of young males in urban centres and as users of evening public transport services creates an environment in which aggressive tendencies come more to the fore. The lack of social constraints on behaviour reinforces perceptions of risk among vulnerable groups, as well as adding to the costs of policing and other security measures.

### Dedicated Service

The most commonly advocated response is to establish a dedicated service for vulnerable persons, offering a door-to-door service. In practice such services as do exist are on a small scale and have very high unit costs per passenger journey. The same problem of scale means the number of people who can benefit is often very limited, but the schemes often attempt to cover a wide area to attract funding.

## Improving Economics

This combination means, at best, restricting use either to trips that can be planned up to a week in advance or, at worst, becoming treated as a personal service by a small clique of individuals. Both characteristics can mean that the service becomes widely perceived as irrelevant to the needs of the majority. For a dedicated door-to-door to be cost-effective it must be focused on a limited area, to minimise the level of dead running.

The high costs and limited coverage provided by door-to-door services means that alternative service concepts need to be examined if the goal of improving confidence in using public transport at an economic cost is to be realised.

The physical resources to provide a new service are readily available after the evening peak. The staff could be sourced from the existing workforce with revised rotas. Alternatively, a team of especially trained part time drivers might be recruited, an approach which may be essential if an all-women service was thought necessary.

The service pattern should be regular but reliability is probably a higher priority than frequency. In theory it should be possible to introduce a hail-and-ride service according to a basic timetable and to allow a limited number of pre-booked route diversions (within a specified area) for persons who feel most at risk.

A variation would be to provide a demand responsive taxi connection. A contract could be established with an approved local taxi company to offer a fixed fare within a series of local zones. The bus driver could then radio/telephone ahead to arrange a taxi to meet the service at a designated point.

To cater for longer trips, the service could co-ordinate with other routes at interchange points with adequate supervision.

## Dealing with the Media

Media coverage clearly has a major influence on perceptions. Although we may feel that reporting has too often distorted the picture towards lack of safety and risk in the interests of a "good story", the same media can be used to reinforce positive images if correctly managed. Packaging a story on protection measures can improve perceptions of safety and may even contribute to a reduction in instances of criminal behaviour (Owen, 1984).

*CASE STUDIES***BRADFORD - HOMERUNNER**

The Bradford "Homerunner" scheme was initially funded by Safer Cities with support from West Yorkshire PTE. The service, which was available to women only, ran between 6pm and 11pm. Telephone bookings could be made up to two days in advance. The service proved extremely popular with users, being frequently over-subscribed thanks to its convenience and perceived low cost, a flat 50p rate.

Users included a wide range of age groups and the service was used by people on evening shift work and attending adult education classes as well as for leisure and recreation purposes.

The project closed because the level of cost recovery was very low and alternative, longer term funding could not be found.

**BRISTOL - SAFE WOMEN'S TRANSPORT**

The project was launched in 1988 against a background of increasing numbers of rapes and violent attacks on women in the City, attributed to bogus private hire car drivers. Funding for the project was provided by the Women's Committee of Bristol City Council.

The project was run by a full time salaried staff of four with a larger number of women volunteer workers, using 4 vehicles. Two types of service were provided. A Monday to Friday service operating 6.30pm to 11.30pm provides a door-to-door escorted lift giving service operated by women. A one day a week off-peak service was provided in addition for women of Asian ethnic origin.

The limited project resources meant that the service cannot serve all women within the catchment area. Priority was given to women from specific groups including those on low incomes and women with a particular fear of violence. In reality this has meant creation of a fixed membership list.

A limited pool of users drawn from a wide geographic area, coupled with relatively high fixed overhead costs, contributed to a high unit cost per passenger trip. The project closed after withdrawal of funding.

#### WIRRAL - HOME SAFE

This women only service ran for a 12 month experimental period. The service was ultimately withdrawn because the high cost could not be justified in terms of the small number of people who accounted for a significant proportion of trips.

#### BIRKENHEAD - CLOSE-TO-HOME

A hail-and-ride minibus link was established by Merseytravel to provide a guaranteed evening connection with trains from Liverpool at Birkenhead Park station. The routeing was designed to offer better penetration of an inner city housing area than provided by conventional bus services.

The service was actively promoted and received significant local press coverage. However, there was minimal passenger take-up and the service was withdrawn after a six month experimental period.

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