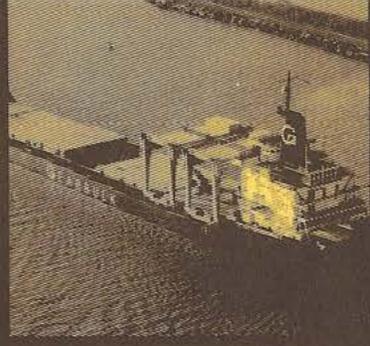


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ARTICLES

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ARTICLESCROSS-SUBSIDY REVISITED

by John Hibbs, Director of Transport Studies, Birmingham Polytechnic

Economists in general are against internal cross-subsidisation much as clergymen are against sin. The odd thing, therefore, is to account for the controversy that came to surround it for a time in the case of transport.

Partly it seems to be a matter of definition, but this in turn, it can be argued, stems from the failure of academics sometimes to appreciate the way commercial decisions are made. If the definition is pursued with miniscule intellectual rigour, it can be shown that something that can be labelled cross-subsidy is involved at every stage in the operation of public transport, as seems to have been the conclusion of the Leeds/NBC study. To the commercial operator, this must appear as scholastic as the issue of the debate about angels dancing on the point of a needle.

To change the metaphor somewhat brusquely, the academic debate seems to have created a gordian knot, which can be cut with - no, not Alexander's sword, but something more like Occam's razor. This is of course Ponsonby's definition of an unremunerative service as 'one that we would be better off not to run'. (Gilbert would have appreciated being likened to either William of Occam or Alexander the Great - I suspect he would have preferred the former.) On this analysis, cross-subsidy occurs only when a given quantum of service is provided at less revenue than is required to meet its escapable costs, 'and make a contribution, however small, to the fixed costs of the firm'. After all, to abandon any operation that does make a contribution is to reduce the revenue available to meet fixed costs, and thereby to increase the unit costs of the total operation.

But Ponsonby never taught that the distinction could usefully be pursued to a miniscule analysis of costs and revenue, and the commercial operator does not in practice worry too much about the fine tuning of contributory revenue. Provided escapable costs are covered by revenue on a more or less service-by-service basis, he will assume that some parts of the operation are more remunerative than others. Any retailer will work on the same assumption; shops wouldn't stay long in business that only stocked the most profitable items, or those with the largest turnover. In the same way, transport operators in a pragmatic fashion identify what is worth running, and what, eventually, must be discarded. The fact that some of the operation earns more than other parts of it neither surprises nor interests them. It may be a fact of life, but it is hardly cross-subsidisation. Perhaps it is best summed up in the saying 'all is grist'. Some activities of the firm earn more; others earn less; provided none involve actual out-of-pocket loss, the skill of management is to make sure that they all add up to a satisfactory surplus at the end of the day. (And the consumer's interest is protected by the fact that competitors' prices in a contestable market will always prevent his exploitation.)

This use of Ponsonby's equivalent of Occam's razor throws a lot of light upon the whole apparent controversy, and reveals it as more of a political than an academic phenomenon. Confusion over the nature of cross-subsidy was in the perceived interest of operators seeking to protect their statutory monopolies under quantity licensing; among the undesirable consequences were the enforcement of standard charging by the licensing authorities as a quid pro quo, and the inhibition of any form of costing so long as the average cost/average revenue formula remained sacrosanct, providing as it did a powerful but untenable demonstration of supposed cross-subsidy. (It may be that the delayed emergence of serious traffic costing was the single most effective cause of the decline in the fortunes of the bus industry after 1960; if so, the blame lies with

the misunderstanding of cross-subsidy. More serious yet may be the rumour that not every major bus operator has given up the average cost/average revenue technique.)

None of this is to deny that there remain boundary problems in the treatment of unremunerative operation. They do become easier to handle, though, when they can be seen in terms of incremental rather than distributive costing. The answer to the key question 'would we be better off without it?' is then seen to depend upon the accounting period and the related fixed costs. If it's one journey within a guaranteed day, then maybe not, but if it's a whole service, well, maybe; if it's the services working from a depot, then perhaps even more so. The impact of fixed costs can be allowed for, as and where they arise. And viewed in this way, cross-subsidy becomes a much less controversial problem.

RECENT MEETINGSEFFECTIVE CAPITAL INVESTMENT IN RAILWAYS: A EUROPEAN COMPARISON

Bill Steinmetz, Booz Allen & Hamilton
(London, June 1986)

The June meeting, held at the Polytechnic of Central London, was addressed by Bill Steinmetz of Booz Allen & Hamilton International Ltd. on the above theme. Booz Allen is a major US management consultancy, becoming increasingly active in the transport field (its London office has perhaps the highest proportion of TEG members of any consultancy).

Bill Steinmetz has been with the firm since 1977, after studying at Rensselaer Polytechnic, New York, to take a degree in civil engineering and then an MBA. He has been based at the London office since 1982, undertaking transport management consultancy assignments in Great Britain (including LRT and BR), and West Germany. He is now a Vice-President, a partner in charge of management consultancy in transport, covering Europe from the London office.

The report presented dealt with work yet to be fully reported, hence it is not possible to report in full detail here the statistics produced. The client for the study is the Deutsche Bundesbahn (DB), who are interested in comparing their performance with that of other European railways, following previous international comparisons which they had made themselves, and the Leeds ITS/BR study of 1979. DB has been undertaking investment at a very much higher level than BR, notably in the 'neubaustreke' (the new high-speed lines). This has led to Federal Government concern about the value of such investment. An analysis of the existing situation, and international comparison was seen as a

necessary condition for continued funding. The study presented by Bill Steinmetz could thus be seen as a 'status report', prior to further studies being carried out.

He described the study as 'investment oriented', in which an attempt was being made to relate investment to financial and physical performance. The year 1983 was taken as the last complete year for which comparative statistics were available, the whole period covered being from 1974 inclusive.

The terms of reference required the consultants to consider whether investments can be made comparable; whether investments can be brought into relation with performance, and whether monitoring systems could improve the criteria used. The major conclusion reached to date was that no unique performance indicator (or even set) can be employed in isolation (one might observe that studies in the bus and airline industries have reached similar conclusions), but that valuable insights into specific issues could be obtained through such studies.

Following DB practice, expenditures on investment and maintenance were classified into 13 categories. Asset values and depreciation were calculated. It was difficult to assign these to business sectors, but this was attempted as far as possible, i.e.:

long-haul passenger (excluding business travel)
short-haul passenger (" " ")
wagonload freight
trainload freight.

Data were standardised to 1983 Deutschmarks, using GDP inflators for each country, and average exchange rates from the Deutsche Bundesbank for that year.

In addition to the British and French systems, the conrail (east coast) network in the US was included as a broadly similar mix of operations.

Given the difficulty of separating investment and maintenance costs (notably in track renewal), these two items were combined in the analysis. Further definitional problems and differences in accounting conventions added to the researchers' task.

A graph of total investment and maintenance expenditure from 1974 to 1983 gave the ranking: DB, SNCF, Conrail, BR. However, full maintenance costs for BR were included only from 1981.

The study then distinguished "repositioning investments" from "residual investments". The former represents moves into new activities, such as high-speed service, higher safety, and other new markets; the latter comprising maintenance and the investment need to continue existing services. In subsequent discussion, the issue of disinvestment was also raised - evident in Britain for many years, although much less so in Germany. It was desirable to separate such "repositioning" from "residual" investment by business sectors.

A similar planning and evaluation process was followed by all the railways, at least in theory, although with very different levels of subsequent investment within Europe.

A fascinating range of data from the first stages of the study was shown in the form of slides. It cannot be reproduced at present, but the eventual publication of a report should provide much valuable data for comparative study. Among indicators displayed here:

- the ratio of track-km to route-km (ranging between 2.1 and 2.4)

- volume of traffic in 1983 (tonne-km and passenger-km)
- revenues excluding operating subsidies (BR emerged as much more dependent on short-distance passenger traffic than the others, reflecting the role of Network South-East, while SNCF was much more long-distance oriented)
- average revenues per traffic unit (higher for passengers in BR, than on DB or SNCF)
- the ratio of operating losses to revenues. Somewhat surprisingly, BR emerged as having a higher ratio than SNCF or DB
- the ratio of revenue to total costs (typically around 60%)
- operating ratios (revenue/operating costs) by sector
- investment and maintenance expenditure per track-km (a fairly similar figure for BR, SNCF and DB in 1983)
- investment and maintenance in the subgrade
- wagon utilisation.

It was evident in subsequent discussion that the study, in the process of seeking to evaluate investment, had of necessity embarked on a broader analysis. We look forward (subject to the client's agreement) to publication of the full study when it emerges.

Reviewed by Peter R. White, Senior Lecturer in Public Transport Studies, Polytechnic of Central London

BUS AND RAIL MASS TRANSIT IN DEVELOPING COUNTRIES

Phil Cornwell, Traffic & Transport Consultants

(London, September 1986)

Phil Cornwell opened the 1986/87 session with a talk about recent experiences in developing mass transit systems in developing countries, a field in which he has been extensively involved.

He began by outlining the typical type of problems with which the authorities in cities of developing countries are faced, namely the problem of growth.

The following statistics for Bangkok illustrate the problem:

	Population (millions)	Cars (thousands)
1971	4.2	168
1984	7.0	424
2001 (projected)	10.0	1297
Growth 1971-2001	X 2.4	X 7.7

In the face of this growth, the effect of doing nothing about the travel problem will be increasing traffic congestion so that it will affect the whole day and most of the city. There will be suppression of demand, and people will shift either their homes or jobs, or both, thus losing the benefits of centralisation of activities.

The Bid Options

Phil Cornwell listed five major options to try and cope with the problem.

- Road construction. This is usually far too expensive and requires widespread demolition of buildings.
- Changes in land use. To achieve this requires an organisational structure which most developing countries do not possess.
- Demand management (e.g. road pricing). This solution, which is widely canvassed, and studied, has only been found to be politically acceptable in one case - Singapore.
- Better organisation of public transport, e.g. ensuring that the fares are at a realistic level and that the money collected is passed on to the operator.
- Segregated public transport - often this is the most feasible option in the circumstances prevailing.

The types of mass transit which should be considered are busways, light rail (e.g. trams) with low platforms, rapid (heavy) rail with exclusive use of tracks, and suburban rail, sharing tracks with other types of trains. Within each of these types of rapid transit there are many different options, in particular the type of traction, design of vehicles, degree of segregation from other forms of transport, the extent of the network of routes required, and above all the institutional arrangements for operating the new system. Should there be a new organisation set up or should the new system come within the fold of an existing organisation such as a bus company or the National Railways? The most appropriate solution must depend on a detailed consideration of each particular case. There is no one right answer.

The speaker then went on to discuss the capacity and operating costs, in general terms, of each of the main options, as set out in the table on page 10.

System	Approximate Capacity (passenger per hour per track in one direction)	Annual Costs including annualised capital cost (US\$ per passenger kilometre)
Buses in mixed traffic	10000	0.02 - 0.05
Buses in reserved lane	15000	0.02 - 0.05
Buses on segregated busway	25000	0.05 - 0.08
Light rail in mixed traffic	10000	0.03 - 0.10
Light rail on segregated track	15-20000	0.10 - 0.15 (surface)
Rapid rail	up to 60000	0.10 - 0.15 (surface) 0.12 - 0.20 (elevated) 0.15 - 0.25 (underground)

(SOURCE: Urban Transport Systems - Guidelines for Examining Options, published by World Bank, May 1986)

The most noteworthy aspect of this table is the suggestion that buses in reserved lanes can have about the same capacity as light rail on segregated track, while buses on a segregated busway can have a higher capacity than light rail. This rather surprising result is often overlooked by those who advocate the more glamorous light rail system in preference to humble buses.

A most important issue in system choice is the average income of the population of the city concerned, which would have to support any particular public transport system. Average GDP per head in various cities in 1980 are given below (US\$ 1980 values):

Amman	1420
Bangkok	670
Cairo	580
Calcutta	240
Hong Kong	4240
Karachi	300
Lima	930
Sao Paulo	2050
Singapore	4430
Tunis	1310

London	7920
New York	11360
Paris	11730

Making reasonable assumptions about individuals' use of public transport: average trip length 10 km, 300 working days per year, 10% of income spent on public transport, the following range of average incomes is needed to support different types of rapid transport system:

bus	600-1500 US\$/year
light rail	3000-4500 "
heavy rail	4500-7500 "

It is clear that in these terms very few cities in developing countries can afford to support either light rail or heavy rail systems. This applies whether the system is financed from fares or from taxation.

Choosing between options

In studies of possible public transport systems, it is usual to go through a conventional sequence of demand estimates, costing, economic appraisal and sometimes environmental appraisal. But it is equally important to ascertain which solutions would be politically acceptable, affordable and feasible to construct in the institutional circumstances prevailing. For example, it may be pointless to advocate a scheme which would involve compulsory purchase of land belonging to influential figures who would oppose the scheme.

It is inevitable that the choice between options will often be influenced by what the speaker termed 'non-technical factors'. Examples would be in the ways in which different options affected the power base of politicians, and the relationships between the government of the country concerned and of potential supplier countries. Another factor is the financial terms which an exporting country can offer; yet another is the way in which the deal is "packaged". The most attractive is a "turnkey" deal, in which an entire system can be bought, from feasibility study to system opening, without having to deal separately with all the many specialists involved.

Visual presentation

Phil Cornwell showed a number of colour slides showing rapid transit systems all over the world, but concentrating on two with which he has recently been involved. An example of a "turnkey" project is the light rapid transit system recently installed in Tunis, by a German consortium. The first line of 15 kms was opened in October 1985. Most of the line is laid alongside roads, but segregated from general traffic. The line inevitably creates some severance, although pedestrians can cross the tracks. Where there are intersections between trams and road traffic, these are controlled by signals. Stations are designed very simply, being little more than slightly raised paved areas, and little property demolition was required.

A quite different approach was exemplified by busways in two towns in Brazil: Curitiba and Porto Alegre. In Curitiba there were a small number of trunk busways, with interchanges fed by other buses operating on normal roads. The interchanges are under cover and there is full ticket control. The busways themselves are indistinguishable from normal roads, apart from the fact that they are segregated by raised kerbs. (This fact unfortunately means that they lack the attraction for politicians of more conspicuous types of transport system.)

In Porto Alegre, several different routes all use the same busway, which is segregated only by studs rather than a continuous kerb. In order to achieve the necessary throughput of buses (some 250 per hour in peak periods), they are run in convoys. At points where several routes converge, traffic signals are used to feed the appropriate number of buses on each route to form a convoy with close headway.

Discussion

In answer to a question about maintenance problems in Karachi's bus system, where between 56 and 67% of the fleet is out of use, the speaker agreed that there were acute financial problems there due to revenue leakage. In these circumstances the solutions may be (a) to try to buy one's way out of the problem by investing in a different system, i.e. rail, and/or (b) to privatise the bus system into small units, on the grounds that crews are likely to have a greater loyalty to such units, so revenue leakage would be much less.

John Roberts asked whether demand management by means such as road pricing, as used in Singapore, is likely to be of wider application. The reply was that proposals for Bangkok and Kuala Lumpur were turned down for political reasons.

Abdul Rashid suggested that investment in rapid transit systems is likely to give rise to large-scale unemployment amongst operators of small vehicles for hire such as rickshaws.

Peter Collins, the Chairman of the meeting, closed the discussion by noting that, much closer to home, the Docklands Light Railway has an image that a busway does not, and this is reflected in the fact that even before it is open it is helping to attract large-scale development to Dockland.

Reviewed by Roland Niblett, London Residuary Body

NEW LOCAL RAIL STATIONS

John Preston, Institute of Transport Studies, University of Leeds
(Leeds, October 1986)

An attentive audience heard John Preston describe and discuss the method and results of his Ph.D. project on new local rail stations in West Yorkshire. It was appropriate that West Yorkshire was chosen as the case study, as this part of the rail network has witnessed the opening of a fair number of new stations in recent years and thus contributed significantly to the recent upturn in the number of rail terminals available to the travelling public. In fact, during the five years 1976-85, one hundred new stations have been opened as against twenty closures during the same period. Thus the criteria employed to justify new stations, and the traffic consequences of these, have become quite important in the contemporary public transport scene. It was John Preston's task to build a model (or models) to explain the emerging results from such new stations and advance criteria for future proposals of a similar nature.

The technical details of the evaluation methods used, statistical techniques, etc., can be found in the Institute of Transport Studies Working Paper No.212. This review will concentrate on the background to the project, the kind of approach used, the parameters of the study and some discussion of the results obtained.

The speaker identified seven aspects of the project: background; identification of the sites; forecasting; comparison of models; evaluation procedures and results; production of guidelines for future new stations; and policy implications. Within this format it would be necessary to assess the volume and characteristics of patronage, distinguish between new traffic and diversions from other modes, differentiate between accessibility for commuters, shoppers, etc. and between financial costs and social benefits.

Of major importance was the type of station contemplated and the characteristics of the service intended to serve it. In this context John Preston thought it right to distinguish between new stations in central (urbanised) areas and those in a "parkway" environment. Stations on new or reinstated services were likely to present different problems to additional stations on well-established services. So far as the physical characteristics of the station were concerned it appeared that the typical new station in West Yorkshire was unmanned, catered for train lengths of four vehicles and cost around £100,000 to provide - obviously the less complicated end of the spectrum of station types! In fact, six examples of new stations conforming to the above specification could be found in West Yorkshire and formed the basis of the subsequent evaluation.

Some constraints on the choice of potential sites for the future were mentioned, in passing. Engineering and topographical restrictions are fairly obvious, but the wise course of eschewing any new stations on lines not to be supported in the long-term by

the PTE pre-supposes the existence of a long-term PTE plan of reliable stability.

On forecasting methods and modelling techniques those interested in the detail are referred to Working Paper 212. However, there are some general comments worth making. Market research based on "stated intentions" is not favoured because gross overstatement is likely and the research is too expensive. A range of models was used. Aggregate models (on flow, population, social class and generalised cost) were calibrated by reference to Local Authority surveys of trip generation. A hierarchical model which differentiated between private and public transport on the one hand, and between bus and rail on the other, was found to be useful - but difficult to manage. It was discovered that parameters were not, generally speaking, transferable from one area to another, but, on the other hand, were comparatively stable over time. Unfortunately, trip data was not available for all the potential stations tested. A market segmented model gave the best results - within 34% of actual traffic experienced.

Evaluations were of two forms: a conventional financial measure of additional receipts compared with additional expenditure resulting from the new station; and a social cost benefit evaluation in which financial and time savings to new users were offset by time losses to old rail users (the latter occasioned by the worsened service caused by the additional service stop at the new station). The possibility of growth of up to 75% over three years was also evaluated.

The results from the six stations examined may be summarised as:

1. a range of financial benefit to the PTE from £0.36m (low growth) to £1.3m (high growth)
2. a corresponding social net present value between £1.76m and £0.25m.

Twenty-eight "potential" stations were also evaluated giving a £2.4m net revenue gain to rail only. Ten of these stations were "in balance" financially, but showed significant social benefit under high growth conditions.

Of great interest were the "guidelines" for new stations which John Preston has derived from his work. He concluded that in the West Yorkshire type of situation the population upon which the station relied for its patronage needed to be concentrated within 800 metres of the station. Assuming a capital cost for the new station of £100,000 a population of 2,000 would give benefits if the average fare from the station reached 60p, but if it only reached 30p (a situation likely to arise if an inner city site was being considered) then a population of 5,000 would be required. At the other extreme, a rural site would be likely to generate an average fare of £1, and a population of 1,000 within the station catchment area would suffice.

In conclusion, the speaker said that the six new stations had proved to be successful, both financially and in social cost benefit terms, but the success was only marginal in the context of the PTE's total rail operations. As an aside he mentioned that the PTE's expectations were considerably in excess of what actually happened. He thought the methods employed sufficiently robust to be able to recommend ten other potential sites for new stations.

In the discussion which followed several questions relating to differences in the results for different stations were raised, which illustrated the need to take each station and its circumstances on its merits, and pointed to the dangers of generalisation. For example, why did FitzWilliam give a better result than Bramley? Answer: more long-distance trips, more time savings (there being no direct bus service at FitzWilliam), and higher social costs in the Bramley case because of the train "congestion" arising from the presence of the new station.

The social time penalty to existing users was advanced as the reason for social benefits being lower than financial benefits under a low growth scenario. It was interesting to learn that the patronage of a re-opened station was similar to that experienced before its closure - provided there had been no major population movement in the interim.

To conclude: your correspondent found his first visit to a Northern Section meeting to be very profitable, as he experienced a well-presented and illustrated address, followed by a steady flow of relevant questions from the very responsive audience.

Reviewed by Don Box

THE CASE FOR PARKWAY STATIONS

John Segal, British Railways Operational Research Unit
(London, October 1986)

At the meeting held on 15th October 1986 at the Polytechnic of Central London, John Segal presented a well-constructed discussion paper of the role and significant features of 'Parkway' stations, as marketed or created by British Rail over the last fifteen years.

The problem that was identified in the late 1960's was that the railway could not compete on door-to-door times with the motorways, even with high speed trains, except city-centre to city-centre. John Segal started by showing (in Table 1) relative journey times of suburb to (other) city centre and suburb to suburb trips:

Table 1: Relative door-to-door times

	Rail	Car
Manchester - London	3h 15min	3h 45min
Altrincham - London	3h 45min	3h 30min
Bolton - Highgate	4h 15min	3h 45min

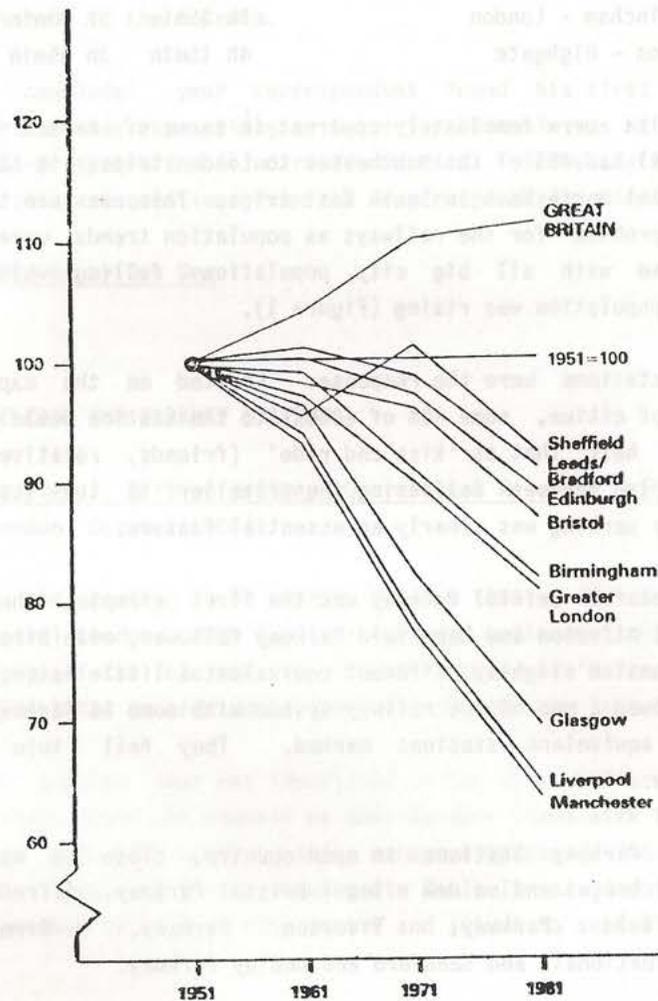
The results were immediately apparent in terms of market share: while rail had 48% of the Manchester to London trips, it had only 40% of total North West to South East trips. This was seen to be a growing problem for the railways as population trends were well established with all big city populations falling while the national population was rising (Figure 1).

Parkway stations were the response. Located on the expanding fringes of cities, some 40% of access to the station would be by car with half that as 'kiss and ride' (friends, relatives and particularly spouses delivering the traveller to the station). Ample free parking was clearly an essential feature.

The successful Bristol Parkway was the first example; the less successful Alfreton and Mansfield Parkway followed, with Birmingham International a slightly different equivalent a little later. John Segal showed a map of the railway system with some 16 Parkway, or Parkway equivalent stations marked. They fell into five categories:

1. True Parkway Stations in open country, close to motorway interchanges and on new sites - Bristol Parkway, Alfreton and Mansfield Parkway, Tiverton Parkway, Birmingham International, and Sandford and Dudley Parkway.
2. Small town stations, on the London side of conurbations - Runcorn, Wakefield, Wilmslow etc.

Figure 1: Population Changes in Great Britain and Major Cities
1951-1981



3. Renamed (and marketed) stations - Didcot (now) Parkway, Southampton (Airport) Parkway, Bodmin (Road) Parkway.
4. Commuter parkway-type stations in the Southern Region (Network south East).
5. "M25 ring" stations for London suburb outbound traffic and suburban business destinations - Watford Junction, Slough, Stevenage and (proposed) Iver (for Heathrow).

John Segal went on to examine the 'classic' success case of Bristol Parkway. He showed a slightly misleading slide (Figure 2) of the origins of passengers joining there. Misleading because the 'contours' around the station were measured in distance, not time and so gave the impression that places like South Bristol and even Bath contributed Parkway passengers.

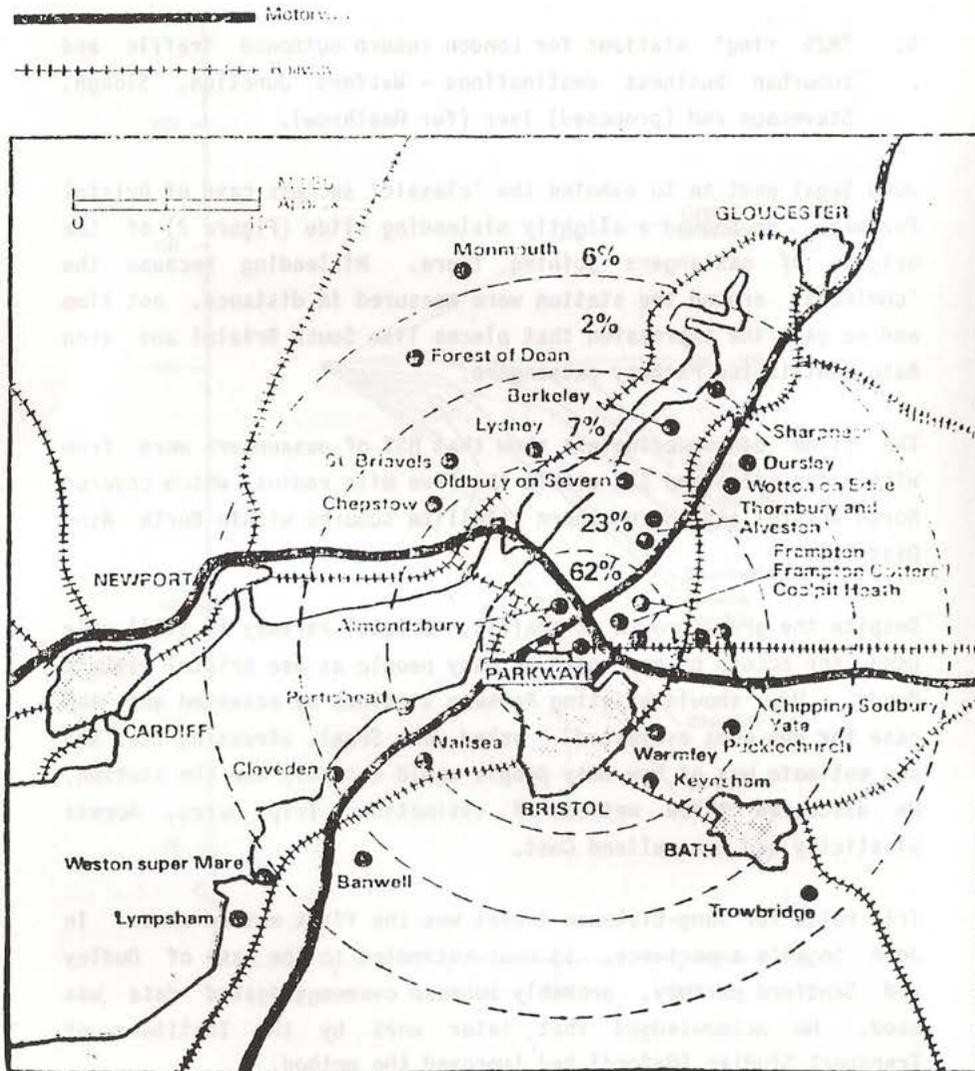
The slide did nevertheless show that 85% of passengers were from within ten miles and 62% within the five mile radius, which covered North Bristol and the northern satellite suburbs within North Avon District.

Despite the great growth in traffic, Bristol Parkway is still only used for access by one third as many people as use Bristol Temple Meads. How should existing Parkway stations be assessed and the case for new ones evaluated? asked John Segal, stressing that the key estimate was of how many people would actually use the station. He discussed three methods of estimation; Trip Rates, Access Elasticity and Generalised Cost.

Trip rates for long-distance travel was the first method used. In John Segal's experience, it over-estimated in the case of Dudley and Sandford parkway, probably because over-aggregated data was used. He acknowledged that later work by the Institute of Transport Studies (Oxford) had improved the method.

Figure 2: Origin of Passengers joining trams at Bristol Parkway

1982



Next he used Access Elasticity, which he suggested could be framed in terms of time or cost - he had chosen time but had found it difficult to estimate revealed preference due to the (unknown) underlying trip-rates. He had therefore used the stated preferences of passengers interviewed about hypothetical situations and obtained a wide range of elasticities from -0.04 to -0.23. These however proved to be related linearly to access journey time except for some stations with low average access times, which turned out to be commuter stations rather than 'real' Parkways.

This led John Segal to the conclusion that the third method - Generalised Cost - would provide the best explanation with the value of access time/cost weighted twice the value of in train time/cost. Perhaps not surprisingly, this is similar to the familiar findings that waiting and walking times are about twice the deterrent to travel by public transport as in vehicle time.

The assumption of this analysis was that parking charges are the same at the parkway station as the 'competing' City centre station. Differential parking charges can be easily incorporated within a generalised cost analysis and with the help and commentary of a colleague in the audience who had actually done the analysis, John Segal showed (in Table 2) the results in terms of passenger numbers of closing Bristol Parkway, assuming different parking penalties at Temple Meads.

Table 2: Estimated Percentage loss of passengers on closure of Bristol Parkway

Parking penalty	Paddington	Exeter + SW	Cardiff + S.Wales	Midlands + North	Total
0 mins	4%	1%	11%	8%	5%
15 mins	14%	9%	26%	19%	16%
30 mins	25%	31%	42%	30%	28%

The parking penalty was deemed to reflect congestion around Temple Meads as well as the price of parking there but at about 1% passenger loss per minute penalty was thought to be an over-estimate for the most reasonable case of 15 minutes difference. Unfortunately the analysis was not taken further to weight passengers by revenue, nor were other alternative stations such as the 'secret' Filton station (used even now by some Bristol - South Wales trains) and less than a mile from Parkway, considered. Both these points tended to overweight the potential loss to BR from depriving South Wales passengers of Parkway and may therefore exaggerate the value of Bristol Parkway.

From this discussion the general net revenue effects of Parkway stations were summed up in Table 3:-

Table 3: Net Revenue Effects of a Parkway Station

Transfer from existing station	neutral
Access mode changed from rail to car	negative
GENERATED TRAFFIC	<u>POSITIVE</u>
Slower trains (from additional stop)	negative
Additional train running costs	negative
Station operating costs	negative

Because generated traffic produces much more extra revenue than the extra costs identified, Bristol Parkway "makes a lot of money" (John Segal did not elaborate). He put this and other Parkway station successes down to five attributes:

- easy access and parking
- large local population
- long distance rail trunk haul
- fast, frequent service
- local attractors.

Of these, he suggested only the last was lacking in the case of Bristol Parkway (although it can be argued that British Aerospace and Rolls Royce at Filton, Hewlett Packard and the Polytechnic even closer and the burgeoning high tech and out-of-town shopping facilities near the motorway interchange are providing such attractors nearby). He also under-estimated the remarkable junction position of Bristol Parkway which is on both North/East-South/West and East/West main lines, which gives it an all round rail service, probably only matched by Reading and Bristol Temple Meads itself in the whole of the South of England. Even more successful was Birmingham International, thanks to the National Exhibition Centre, Birmingham Airport and (although John Segal did not admit it) a properly designed and laid out modern station to contrast with the Spartan facilities, inadequate ticket and information office, long steep steps and 'temporary' shelters of Bristol Parkway.

Many of these points were brought out in the lively discussion that developed after the presentation, as was the fact that Parkway stations seem to be unique to Britain; surely here is the concept that European railways could usefully take up even though European cities are still built at higher population densities than British ones. The economics of Parkway stations were also seen to depend on the existence of redundant railway land for the car parking and planning restrictions that meant the land had no (or very small) alternative use value or opportunity cost.

The paper appeared better at the time than on reflection, not by reason of any failings of the author but the feeling that much commercially sensitive information had been deliberately and probably wisely excluded. After all it would do BR no good if coach operators took up the Parkway concept and so added to their motorway competition with the railways.

Reviewed by David Bruce, Bristol Polytechnic

BOOK REVIEWS**THE US COMMUTER AIRLINE INDUSTRY. POLICY ALTERNATIVES**

James F. Molloy, Jr.

Lexington Books; Lexington, Massachusetts, USA (1985)

The development of the so-called commuter airlines in the United States is a fascinating story and it is surprising that it has not attracted greater academic interest in the past. James Molloy, an associate professor of management teaching specialising in transport and small businesses at Northeastern University, attempts to correct this omission with a detailed account of the early growth of the commuters, the effects of deregulation and, in particular, the operation of the essential air service programme which provides subsidies for commuter operations to a large number of small communities. Molloy finishes with a series of policy recommendations, especially concerning the period after 1988 when the subsidy programme is scheduled to end.

Before the deregulation of domestic air services in the US the commuter airlines were probably the most dynamic and fastest growing sector of the industry. Limited to operating aircraft with 30 seats or less, they were effectively exempted from economic regulation. They provided a key, and frequently quoted, example of what might happen to the industry as a whole if all economic regulations were abolished. By the time of the Airline Deregulation Act in 1978 commuter airlines were carrying over eleven million passengers per year, about 4.5% of all passengers carried by US airlines on domestic services.

It was ironic that deregulation actually produced greater regulation for the commuters, especially in the safety area. Nevertheless, they continued to prosper, at least in terms of traffic growth if not financial health. Between 1978 and 1981 the number of passengers carried by commuter airlines increased by over

38%, compared with an industry growth of just 4% and a decline of 10% by the major trunk airlines. The number of commuter airlines in existence increased from 117 at the end of 1976 to 168 by the end of 1983. The number of points served by commuters increased from 415 in 1976 to 536 in 1981, while those served by the trunk and local airlines declined from 421 to less than 300.

All this, and much more, is described in detail by James Molloy, supported by numerous statistical tables. There are a small number of factual errors and some of the tables could have been presented more clearly, but on the whole the author does a good job. Anyone interested in the post-war development of the US airline industry will find this book, which appears to be based on Molloy's Ph.D. thesis, both useful and instructive. It could not be described as light reading, but equally the style is not difficult despite the mass of statistics.

Inevitably the figures quoted in a book such as this are out of date by the time of publication. Molloy uses some statistics for 1983 and 1984, but most cover the period only up to 1981. This is a major drawback in an industry developing as rapidly as air transport, and especially so in a sector such as the commuter airlines which has changed so much in the past two years. Regulations introduced to control the misuse of computer reservations systems have had the effect of encouraging tie-ups between the major trunk airlines and the commuters. The vast majority of commuter airlines are now wholly or partly owned by the trunks or have entered into close marketing arrangements with them. It is too early to determine the final effects of this restructuring of the industry, but it is likely to be substantial. Not surprisingly Molloy covers none of this. Thus, useful as his book may be, there is ample material available already for a second volume on the US commuter airlines.

Reviewed by Dr. Barry Humphreys, Head of Air Services Policy,
Civil Aviation Authority

BUS WORK AND HEALTH REPORT

Dr. M. Joffe, T. Mackay and J. Mitchell

TURC Publishing, (7 Frederick Street), Birmingham B1 3HE (£4)

This report presents the results - somewhat belatedly - of a consultancy study, carried out for the GLC, on the health effects of one person bus operation. It complements the general study of OPO in London carried out by Phil Goodwin (which was the subject of a TEG meeting in January 1986).

The study was based on the responses to a self-completion questionnaire handed to all drivers and conductors at a sample of 13 LRT garages. The survey was designed and circulated with the active participation of the TGWU, in contrast LRT management refused to co-operate with the study or provide data for it. The responses to detailed questions on types of ill-health were used to build up general indices of the participants' health. Further questions allowed various possible explanatory factors to be considered. The main conclusion is that OPO drivers experience significantly worse health than crew drivers, with conductors being between the two. This cannot be explained by differences in age, smoking and drinking habits, weight or housing conditions. But it does appear to be related to feelings of distress, tiredness, being "wound up" and lack of job satisfaction. A large number of tables provide detailed statistical breakdowns, and the methodology is explained at length in the appendices.

The study could be of interest to TEG members for three reasons. First, although not an economic analysis, the report demonstrates that health effects are a factor that ought to be taken into account in any economic assessment of OPO. Second, it provides a useful introduction to occupational health issues for those - like this reviewer - with very little knowledge of the subject. Finally, the authors claim that the report shows that trade union based research can not only be scientifically valid, but can also contain insights

which would not otherwise be obtained. This general claim seems to be borne out by what they have produced.

Reviewed by Simon Temple, Transportation Group, UMIST

TRANSPORT POLICY - A STUDY OF ROAD PASSENGER TRANSPORTATION

Terry Markman

Free Market Foundation of Southern Africa (5 Wellington Road, Parktown) Johannesburg, RSA (1984)

Most of the arguments for a free market in road passenger transport have been around for a good while; not just my own contributions, but those seminal papers by Ponsonby and Smeed. Yet while Hayek's influence at the London School of Economics may be visible in retrospect in Ponsonby's work, the case for deregulation has been developed prior to the general appearance of neo-Austrian texts. That is one reason why this monograph is so interesting, since it sets out a critique of South African policy that is firmly rooted in the arguments of Hayek, Ayn Rand, Murray Rothbard and von Mises. It makes one look forward to the enormous benefit that could come from a rigorous counter-argument from the neo-classicists, who can no longer take their model of the economy for granted.

Markman's analysis is the more valuable in that it applies neo-Austrian theory to a specific situation, which he describes. It has the further advantage that he goes on to use the theory as a touchstone to judge the Welgemoed Report, giving us a further application to examine. Some of his arguments suffer from the enthusiasm that is not unknown among converts to any new school of thought, but much can be allowed for any author who breaks new ground.

While it is becoming plain that transport economics can never be the same again, it is also true that we await a neo-Austrian text on transport. (I suspect it is equally true that a good many of us have yet to read a general neo-Austrian text, like Shand's The Capitalist Alternative.) Markman has not written a full text, but when that book comes, it will be the weaker if it makes no reference to Markman.

Reviewed by John Hibbs, Director of Transport Studies,
Birmingham Polytechnic

SKY HIGH: AIRLINE PRICE AND EUROPEAN DEREGULATION

Adam Smith Institute (1985)

TRANSPORT POLICY IN IRELAND

Irish Management Institute (1982)

Sean D. Barrett

The parrot-cry of 'fascist' that serves in some quarters as a means of avoiding debate with the advocates of a free market has never been a pleasant sound, but I know it has been used of certain of my own publications, and I suspect that it may inhibit the acceptance of Sean's discussion of European Air transport, just because it comes from ASI. That would not just be a loss to general levels of discussion, but would be equally illogical, because what this book is about is an analysis of protectionism, and that is something that left-wing economics at one time was against. Sky High contains a great deal of economic analysis that the airline establishment would prefer not to be done, and effectively calls in question the whole basis of policy. But the parrot-cries of those who favour protection are the same, whether the vested interest is private or 'public', and the determination of vested interest to defy the logic of economics is not limited to the airlines.

Sean's analysis of Irish state policy for transport does not seem to have been noticed on this side of the oceanic divide that seems to separate our two countries - why is it that Irish thought always seems closer to the United States than it is to Great Britain (don't answer that)? But here is an extended discussion of protectionism at work and its horrifying consequences for a nation's economy. Governments everywhere that listen with too much sympathy to their entrenched monopolists, and seek the fool's gold of 'co-ordination of supply' should be reminded of Plant's conclusion back in 1931, that it 'involves impoverishment of the community'. When will they ever learn?

Apart from anything else, these two books are full of statistical material, so that those who would reach other conclusions can use them to work out why.

Reviewed by John Hibbs, Director of Transport Studies,
Birmingham Polytechnic

TEG NEWSMEMBERSHIP NEWS

Our international links are growing! We have recently recruited our first member from Japan. He is Professor Haruya Hirooka of Hosei University who was in this country quite recently and learnt of our activities through contact with our home-grown membership.

We also export members. Ian Savage, a committee member for a number of years, has now taken up a post at Northwestern University, Evanston, USA. He is, however, maintaining his membership of TEG and doubtless we will hear from him from time to time. Ian worked at Booz Allen & Hamilton and I am pleased to say that we have recruited another from that organisation in his place. He is Trevor Hartley, who was at the Institute of Transport Studies at Leeds at an earlier period in his career.

Two more London-based recruits to report: John Roberts of TEST and Laurence Baker of Halcrow Fox. Finally, moving off-shore once again: Harry McGeehan of Coras Iompair Eireann, and based in Dublin, has joined the Group.

May I remind you that a full list of members, with their telephone numbers and details of employment (if any), is provided at the end of each year. To maximise the usefulness of this service, and also to ensure that correspondence, journals, etc. go to the right addresses, please let the membership secretary know of any changes in this kind of personal detail.

Don Box, Membership Secretary

CHRISTMAS DINNER

By way of widening the social activities of the Group, it is proposed to hold a Christmas Dinner. This will follow the London meeting on Wednesday 17 December - at which the speaker will be Professor Rigas Doganis, of the Transport Studies Group, Polytechnic of Central London, on 'Prospects for European Airlines in a Deregulated Environment'.

The Dinner will be held at 2030 in the recently-refurbished Sherlock Holmes Hotel, in nearby Baker Street. The menu will comprise homemade cream soup, a main course with traditional steak, kidney and mushroom pie, and chocolate profiteroles. The cost per head will be £11.40, plus drinks. We hope that members will take this opportunity of getting together more informally. Please let the Chairman know by December 1st if you wish to come along, and send a cheque of the above sum for each person, payable to the 'Transport Economists Group'.

Peter White, Chairman

MEETINGS AT PCL

In future, meetings at the Polytechnic of Central London, 35 Marylebone Road, NW1 will be held in Room 206, a recently-constructed lecture room with higher quality facilities than those used recently. This is adjacent to the centre staircase, on the second floor. Drinks before the meeting will be served in Peter White's office, off Room 205, on the opposite side of the stairway.

Peter White, Chairman

TEG ARCHIVES

Having inherited various documents from previous chairmen, executive secretaries and others, I currently have a pretty complete (not to say bulky) archive of TEG from early days, including (to the best of my knowledge) all issues of the journal. However, there are no records of any meetings before the second AGM (1975) and I would be interested in any earlier documents long-established members may have.

Peter White, Chairman

THE TRANSPORT ECONOMIST

The article on the origins of the Transport Economist in the last edition was a little late (one edition late in fact!) in appearing. This is definitely Volume 14 Number 2.

The British Library would like to complete their set of the TE. If any readers have duplicate copies of earlier editions please help keep the Editor and Chairman out of the Tower of London whence the BL seems intent on sending us if we do not produce these early numbers. Please send any spare copies to Peter White at PCL.

Stuart Cole, Editor

FORTHCOMING MEETINGS

1986-87 LONDON MEETINGS PROGRAMME

Wednesday, 17 December 1986

PROSPECTS FOR EUROPEAN AIRLINES IN A DEREGULATED ENVIRONMENT

Professor Rigas Doganis, Transport Studies Group, Polytechnic of Central London

18.00 for 18.30, PCL

CHRISTMAS DINNER (Details on page 33 of this edition.)

Wednesday, 21 January 1987

ROAD NETWORK IMPROVEMENTS: IDENTIFYING THE WIDER BENEFITS IN FREIGHT DISTRIBUTION

David Quarmby, J.Sainsbury plc

18.00 for 18.30, PCL

Wednesday, 18 February 1987

SECTOR MANAGEMENT IN BR

Chris Green, Director Network South East, British Rail

18.00 for 18.30, PCL

Wednesday, 18 March 1987

ECONOMIC ASSESSMENT OF URBAN ROADS

Richard Paling, Halcrow Fox & Partners

18.00 for 18.30, PCL

Wednesday, 15 April 1987

VALUE OF TIME

Mark Egerton, Department of Transport

18.00 for 18.30, PCL

Wednesday, 20 May 1987

To be arranged

"PCL" refers to the Polytechnic of Central London building at 35 Marylebone Road, London NW1 adjacent to Baker Street Underground Station. Meetings are held in Room 206 on the second floor of the main block directly fronting Marylebone Road.

1986-87 NORTHERN MEETINGS PROGRAMME

Wednesday, 4 February 1987

ALLOCATIONAL, DISTRIBUTIONAL AND PUBLIC FINANCE IMPACTS OF URBAN PUBLIC TRANSPORT SUBSIDIES

John Dodgson, University of Liverpool, and

Neville Topham, University of Salford

Meeting at: Department of Economics, University of Salford

15.30 for 16.00

Wednesday, 6 May 1987

MONITORING BUS DEREGULATION

Norman James, Transport Operations Research Group,

University of Newcastle

Meeting at: Room G.03, Institute for Transport Studies,

University of Leeds

15.30 for 16.00

NON-MEMBERS ARE WELCOME TO ATTEND ALL TEG MEETINGS

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EDITION	VOL.	NO.	COPYDATE	DATE OUT
Spring 1987	14	3	January 30	February 27
Summer 1987	14	4	May 1	May 29
Autumn 1987	15	1	July 10	August 28
Winter 1987	15	2	October 30	November 27