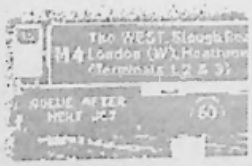

Tenth Annual Symposium:
15 October, 2002 ~ Midland Hotel, Derby

LEARNING FROM HISTORY

Current Transport Issues that have Historic Roots

SYMPOSIUM PAPERS

Roads and Road Transport History Association

Founded in 1992 to support historical research

It is regretted that one paper presented at the Symposium, "Area Agreements" by Jim Hulme, is unable to be included.

7 Squirrels Green, Great Bookham,
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The Roads & Road Transport History Association
Tenth Anniversary Symposium

Learning from history

Garry Turvey CBE, President

Colleagues,
We have chosen the title "**Learning from History**" for this first milestone in our short history and tomorrow we will have the privilege of listening to a varied range of speakers who will draw on their personal experience to bring that title to life.

We might easily add a sub-title "Why Are We Here?"

Again, there might be **varied** answers to that question, but whatever they might be it is certain that we are here because we all share an interest, (to some it might even be an obsession,) in transport. Collectively we will have considerable knowledge of the transport business and together we will have centuries of experience.

Interest, knowledge and experience. Attributes which ought to be held in the highest regard, but all too often these days are ignored or are even the cause of derision.

Last week at the **FTA Dinner** in London I was introduced to a senior Transport Department civil servant who, I gathered, was involved in the highways side of the business. I asked him what he thought of the excellent work being undertaken by the **Motorway Archive Trust** whose book "**Frontiers of Knowledge and Experience**" had just been published. He professed to know nothing about it, so I explained that the Trust had been established so that the personal experiences of those who had actually delivered the motorway programme during the 50's, 60's and 70's (his predecessors) could be recorded whilst they were still around to do so and, hopefully, would be of immense value to those who were to follow (assuming that we were going to build some more roads sometime). To say that he was dismissive would be to put it mildly. Out came the all too familiar present day response "What have I got to learn from them?" He certainly wasn't prepared to "learn from history".

Over the past 18 months I and a few others from my era have been helping the RAC Foundation in trying to present a motorist viewpoint at a least some of the mass of integrated transport meetings and conferences which have been held and are continuing to be held, by the **Regional Assemblies, the Regional Development Agencies** and especially the **Multi-Modal Studies** which cover major parts of the country. I have become familiar with SoComms, Orbit, SWARMMS, the West Midlands MMS , not forgetting CHUMMS, the Cambridge to Huntingdon MMS and there are many others.

All follow a similar pattern. They are all being run by major consultancy firms.

The multi-modal teams report to the Regional Assemblies, who, in turn are responsible to the local Government offices and eventually the route leads back to the Secretary of State.

As always the environmental groups are well organised and feature prominently at all levels of this cumbersome process, so too the various layers of government. Bus, lorry and car representatives, indeed transport as a whole, has struggled to get a hearing and then, in many cases, only grudgingly. Those with practical transport knowledge are largely ignored and when assistance is volunteered it is frequently rejected.

Some of you might know Professor John Wootton, who was a much respected Director of the Transport Research Laboratory and currently is visiting Professor at Southampton University. John is a fountain of knowledge, without any axe to grind and he works with us for the RAC Foundation. Here I quote from the minutes of one of our meetings.

> *"John noted that SWRDA had organised a 3 day workshop on SWARMMS. John's request to participate had been refused without any good reason being given "*

Mind you, there is nothing new in that. Our Chairman's excellent publication "Deregulated Decade, Ten Years of Bus Deregulation" 1997 states

> *"Mr Ridley was seen as an iconoclast, not least in neglecting to consult the people with experience "*

Now I am not against the concept of multi-modal studies, although I have doubts about breaking our relatively small country into many parts, at least as far as transport strategy is concerned. Nor am I opposed to on-going debate upon our very obvious transport problems. My concern is how the matter is being handled and the process of choosing those who are invited to contribute. The enormous cost of the whole exercise, now standing, we are told, at £32 million with more to come, should also be a matter of deep public concern.

But, within the context of our symposium, our greatest concern must be the low status given to those who know their transport. The naivety of many of the contributions, the attempted repetition of work which has been carried out many times before and which in most cases, is readily available for study and a widely held view that there is nothing to learn from what has gone before..
It would, of course be wrong to infer that nothing good, or

new, is emerging from all this work, but from what I have seen so far the reports are strong on grand designs and sound-bite statements and virtually bereft of realism. The South East Regional Assembly draft transport strategy, for example, which boasts the title "From Crisis to Cutting Edge" has a vision statement as follows:

"to create a high quality transport system to act as a catalyst for continued economic growth and provide an improved quality of life for all in a sustainable, socially inclusive manner; a regional transport network which by 2021 matches the best in north west Europe ".

Grand words, but you look in vain for the deeds and the realism to support the rhetoric. Maybe they will emerge in good time, but those of us who have seen so many false starts, so many broken promises can be excused for having our doubts.

There is far too much talk, far too many reports, meetings and conferences, too much generality at the expense of substance, certainly far too many fingers in the pie and definitely **far too much money being wasted on going over old ground** most of which is familiar to anyone who has studied transport and been prepared to learn from history.

So, what as transport historians, whether professional or amateur, should we say when we are given an opportunity to participate in this on-going debate?

You will all have your own views, but for my part I would try to ensure that no-one was left in any doubt as to the importance of the following.

Investment
First and foremost, nothing will ever be achieved without significant ,on-going, and well directed investment. From what I have seen so far the emerging reports cannot be faulted on the first two counts, **always assuming, of course, that words will be turned into deeds,** (the proposals in the south coast report alone covering Dover to Southampton are costed at £1.1 billion) **but I doubt whether the same can be said about the third count, the need for sound and proven direction.**

I confess to mixed emotions whenever I see the rapidly emerging high speed rail link through Kent. That part of me which has long campaigned for transport investment rejoices at seeing such an initiative. Then I consider all the other shortcomings in our nation's transport facilities and wonder what has happened to our sense of priority. If we are to get the best value from the Government's commitment to spend £180 billion over a ten year period we must harness all the experience and expertise at our disposal to ensure that money is spent wisely and not in response to some fashionable, politically correct whim.

Transport Serves
Secondly, transport policies must be based firmly on the understanding that transport, in all its forms has but one purpose and that is to serve the customer.

You cannot separate the transport function, no matter what the mode, from all the other activities which make up society and comprise our way of life. Policies which start from the other end and assume that the customer will respond to whatever is put before him, or her, are almost certainly doomed to fail. There has been far too much of that in the multi-modal studies, with planners from the "we know best " school all too often avoiding to address the only question which matters **"will it work"?**

The most obvious example of this has been, in my opinion, a massive over-assessment of the scope for modal shift away from the lorry and the car.

Urban and Country
Then we must counsel against falling into the trap of believing that solutions which are appropriate for our major urban areas can be imposed upon the rest of the country. Too many transport theorists live in towns and cities and do not appreciate the needs of and problems faced by those scattered throughout the rest of the land.

Mistakes
I could go on, but just as we want others to learn from past achievements so, I hope that we would have the grace to warn others of our mistakes.

Again the list is endless and time is pressing, but I would always stress the importance of taking a long term view and avoiding the narrow perspective. Not easy when immediate results are demanded and entrenched positions are there to be defended. Just two examples.

For far too long we in the FTA fought a rearguard battle against tolls on the well known grounds that taxes were far too high and more of that general revenue should be devoted to transport. That is still a widely held and legitimate view. But what we should have done was to concentrate first and foremost on the need for major capital investment in our transport systems and then worry about the means of raising the finance.

And how back in 1968 when we moved away from quantity licensing for goods vehicles to a system based firmly on quality did we then decide to have standard and restricted licences and the consequential different assessment of safety?

What next?
So what does all this mean for us and the Roads and Road Transport History Association?

We can, of course, shrug our shoulders and leave others to worry. That would be an understandable approach and it would be naive and inappropriate to think that as an Association we should change course. We are not a lobby organisation and I doubt whether any member would wish us to become one.

We are though, custodians of transport history. As such it is fair to assume that we are advocates of the doctrine that the more we understand where we have come from the greater chance we have of clarifying both where we are now and where we might be going in the future.

The forthcoming publication of our two Companions should give us an excellent opportunity to promote the belief which brings us together at this time. **Namely that you can and should learn from history.**

Survival rates in the road haulage industry - What's new?

David Holding, Newcastle Business School, University of Northumbria

Perhaps I can begin with extracts from two readers' letters to the journal *Commercial Motor*:

> "Our industry is now at an all-time low. . . I feel they (the Government) are going to put us all on the dole, turning what is supposed to be a proud nation into a holiday island for the unemployed". (1-7 April 1999).
>
> "Things have never been so bad in haulage. We really are close to losing our businesses, our livelihoods and our homes." (24-30 June 1999).

It is interesting to compare these views with the regional features which Commercial Motor regularly runs, and which invariably show beaming hauliers standing before newly-delivered trucks, making bullish statements about business conditions! The letters above date, of course, from the period shortly before the "fuel tax escalator" culminated in the blockading of oil refineries and other protests; parts of the haulage industry had already been campaigning against the effects of the "escalator", including some demonstrations in the form of slow-moving vehicle convoys, but these were largely ignored by Government until the more widespread protests.

At the time we were discussing with the Road Haulage Association possible areas of common interest for research, and it was suggested that survival rates could be such a topic. It seemed to have potential, and after some initial work by myself, an undergraduate returning from a work placement with Transport Development Group, Graham Heap, took it over as his final year dissertation. He wrote an excellent report and we took a paper based on it to the 2000 meeting of the Logistics Research Network.

Objectives of this Paper

The theme of this conference is "Lessons from the past" and I have always believed in the value of history as a pointer to the future. My intention, therefore, is to summarise the findings of the 1999/2000 work but then to look back at the evidence available of survival rates, and the factors influencing those rates, under earlier regimes. Despite rising thresholds in the form of increased capital requirements etc, the haulage industry is still one of the easiest to enter and so one of the closest to a free market in the UK economy. It should be instructive to see how survival rates compare in the period before 1933 when no licensing system existed at all, and between 1933 and 1969 when a fairly restrictive system of A, B and C Licences prevailed.

Recent survival rates - methodology

One of the reasons that a study of survival rates appeared attractive was the shortage of existing industry data. This applies not only to business performance but to more fundamental statistical data. While the Traffic Commissioners' Annual Reports and the annual "Transport Statistics UK" tell us much about licences and the vehicles attached to them, this is not related to the businesses which own the vehicles and hold the licences; indeed it was difficult to decide on a means of obtaining data that was going to be at all reliable. Another possible source was VAT registrations and re-registrations, but these shared with Traffic Commissioners' data the weakness that it gave numbers at different times but did not distinguish new businesses from old ones. Additionally we suspected that many small operators would not register for VAT because they believed that an annual income below the VAT threshold would be sufficient to cover their costs and make a living; such operators would be precisely those who failed to survive!

However, we were assisted by a change in the Operators' Licencing system in 1997 which replaced renewal of licences by a 5-yearly review process. We surmised that an operator going out of business would not have notification to the Commissioners at the top of his priorities, but that when the review was undertaken operators would have to confirm they were still trading and, more importantly, pay a fee. Given the information available at the date of the study, we were able to look at how many of the new licences issued in 1992 and 1993 were still in force 6 years later. Criticisms can be made of the licence as representing a business (eg when a business name is changed) but this seemed to be the nearest we could get. The sample that was used was Standard National Licences issued in the North Eastern Traffic Area, which we were happy were reasonably representative.

Recent survival rates - findings

The results from the analysis are summarized overleaf; 647 new licences were issued in 1992 and 533 in 1993. As we expected, failures were concentrated in years 5 and 6, when the revie wwould take place.

These figures were compared with results published by Barclays Bank PLC (1998) showing the survival rates of new small business accounts set up with them after different periods of time. "Survivability" as a whole was improving through the mid-1990s from a situation where 20% remained at the end of 3 years in 1994 to 41 % in 1996 and 50% in 1998. Nonetheless these levels compare unfavourably with the 6th-year survival rates of 57 and 58% shown above for haulage

Year of Licence "Life"	*Number Failed*	*Cumulative Failures*	*% Failed*	*% Failed*
1992				
1	38	38	6	94
2	38	76	6	88
3	21	97	3	85
4	21	118	3	82
5	81	199	13	69
6	76	275	12	57
7	10	285	2	56
1993				
1	23	23	4	96
2	33	56	6	91
3	16	72	3	86
4	18	90	3	83
5	79	169	15	68
6	54	223	10	58
7	0	223	0	58

businesses, especially when it is considered that the haulage data includes 2!! licence terminations and not just those arising through business failure.

Yet considerable evidence also exists of poor returns and in some cases financial losses in the industry, as demonstrated in a series of studies by Plimsoll (1997, 1998, 1999). In each year these examined a representative sample of companies; in 1997 (reported in 1998) mean profit margins of 3% were found, with 487 companies experiencing a fall in profit against 255 achieving an increase. 11 % of companies achieved a profit margin exceeding 10% while 20% recorded no profit. By the first quarter of 1998 (reported in 1999) the proportion failing to achieve a profit had risen to 34% and declining profits were being experienced by over 50% of firms surveyed.

This apparent contradiction may be explained in terms of the absence of financial training among proprietors of small haulage businesses. McHugh (1992) made another apocalyptic statement in "Commercial Motor" but it is one which perhaps gives us clearer insight.

> "Exams are passed, licences obtained, the vehicle is purchased, advertisements for work are placed and eventually employment is "secured". Six months later 25% of the hopefuls will be broke. Their lorries are repossessed and possibly their homes as well ... *The lack of even the simplest business knowledge among many owner-drivers is frightening and it is a direct cause of so many going broke".*

It seems at least possible, then, that many loss-making businesses continue trading in blissful ignorance. It can also be difficult once having entered into financial commitments to get out without incurring personal bankruptcy. A further factor is the extended credit periods often demanded by hauliers' customers which, by damaging cash flow and adding to capital requirements, reduce viability but may not be sufficient to force liquidation. However, another conclusion can be drawn. At the time of the fuel tax demonstrations, hauliers were making much of the argument that theirs was an "essential" industry which should not, they said, be damaged by over-taxation. Cynical observers might think that the Government response to this would be "OK then, if you're so essential we can tax you to the hilt and in the final analysis, enough of you will survive to carry the goods and the customer will have to pay." In other words, ignoring distractors like the possible influence of French hauliers in Kent, regardless of the level of taxation the industry would find its own level and, as in any free market, rates would emerge that were sufficient to cover the costs of efficient operators.

Earlier experience - before the 1933 Act

So how does recent evidence compare with earlier regimes? Prior to 1933 no licensing system existed and an absence of quality or other controls resulted in even lower thresholds that exist currently. It might be expected, therefore, that oversupply and high failure rates would result.

Certainly this was the view of Brunner (1928), who wrote about the naive newcomer in words remarkably similar to those of McHugh:

> "He knows nothing about costing, and seldom keeps any intelligible accounts. In order to obtain business, he relies on getting a full load from one town to another at a price below that quoted by regular haulage contractors and, if he cannot do better, often below his actual operation costs, if proper allowances were made. . . The presence of these "Pirates" in the trade accounts for the high bankruptcy rate."

In common with the passenger industry, haulage was examined by the Royal Commission on Transport in 1929. Evidence was taken from the then emerging trade bodies representing the larger businesses, but not from the smaller operators who then, as now, predominated. The Commercial Motor Users' Association and the National Road Transport Employers' Federation painted a familiar picture of ex-servicemen using ex-military vehicles who, aided by rail rate increases, brought about "transient and fictitious conditions." These "encouraged many who were without the necessary resources or training to embark in the business of road transport." It was "not until comparatively recently that the business of road transport gradually settled down into a condition of relative stability. . . . but the process was painful and, *although some survived. a great number of the smallest operators were submerged."* (para 300).

Evidence was also taken (paras 309-312) from the Long-Distance Road Haulage Committee. This body contrasted the efficiency and social responsibility of its own members with the owner-driver, who for return loads was "almost forced to accept any rate that may be offered, and certainly tempted to canvass for traffic at a rate which will obtain traffic irrespective of whether the transaction is a paying proposition in the long run for himself'. References were made to the effects of hire-purchase repayments, working excessive hours and disparities in wage levels. Neither of these bodies, however, provided any statistical evidence of survival rates, performance or financial results.

The haulage industry was considered a lower priority for action than other sectors by the Government and the Road Traffic Act 1930 which followed the Royal Commission did not include provision for it. However, following implementation a Conference was convened in 1932 under Sir Arthur Salter which looked at the issue of licensing control for the haulage industry. Given that a major concern was perceived unfair competition with rail, and that all four major rail companies were represented at top level at the Conference, it is not surprising that a restrictive licensing regime was recommended (and implemented through the Road and Rail Traffic Act 1933). The Conference formed a similar view of the small operator as unstable and a threat to the industry as that presented to the Royal Commission:

"Any individual at present has an unlimited right to enter the haulage industry, without any regard to the pressure on the roads. . . He is able to purchase his vehicle on the instalment system and is often tempted to force his way in by offering rates which are completely unremunerative and *necessarily lead to a bankruptcy which. nevertheless. does not discourage others - or perhaps even himself - from following the same course in a perpetual succession (para 100).*" Again, no evidence was forthcoming to support this anecdotal view.

Over 30 years later the issue was revisited by the Geddes Committee (1965) as part of its remit to examine whether the A, B and C Licensing system introduced through the 1933 Act should itself be superseded. The Committee formed the following conclusion:

"It has been strongly argued, both at the time and more recently, that this period of free competition resulted in excessive rate cutting, financial anarchy and instability damaging to the industry and so to its customers. It is particularly difficult to judge the extent to which these claims were justified. Some evidence we have received suggests that the position may not have been so bad as has sometimes been maintained. Because of the relevance of the point to our work, we sought out specially the recollections of some of the people who had direct experience of road haulage before licensing was introduced. While their views differed, we gained the impression that competition did not prevent transport users from getting a reliable service from road hauliers. No doubt many small operators got into financial difficulties, particularly when rates were generally low in the depression years. But in the circumstances of the times it would perhaps have been surprising if this had not been so... . The troubles of the industry may have loomed larger than was strictly justified. They were perhaps the natural growing pains of a new industry made up mainly of small operators, rather than the malaise of a chronically over- competitive situation." (Para 2.5)

The "A" licensing era

From 1933 onwards it became more difficult to enter the industry, an entrant having to satisfy the Traffic Commissioners that existing operators and the railways (both of whom could object) had no existing capacity for the traffic he proposed to carry. One would expect this to lead to a period of greater stability and higher profits, and the evidence available suggests this was so.

The most reliable data lies in Macleod and Walters (1956) who compared bankruptcy rates among road hauliers at different times with those in other trades. The comparators chosen were butchers, bakers, greengrocers and fruiterers, wine and spirit merchants and confectionery / newsagency / tobacconists, these being sectors of retailing frequently entered by small traders under similar financial conditions to haulage. The data used were taken from Traffic Commissioners' licensing figures and the Board of Trade's annual reports on bankruptcy.

The authors took three periods before the 1933 Act (1921-24, 1925-29, 1930- 33) and one after (1934-38), and found that almost without exception bankruptcy rates in haulage were lower than in all the other sectors examined; of these bakers had the highest failure rate and wine/spirit merchants the lowest, but even the latter had a lower failure rate only in 1921-24 while in 1925-29 it was the same as that of hauliers. In most of the retail occupations bankruptcies rose from 1921-24 to 1925-29 and again in 1930-33, whereas in haulage each period showed an improvement on the last, the outcome being that, according to Macleod and Walters' calculations, bankruptcies in haulage at 0.15% per annum in 1934-38 compared with 0.24% among wine and spirit merchants and 0.72% among bakers.

While the figures for hauliers show a generally improving trend during the 1920s (the "relative stability" of the Royal Commission), there can be no doubt that the introduction of licensing also acted as a financial support to the industry - or at least to those able to obtain licences.

With "A" Licencing still in force, the Geddes Committee also looked at the evidence available in the post-war context, and their comments are worthy of reproduction at some length.

"Our attention was invited to figures published by the Board of Trade, showing that in 1962 the number of road haulage contractors who failed in bankruptcy was exceeded only by the figure for builders. In the previous year the figures were again high, exceeded only by builders once more and hardware and electrical retailers."(para 3.27)

The report makes the comment that bankruptcy could not always be ascribed to business failure, the debts sometimes being incurred in private life, and then continues:

"More than half of those classified as road haulage contractors in the Board of . Trade's figures were not holders of carriers' licences. Many were completely unknown to the Licensing Authorities; others no longer held licences at the time of bankruptcy, or, holding only "C" Licences, almost certainly failed in their main line of business, and not because of transport factors. Counting only licenced hauliers, there were roughly 100 failures in each of years 1961- 63 out of a total of roughly 46,000 "A" and "B" licenced operators." (para 3.30)

"The number of failures by licenced hauliers would have placed them 7th, 8th and 10th respectively in the order of occupations with the most failures, as against 3rd, 2nd and 4th according to the published classification." (3.31)

"The 293 "A" and "B" licence holders who went bankrupt in 1961-63 operated a total of 900 vehicles or, on an annual basis, about 0.2% of the total haulage fleet operated in each year. 64% of bankrupts had only 1 or 2 vehicles and only 4% had fleets of more than 10 vehicles." (3.32)

". . . most bankrupt licenced hauliers had not been in that business long. Only 32% of those failing in 1961-63 had been operating for more than 5 years and only 1% had held licences before the war." (3.33)

"Failures under Contract "A" and "B" licences show a clearer pattern. A large number of bankrupts worked in the tipper field. 55% of bankrupt Contract "A" licence holders' vehicles were tippers (35% of the national Contract "A" fleet) and 70% of "B" licenced vehicles involved in bankruptcy were tippers (40% of the national fleet of B vehicles). ... these tippers were engaged largely in the construction industry and in the carriage of solid fuel." (3.36)

"Our investigation of bankruptcies suggested that the vulnerability of the road haulier to bankruptcy was

not as great as many people thought, that those who failed were nearly always in a small way of business and not long established, and that *the nature and scale of bankruptcy were not such that any special measures by Government were called for on that account.*" (3.37)

The Committee's conclusion was that *"the rate of bankruptcy in road haulage is not unduly high and does not suggest any serious lack of stability in the industry".* (3.27)

Thomson and Hunter (1973) reproduced figures provided by the Road Haulage Association as evidence to the National Board for Prices and Incomes in 1967. These related to a cross-section of medium-sized companies with fleets of between 7 and 70 vehicles and showed profit margins (as a percentage of turnover) of between 9.0% and 10.5% in each of the years from 1963 to 1966, falling to 4.2% in 1967.

A final source from this period is Edwards and Bayliss (1971) who, after the introduction of the current "0" Licensing system, looked back to 1965 in a study of the industry's operating costs and receipts. The figures are not wholly reliable because they include the then huge British Rail collection and delivery fleet at one extreme, while at the other it was accepted that figures for the smallest fleets (40% had 1 or 2 vehicles) were of dubious accounting value. Nonetheless, it was estimated that public haulage had total costs of £571.5m against receipts of £683.6m, giving an excess of £112.1m or an average margin or around 18%; margins were found to be greatest in fleets of between 6 and 50 trucks.

Economies of scale in the industry

The clear suggestion that the smallest fleets have been the most vulnerable leads us to question whether the more stable larger operators benefit from economies of scale. Edwards and Bayliss (op cit) believed the industry operated under constant returns to scale or something very close; they produced the interesting argument that, while there were no economies from size of *fleet*, major economies were available in size of *vehicle*. They suggested that only large operators might be able to generate the business to make use of larger trucks and so derive those economies. Since their paper was written, maximum weights have increased and small operators have visibly been among those taking advantage of the increase; indeed, given the increased competitiveness of the industry under "0" Licensing, there can be little doubt that any operator *not* taking advantage of larger trucks would soon be joining the bankrupts.

Another paper by Harrison (1963) also suggested constant returns to scale, although without any statistical evidence other than the slow (and still continuing) growth in average fleet size. Harrison also suggested that larger businesses might survive better despite similar or higher costs due to their greater marketing ability - in other words they could generate higher revenues by giving "added value". There is little doubt that this is increasingly true.

However, an equally important factor lies in the business relationships which often exist between large and small operators. The smallest firms comprise owner-drivers with at most 2 additional trucks; while some have good direct relationships with customers, they are likely at best to be price-takers rather than price-makers. In most cases they are either subject to all-embracing contracts with the client (especially in construction), or they act as sub- contractors to larger firms or clearing houses. In the former case, the construction industry has notoriously tied owner-drivers down to onerous terms which make survival difficult; in the second, the sub-contractor has at best an uncertain pattern of work and receives a rate 10% (or more) lower than that paid to the principal. Harrison (op cit) noted that sub-contractors act as a "buffer" for the large company, which fixes its fleet size at a level designed to give maximum utilization and thus derives a lower operating cost per mile; sub-contractors perform a vital function by evening out peaks and troughs, but are more vulnerable to enforced inactivity and so likely to achieve lower returns. The extended credit periods common in the industry, already referred to, are also a particular problem for smaller businesses.

Bankruptcy and voluntary liquidation

It can reasonably be argued that bankruptcy figures are merely the tip of the iceberg and a poor indication of the true state of the industry; it is likely that a proprietor with any degree of financial awareness would get out before bankruptcy occurred. The problem with voluntary liquidation, however, is that, as with licence termination, it can occur for a number of non-financial reasons such as business re-organisation or re-naming, or sale as a going concern. Overall, therefore, the bankruptcy figures as used by Macleod and Walters, and later by Geddes, are likely to be the best hard indication of comparative financial failure.

Conclusions - factors affecting survivability

The evidence available suggests that, throughout its history and under different regulatory regimes, the road haulage industry has not suffered unduly from instability or a high failure rate, and its survival rates have been better than those in other small business sectors. Small and inexperienced operators may well fail more frequently, but apparently less so than those who take on corner shops and similar enterprises.

However, it is to be expected that external factors would affect performance in the industry as a whole and therefore survival rates among marginal businesses. It is noteworthy, for example, that the 1928 Royal Commission and the subsequent legislation were contemporary with the Wall Street Crash and the Depression of the 1930s which followed, and which even well- managed businesses had difficulty in surviving. In writing this paper I contacted Bob Tuck, who has written a number of haulage company histories (see reference list below). Mr Tuck in his reply commented on the particular impact of nationalisation after 1948, which he sees as an opportunity for weak businesses to exit and, in some cases, be re-formed more healthily after the de-nationalisation which followed:

"In fact this transition created many strong concerns so you could argue the cutting out of old businesses was replaced with much stronger fresh growth. Like pruning back old rose trees".

It has already been observed that the "A" licence period from 1933 to 1969 created an artificial market which does appear to have increased average returns and reduced failure rates. Other political actions which could be seen as strengthening the industry were the programme of motorway building and trunk road improvement from the 1960s onwards, and the successive increases in maximum weights. These were used by hauliers as a counter-balance to increasing competition, in that they enabled improvements in productivity and so kept rates down.

On the other hand, to complete the circle, it is reasonable to suppose that the "fuel tax escalator" did have an adverse impact on industry performance, at least in the short term

until businesses acclimatized to the new conditions and either reduced other costs or secured rate increases. It is clear too that a number of factors currently affecting the industry adversely - skill shortages, traffic congestion and the Working Time Directive among them - are leading some well-managed medium-sized firms to make strategic decisions that their capital is better invested elsewhere. If this leads to a fall in capacity available, the likely medium-term outcome is a return to higher profits and survivability among the firms remaining.

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Paying for a tramway: In the black, in the red, or green with envy

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The Edwardian Boom

By 1903/4 there were 1,677 route miles of tramway in Britain, mostly but not exclusively electric. In the same year there was a total of 6,795 electric trams. Twenty years later the equivalent figures were 2,624 miles and 14,355 cars. That was the peak year for mileage; there were just a few more trams in use in 1926, but otherwise 1923 was definitely the apogee for tramway development. The accumulated capital expenditure in those years was, respectively, £43.58 and £92.22 millions. The highest investment in any one year, and that by a long way, was made just before the boom began, in 1902/3.[1] Taking into account the war years, it is fairly evident that the Edwardian age, up to 1913, must have been the peak period for the construction and extension of electric tramways. In the British Isles as a whole, 152 systems were opened between 1900 and 1913; 29 dated from the previous century[2], plus a further four early pioneer installations[3]; just one mainland line was opened after this, the Dearne District, in 1924.[4]

£92 million does not sound much to us. It is in fact less than one sixth of what the 'big bang' expansion of Manchester Metrolink is expected to cost.[5] It is also, however, somewhere around 12 per cent of the total capital expended on railways by the mid-1920s, which gives an idea of the scale of the tramway industry. The cost of setting up motor bus concerns at a similar date is probably underestimated at £21.5 million[6], but this comparison is of course highly significant, coming in at less than a quarter of the accumulated expenditure on tramways.

It should be remembered, too, that the capital for the main-line railways had been subscribed over a period of some 80 years by 1913, whereas that for electric trams had been provided over a much shorter period, at most 20 years, though the real boom came within the decade 1898-1907, when no less than 160 electric tramways opened for business in Britain. As many as 102 of them came in the four years 1901-4, though of course it must be realised that larger systems would have gone on expanding long after this. This matches the peak investment year of 1902/3, of course. It is evident, therefore, that an exceedingly large amount of money had to be found for the new technology of electrically-powered tramways in a very short period indeed. I want to go on to examine where it came from.

The Private Sector Option

If one pursues the comparison with the railways a little further, in the UK they were developed entirely by private enterprise, largely through the device of the limited company, though this structure only became generally available to entrepreneurs in 1856.[7] The railways were financed in this way in the United States too, and there the same pattern was followed by the electric tramway industry. In 1903 the issued share capital of the street railway industry exceeded $3 billion, and the companies were unashamedly 'profit-seeking entities.[8] The first publicly-run enterprise in the States was the San Francisco Municipal Railway, which began running as late as 28 December 1912.[9] Early developments in the UK might have suggested a similar pattern would be repeated here. Companies were certainly at the forefront of progress in, for example, Bristol, Middlesborough and outer London (the London United).[10] All of these systems were owned by the Imperial Tramways Company, either through subsidiaries or, in the case of Middlesborough, directly. In fact, the majority of company lines were not run by purely local concerns, but were controlled by holding companies. One which still has an important, though different role today is Balfour Beatty, which eventually had 11 tramway operating subsidiaries. The major player was, of course, the British Electric Traction Co. Ltd. (B.E.T.), which at one time or another had a controlling interest in 43 electric tramways in Britain and Ireland, plus four overseas. Each line was run by a separate company, which might be either wholly owned by the B.E.T. or only partially owned, in which case there would be some local directors.[11] We shall return to the B.E.T.

Companies, then as now, had two options for raising capital on their formation. They could issue shares or debentures. The latter are fixed interest securities with a prior claim on the company's earnings. A variety of share, usually also at a fixed interest rate, is the preference share, and this also takes precedence over so-called ordinary shares. The latter, however, are usually the only ones with voting rights. Once established and trading, recourse might be had to loans.

As an example, we can get some idea of how a company was funded at its inception by looking at the annual accounts of the Barnsley & District Traction Co. Ltd. for 1923, the first year's which seem to have survived. When founded the Company had 'Electric' in its title and was the operator of the small tramway in Barnsley, but from 1913 it also went into the motor bus business. The system was promoted and built by the BET and opened on 31 October 1902. In that same year the B.E.T. promoted a local concern, but shares in it were not offered until almost two months after trams had begun running.[12] Obviously, the 1923 accounts reflect the move into motor transport, but the sources of capital were likely to have changed in only one respect. The issued capital was made up of £22,000 in 7% preference shares and £60,105 in ordinary shares. There was also £19,928 in 4½% debentures. It is not stated, but a controlling interest would have been retained by the BET, presumably through the purchase of a majority of the

voting shares. At this time the Company was clearly not doing too well, because a further £29,000 in debentures had been issued to the banks as security for an overdraft; this, of course, would be a source of finance unavailable to a 'start up' venture. In fact, the item balancing the books was £32,643 at short call at bankers and in hand'. Dividends were, however, still being paid.[13]

Most of the dividends would have gone straight to group headquarters, and were probably still paid because the local financial difficulties were mirrored by those of the B.E.T. itself, best put in Charles Klapper's words: 'a remarkable number of [tramway ventures] at home lost money, so much so that during Emile Garcke's tenure of office as Chairman - 1911 to 1929 - the capital had to be written down'.[14] Some of the reasons for this, such as the problems caused by World War I, were general to all tramways. But of the others, one bore disproportionately on company lines and another was specific to them (and, in general, specific to the UK too). The first was motor bus competition, which companies were, for various reasons, less able to resist than local authorities. One reason was that the latter had at least some powers over the licensing of buses, which they might use to protect their own tramways, as companies could not, or contrariwise, to drive a company out of business. The most well known case of this is that of the Potteries tram company, another B.E.T. concern.[15] The second problem was the 1870 Tramways Act,
which gave councils a veto over the construction of tramways and the absolute right to purchase an existing line after 21 years and every seven years thereafter (the rules for light railways could be more favourable). The veto, threatened or actual, meant that companies often withdraw proposed schemes, as the B.E.T. did in Doncaster, for example.[16] This also meant that, by and large, company tramways were the smaller and less profitable ones as, with a few exceptions, they were kept out of the big cities and towns. And the right of purchase, at so-called scrap iron prices, meant that owners were reluctant to modernise, a consequence of which being, naturally, that the earning capacity was reduced. Here the most famous case is Bristol's, where no tram was ever top-covered.[17]

It thus turned out that capital from the money markets, which had built all the UK's railways and most of its pre-electric tramways, was not the main source of finance for electric tramways.

Municipal Finance

Municipal finance for tramways seems to have been simplicity itself when it came to finding the money, less so when it came to paying for it; for, like any other commodity, money has to be paid for. Ian Yearsley explained how the system worked in his 2001 Roy Cresswell memorial lecture. Municipal finance was entirely by loans, which were normally taken out by the borough treasurer against the security of the rates, not by the trading department against its profits. This was quite logical, for rates seem for most of the last century to have been regarded as, and to have been a bottomless pit. There was no such thing as rate capping, so if a tramway could not pay the capital and interest off from its earnings, the rates could be put up to cover the discrepancy. Although not relevant to the current argument, it is interesting to note what happened when a transport department was freed from municipal financial control. In trolley and motor bus days in Doncaster, a secretary recalls, the manager had nothing to do with the Corporation. The Department always made a profit, which could not be paid into the rate fund because much of it was earned outside the Borough. So the Transport Department could buy what it wanted and was run as a business, much to chagrin of other department heads.[18] No doubt including the Borough Treasurer, a breed who liked financial freedom as much as the average Chancellor does!

Going back to Yearsley, the funds came from the Public Works Loans Board, with repayment periods laid down by the Board of Trade and later the Ministry of Transport.[19] What seems remarkable, and I should be interested to be contradicted, is that there seems to have been virtually no restriction on these loans. A council did have to get powers under the Tramways or Light Railways Acts, and these did specify what the costs should be, but after that there was no attempt to, in modern terms, 'restrict public spending'. You had your powers, you could have your money. To see how this worked in practice, take a glance at the Doncaster Corporation Light Railways. The initial system was authorised under Light Railway orders granted in 1899, 1902 and 1903. The Commissioners' main role seems to have been the quasi-legal one of granting or protecting the rights of the various actual or putative transport operators, in this case the railway companies and the Corporation. They do not seem to have thought it necessary to question the estimated costs supplied by the Borough Surveyor, merely to grant the borrowing powers requested. The sums required to carry out the works under each Order were, respectively, £70,000, £7,500 (strictly, £5000 was for track doubling which fell outside the Order proper) and £14,500, a total of £91,800.[20] In fact, until 1909 capital expended did not quite reach £87,000, because it was not possible to link the Bentley route to the main system until 1910/11; that expenditure brought the total about £3,000 over the amount authorised,[21] so presumably additional borrowing powers were requested. This was certainly so with new works after the Great War, when a second tram shed was being built and, in those inflationary days, the lowest tender exceeded the estimate by £2,483; the Council then resolved to apply for that sum,[22] and evidently got it, as the sheds were built.

The arrangement is unrecognisable today, where the grant of powers has no necessary relationship to the provision of funding. In the early Twentieth Century the only prerogatives central government seem to have had were similar to those usually ascribed to the monarch - to be consulted, to advise, and to warn. Thus, for example, when the ill-fated Dearne District Light Railways were in the planning stage, a Mr Stanley from the newly-formed Ministry told the committee that a tramway would inevitably be loss making and that motor buses alone might break even.[23] This was in 1920, but when construction began three years later, there seems to have been no question at all over granting the loan.

And that, really, is that. Simplicity itself.

Picking up the Tab: [1] - Private Enterprise

After World War I the tramway boom was emphatically over. As mentioned, the Dearne District, itself a hangover from before the war, was the only new project opened to traffic. Everywhere, lack of maintenance, heavy wartime traffic and steep inflation were making tramway balance sheets look poorly. How was the initial capital, let alone new capital required for reconstruction or extensions, to be paid for? Where it comes to limited companies, the only portion of their capital which *had* to be paid for were debentures or bank loans. Ordinary shareholders were, in strict legality, owed nothing. They might expect a regular dividend, but it was not a right. In practice, of course, no company can get away with simply meeting legal obligations to people with an absolute claim on their earnings whilst ignoring shareholders. The latter may grant a period of grace in which the company can be turned round, but there will come a point when debtors and shareholders combine to enforce change, either of policy and/or of management. Though it is surprising how patient tramway company shareholders often proved to be. A further consequence of failure to pay a dividend was, of course, an

inability to raise new capital. The Bath Tramways Company provides an extreme example of both statements. In 1920 it had paid no dividend since 1906. It wished to expand into the motor bus business, but could not persuade people to provide the necessary investment. The solution was to set up a subsidiary company to run the buses.[24]

Capital might be lost, if only in part, if a company was forced to close down all or part of its operations. In that case, of course, that part of the capital which was not fully paid for (as, for instance, paid-up debentures were) could end up being paid for partially at best. Ordinary shareholders who had, as it were, lent money to the company might lose all or part of their savings. In the troubled 1920s, when monetary fluctuations, labour troubles and motor bus competition caused severe difficulties to many tramways, such a threat was by no means notional. The Lanarkshire Tramways Company, for example, was in a prosperous position in 1919. Capital expended was £460,000 and the average dividend had been 6½%. By March 1926, however, the Company was in arrears with rates and the local councils threatened to petition for its winding up. In that year a loss was made, but by 1927 an agreement was reached with the councils. Even so, it was expected that the Company might still fold, and its shares, which had once traded at 24s, were now down to 1s. As in so many other cases, of course, conversion to buses saved the day.[25] In another instance, that of the Yorkshire (West Riding) Electric Tramways, about a fifth of the capital actually was lost due to the closure of its Castleford lines. Incidentally, ordinary shareholders had been waiting for a payment for 27 years![26] So as far as they were concerned, the whole of the capital must have seemed effectively lost.
It would be wrong to go away with the impression that all was gloom in the company sector between the wars. For some tramways, such as Torquay's in the mid-1920s, the big problem was overcrowding, not loss of traffic; to meet the criticism, four large new bogie cars were ordered from Brush.[27] And it was the London companies in the Underground Group who invested no less than £342,000 in the new Feltham trams, though this was against a background in which the L.U.T. paid no dividend from 1920 onwards and the M.E.T. only three[28]
But although there was some limited investment in cars, it would probably be true to say that there was none in extensions. The only way out was to abandon the previous investment in a fixed track system and to move into one or other of the much vaunted more flexible modes. Where this happened, that part of the capital originally put into the tramways which had not been paid off would be written off. In the final full year of operation of the Barnsley tramway, for example, capital expenditure at cost was recorded as £63,362 and of this, £37,773 or 60% was written off. In this sense, therefore, most company-run tramways ended their days firmly in the red.

Picking up the Tab: [2] - Municipalities

The situation for municipal transport departments was actually much more difficult. As long as a company did not actually become bankrupt or go into voluntary liquidation, it could continue trading. Writing down its capital might reduce the value of its shares, and hence adversely affect shareholders, but they had no effective comeback apart from voting out the directors. Even if a company did go bankrupt, limited liability meant that debts were only payable up to the limit of its assets. Shareholders, who might be seen as the ultimate providers of the capital employed, would only get back whatever was left after prior creditors, such as the banks, had taken what was owed to them. This may explain why so few tram company shareholders showed any tight; it was almost always better to allow a firm to continue trading in the hopes of future earnings than to enforce liquidation. A publicly-owned concern, however, could never escape its debt. It was bound to pay; and even if local government reorganisation caused an authority to disappear, its debts were passed on to the successor body. Hence, for instance, in 1938 a proportion of the DDLR's loan was being paid off by the Dearne UDC, an authority which had not existed when the line was built.[29]

The holy grail for any public concern was to earn enough to fully repay the initial loans, and at the same time to build up capital to replace the assets, which was done through depreciation or renewal funds. In short, although the declared aim was often something like municipal socialism, the actual aim was to turn a profit, a not dissimilar purpose to that of a company. Real profits, in the sense of a surplus, were often earned too, and these were paid into the municipal coffers in relief of rates. Sometimes this was done unwisely, at the expense of an adequate reserve. There were cases, however, where all the proper costs were met, and met handsomely. Glasgow is the most famous case in which the tramway debt was paid off fully, not once but twice, in 1915 and 1941.[30] Other large cities managed to meet capital charges with little difficulty. Sheffield had paid a grand total of over £585,000 to the rate fund up to 1928, when the policy changed, and always covered its capital charges until 1945 and sometimes even after that.[31] The Petre Street tramway, which was replaced by buses in 1925, was the only one to close with an outstanding debt.[32]

However smaller towns were, in general, not able to pay what were, in effect, their hire purchase charges on their tramways. The reason is simple and brutal; they were not paying propositions. The Doncaster Corporation system, for example, ran for 34 years; in one year, 1905, a working loss was made, and in 18 further years there was a negative balance after capital payments had been made.[33] As a result, when the trams were finally superseded, £58,000 remained to be paid off from the rates. This may not sound much, but the system originally projected in 1899 had been costed at only £70,000.[34] This situation arose because small-town tramways were unable to earn enough to meet their costs of construction and equipment, whereas the large city systems could. In 1921-2, for example, revenue per track mile of line in Britain as a whole was £12,171, almost two-and-a-half
times the earnings in Doncaster, which averaged £5,056 in the same year.[35] Obviously, the costs of running a less intensive service in a smaller place would not be as great as peak-hour service in a city and nor would the capital costs be as high. Doncaster, for example, was mostly single-and-loop track, whilst Sheffield's tramway was almost entirely double-track. But these differences obviously did not outweigh the reduced earning power, and most minor undertakings struggled to balance the books. The Dearne District Light Railway closed owing £261,396 and had paid off only about one eighth of its capital or £31,007. This line was, admittedly, a special case, in that it had been built at much higher post-war rates than most tramways, but the undertaking could not have met even pre-war costs as it registered a working loss for exactly half of its short lifespan.[36]

It is important to remember a final matter when assessing whether or not tramways were viable during the inter-war period. This is the point developed in various places by Ian Yearsley.[37] Because the loans were taken out on the authority of the borough treasurer, his interests tended to predominate. And his concern was to spread the repayments over as long a period as possible. Tramway managers, on the other hand, normally came from engineering backgrounds and would - had they been asked - have probably wished to match the loan period with the likely life of the assets; and they would also, doubtless, have had a better idea of that life than the financiers did. It was rather convenient for the treasurers that, more often than not, there was no tramway manager at the time when the initial system was being planned! Loan periods were set by the

Board of Trade and later by the Ministry of Transport. Track loans were typically set at 40 years in the period of the Edwardian boom, though at the light railway inquiry in Doncaster in 1899 it was stated that the Board usually allowed 50 years and the Corporation actually asked for *60!* [38] Theoretically, this would have meant using the track until 1962! In actual fact, the Corporation was forced to relay part of the Bentley route in 1916, just 14 years after the opening; because it was wartime, they had to threaten to close it before the Ministry of Munitions would give them the permission to obtain the necessary supplies of steel.[39] The general conclusion from all this is that if tramways had been capitalised on more conservative terms, very few of them could conceivably have met their obligations. What happened in practice, of course, is that they had to enter into fresh expenditure before they had paid for their initial start-up costs, and in the case of smaller lines, this drove them further into debt. Proper assumptions at the beginning or 'catch up' later didn't matter; the result was the same.

Going back to my title, when capital payments were taken into account, larger city tramways could stay in the black, but many smaller ones were frequently in the red, and by the end of their somewhat inglorious lives, nearly always.

Reinventing the (flanged) Wheel

So what about son of tramways, modern light rail? How is this being paid for? And is it being done in a way which will provide a secure future (as the old method of rate supported grants did not)?

The first five light rail schemes in the UK were Tyne & Wear, Docklands (DLR), Manchester, Sheffield and Midland Metro. In all cases except the DLR the Passenger Transport Authority (PTA) promoted the line on behalf of the local authorities. Funding was almost entirely from the public purse. Sheffield, for example, was given a 50% cash grant by government (some of it later replaced by EU funding), the balance being covered by authority to borrow. Interest and repayments would, it was said, be covered by later increases in government grant. The responsible Minister, Roger Freeman, said that it was entirely a Government sponsored scheme.[40] The funding was a so-called Section 56 grant, the main ground for which was (unlike for the earlier Tyne & Wear Metro) non-user benefits, such as reduced road congestion which cannot, of course, be paid for by fare revenue.

This approach had its limitations, as shown by the long-running saga of the attempt by the four local authorities to hold the Government to its presumed promise that they would not have to fund loan servicing. The Minister had, in fact, been disingenuous in his presentation of the funding package. £81 million, a third of the total, was neither Section 56 nor local authority loan; it was a commercial loan, based on the assumption that the operating concession could be sold for this amount. It couldn't. Stagecoach was variously said to have offered £20 million more than the then-local bus company" or a total of as little as £1.15 million.[42] I'd be interested to know if anyone can give me the correct figure! Some of the shortfall would have been made up by the sale and leaseback of the cars and the track, but that merely translates an interest payment into a rental.[43] The authorities were still talking about a £115 million shortfall.[44] So the simple mix of grants and loans clearly was not satisfactory. Even in these early schemes, developer contributions were usually sought, though these are not usually a major proportion of costs; the Leeds Supertram project, for example, aims to achieve less than 1% of costs from a contribution towards the expense of stops serving particular developments.[45] Incidentally, Professor Hass-Clau's conclusion that UK light rail lines attract more public and private development than European ones do[46] argues that promoters are failing to extract enough funding from this source.

The later changes were foreshadowed in a TRRL report explaining the *old* scheme. I quote, 'Government expects new rapid transit systems to cover at least their operating costs' and 'revenues received are rarely sufficient to provide an adequate return on sums invested (so making them) an unattractive proposition for a purely commercial enterprise'.[47]

From the realisation that an operating profit must be worth something and that a public/private (rather than a 'purely commercial') enterprise was possible came the Public Private Project (PPP) and the associated Private Finance Initiative (PFI). An invention, I gather, of the late lamented Norman Lamont! The transformation is graphically illustrated by the case of Phases 1 and 2 of Manchester Metrolink. The first was funded from the European Regional Development Fund, by local authority and PTA borrowings and from Section 56 grant; in other words, from fully public sources. The second phase included the first two elements, but there was no direct central government grant; instead the PTA contributed some cash reserves, there was quite a large developer contribution and £95 million, well over half the total, came from the Altram Consortium, the builder and operator chosen under the PFI contract.[48] It should be stressed that the private consortium or Special Purpose Vehicle does not put much of its own money into the project; it may seek limited external investments, but 90-95% will typically be bank borrowing or from the issue of bonds.[49]

PFI can include cases of full private financing, but in the case of light rail the public purse always still has to pay for a considerable proportion up front. For instance, Tramtrack Croydon Ltd (TCL) - a consortium of appropriate firms - put up £80 million and the Government and the EU £125 million. TCL is expected to be able to cover its investment from the fare box. In a sense, the public authority is buying not an asset, but a service, at least over the period of the agreement. In this case this is an exceptional 99 years. A much shorter period is more usual, like the 23 years for Midland Metro Line One. In some cases the Department of Transport (DoT) promises to make service payments throughout the life of the project, in a sense hire purchase for the service (e.g. Leeds). In others, the sums are described as performance or availability payments conditional on maintaining certain standards (e.g. Midland Metro extensions).[50]

Common sense says that this method has to be more costly than public finance because a profit element is built in. It is this, of course, which so exercised delegates to the recent Labour Party Conference. The value for money case is certainly not proven. Polly Toynbee writes in the Guardian, which generally takes an anti-PFI line, that officers drawing up PFI deals 'shrug with a grim despair ... it was PFI or nothing' and when 'asked if it's good value, they ... say they will be gone when the pigeons come home to roost'.[51] The most notorious dispute relates to the PPP for the tube, which opponents say will be more expensive than New York's use of bonds .[52] The theory, too, that risk is transferred is specious. George Monbiot writes, again in the Guardian, that 'rather than allow a public service to collapse, the government will bail out the ... consortium ... as (in the case of) Railtrack'.[53] The system isn't producing the goods anyway. The Commons Transport Committee has noted the absence of new light rail schemes towards the 10 Year target of 25 new lines and has scorned the DoT for underestimating the time and money required for such projects.[54] All is not well even from the private side. Amec has threatened to pull out of PFI and sell its existing stakes, largely because of the cost of bidding and the slow pace of decision making.[55]

Taking a historical take on it, the conclusion seems to be that easy credit in the Edwardian boom years allowed the construction of many tramways which were not viable. Whereas the present stress on PFI is likely to restrict the expansion of light rail unduly and, perhaps, once again burden it with unsustainable costs; the worst of both worlds. In the black, in the red? Who can tell?

Green with Envy?

In the mid-1960s and early 1970s the then West Germany set up a system whereby part of the revenue from a new fuel tax could be diverted to public transport. Over the 30 years from 1967 nearly DM 50 billion was invested, 60% of this in light rail. Generous support was and is available from provincial and municipal sources as well. For example, a new 3.3 km tunnel in Cologne was awarded a 90% grant by the Land.[56] All this has, and I quote from an official report, 'made light rail the backbone of transport systems in major German cities (and created) generally first-rate public transport.[57]

Truly, we can only be green with envy!

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Tolls, Turnpikes and Traffic

Dorian Gerhold

The purpose of this paper is to examine what, if anything, can be learnt from the turnpike trusts, now that road tolls are being considered again. To do this, it is necessary first to examine what a turnpike trust was, to what it was the alternative, how the toll system was implemented, the effect of the trusts on roads and on their users, and their wider effects. Much of this has been illuminated by the work of William Albert and Eric Pawson, but much remains unclear.

The trusts and the alternatives

A turnpike trust was essentially the right to take tolls from users of specified roads and apply the proceeds to the repair or improvement of those roads. They replaced the former right of free passage. The aim was for the roads to be better repaired and for the burden to be shifted to the road user. The trusts almost always took over existing roads, though there was much realignment and improvement. There were however some new roads from about 1750, especially near London.

The trusts were non-profit-making track authorities, and were at first intended to be temporary (usually for 21 years), though their powers were soon being routinely renewed. The first trusts were run by justices of the peace, but from 1707 most new trusts had trustees instead. The first was established in 1663, but the second not until 1696. Then there was gradual expansion, especially on roads to London, in the west Midlands and around the Severn ports. 'Turnpike mania' in 1750-72 created a dense network of turnpike roads. Then there was a period with little activity, followed from the 1790s to 1836 by an upturn in new schemes, especially in industrialising areas. The number of miles turnpiked was 3,400 in 1750, 15,000 in 1770 and 22,000 in 1836. The latter was about a fifth of the length of the parish highways (about 105,000 miles).

Apart from private charity (which was relatively unimportant), there are three ways of funding roads: charges or tolls on road users, taxes levied on large areas such as counties or the country as a whole, and taxes or work obligations laid on small areas such as parishes. Taxes or work obligations can be apportioned in different ways: on everyone because the whole community benefits from better roads, or on landowners because good roads and other transport improvements raise land values. An alternative or additional policy is to restrict the level of traffic.

All these options were used in the turnpike era. A policy of restricting weights carried began in 1618, with an attempt to outlaw four-wheeled vehicles in favour of two-wheeled carts, and continued until 1835, mainly through restricting the size of teams. Seeking to make the traffic fit the roads rather than vice versa is usually condemned by historians, but in fact the same policy is applied today, for good reasons, in the form of restrictions on lorry axle weights.

The levying of taxes over wide areas was introduced in 1531 with the start of the system of county bridges, maintained by rates levied on a county. The system of parish repair began in 1555: anyone with land worth ,50 a year or keeping a plough and team had to provide a team of horses and two men for six days a year; everyone else had to provide one man or work themselves for six days. In other words the obligation was laid partly on landowners and partly on the local community as a whole. This 'statute labour' was supplemented by parish rates in 1654, but the apportionment remained similar. Parish road repair is long overdue for a reassessment of its effectiveness. It certainly did not depend on there being little wheeled traffic, as most traffic since at least the fourteenth century had been by cart rather than packhorse, but it did become less effective on major routes as traffic grew, especially where those routes were on clay soils.

From 1696 tolls became increasingly important. Only a few roads were created or improved in alternative ways: some military roads were built, mainly in Scotland, and the London to Holyhead road was improved after 1810 by Telford using government funds.

Implementation

Tolls were in principle simple, but in practice complex. The first area of complexity was variation according to the likely damage to the roads. For example tolls on waggons varied according to the number of horses drawing them or the width of the wheels. (Note that, on modern roads, a 36 ton lorry is reckoned to do 18,000 times as much damage as an ordinary car.) Then there were exemptions, often with a political rather than economic basis. These included local traffic such as waggons involved in agriculture or people going to church, categories of vehicles such as post-horses, the army, waggons carrying vagrants and mail-coaches, and special cases such as green hop poles carried between Rochester and Maidstone. Some regular users such as waggoners compounded for tolls.

One of the problems was evasion, which resulted in gates having to be moved and the erection of side-gates. Waggoners sometimes unhooked a horse or two or removed

part of a load when approaching a gate. An Act of 1773 provided for fines on landowners who allowed gates to be bypassed. There were occasionally riots against tolls, especially in the early eighteenth century. Because of the difficulties of collection, some trusts farmed out gates for fixed sums. Nevertheless, the toll system seems to have worked reasonably effectively.

It was hard at first for the trusts, being non-profit-making, to raise money. They generally did so by mortgaging future tolls, often to just one or two major creditors. However, from about 1750 they were able to raise subscriptions from large numbers of people, which made fund-raising much easier. It has sometimes been claimed that much of the toll income was swallowed up by interest payments, but this was not the case. In the 1830s, interest and repayment accounted for 28% of trust outgoings, management for 9% and road repairs for 59%, and the proportion spent on road repair appears to have been similar in the eighteenth century.

The trusts' work on the roads

The trusts' activities have been examined by Albert and Pawson. Their emphasis has been almost entirely on road surfaces, together with foundations (if any), drainage and the shape of the road surface. There was also widening of roads, which probably contributed to the use of broad-wheeled wagons, and certainly encouraged the use of waggon horses in double file instead of the less efficient single file.

The neglected aspect has been the reduction of gradients, through cutting and embanking, realigning and the creation of new routes. Gradients have an enormous influence on horse-drawn transport. Compared with a horizontal road, a 1 in 20 road nearly doubled the cost, and 1 in 10 quadrupled the cost, because of the greater number of horses needed. There was some trust activity on gradients from about 1750, especially through creation of new routes, as on the Bristol road, but the building of wholly new roads occurred mainly in the 1820s and 1830s.

The effectiveness of all this work can be assessed in several ways. One is contemporary comment, though criticism sometimes reflected rising expectations. For example, in Arthur Young's *Northern Tour* of 1771, 20% of turnpike roads were described as excellent, and the excellent, very good, good and middling together constituted 72%; the indifferent, bad and vile together accounted for only 28%. Another method is to look at changes in road networks, for example around Oxford or between London and Brighton, and especially the development of new routes avoiding hills. An even better method is to examine the impact on road users.

Impact on road users

There has been a tendency to assume that road transport was hopelessly unreliable and inefficient before the turnpikes, and therefore to exaggerate the turnpikes' impact. The myth that all goods transport prior to turnpiking was by packhorse has proved especially hard to dispel. In the seventeenth century waggons, packhorses and stage-coaches provided highly reliable services, only rarely obstructed by snow or floods. Nevertheless the considerable scope for improvement is shown in several ways: the use of packhorses instead of waggons on some routes (though usually for their greater speed rather than because the roads made waggon use physically impossible); the reduction in rates of carriage when the roads were improved in the mid- to late eighteenth century; and the much slower schedules of stage-coaches in winter than summer.

There is only limited evidence of turnpikes having an impact before about 1750. In goods transport, waggons began to appear on additional routes and packhorses to disappear from about 1710; the last packhorses recorded on London services were to Wigan in 1757 and Bristol in 1758. However, the justices' assessments setting maximum rates of carriage provide little evidence of falling rates until the 1750s, except in the West Riding from the 1730s (where this probably coincided with the switch from packhorses to waggons).

As for stage-coaches, there was no increase in speeds or decline in fares from their origins in 1650s until the 1750s. For example the Chester coach, which is particularly well recorded in diaries, took four days in summer and six in winter, with the same dining and lodging places, throughout that period. Flying coaches were established (the most impressive being between London and Cirencester B 92 miles B in one day from 1696), but they simply travelled for more hours at the same speed as other coaches, and most were on unturnpiked roads. Virtually no new coach routes were established between about 1705 and 1760.

Several reasons can be suggested. The early trusts introduced no new repair methods. Many lacked easy access to stone. They had limited ability to raise money. Their ambitions seem to have been confined to putting right the worst stretches of road, after which it was at first expected that they could be abolished. Some turnpike roads were of high quality, notably the Colchester road by the 1720s, but some trusts proved completely ineffective, including a number of those on the Bristol road.

This changed after about 1750, coinciding with 'turnpike mania'. Subscriptions provided a new way to raise funds. Hilly roads were sometimes replaced by new routes. Fords were replaced by bridges. There was more employment of professional surveyors. Trusts seems to have become more ambitious about road quality. It is really in about 1750 that the turnpike era begins.

There were sudden reductions in century-old journey times for stage-coaches - for winter timings in 1752-5 and for summer timings in 1761-4. Running speeds in summer rose from 4 to 5 miles per hour to 5 to 72 miles per hour, with only a small increase in fares for the highest speeds. The immediate cause was steel springs rather than turnpiking, but steel springs tended to break on bad roads, and the ability to use them was therefore an indirect result of turnpiking. After the 1760s there was a gradual (or perhaps episodic) increase in speeds to between 10 and 11 miles per hour for the fastest coaches in the 1830s, without a commensurate increase in fares.

In goods transport there was no increase in speed at any date (about two miles per hour was the cheapest speed on any road, exceeded only by a few expensive and not very successful van services from 1814), but there was a substantial increase in the load which could be drawn per waggon horse, and therefore a reduction in rates of carriage. Here there was a fairly direct relationship between better surfaces and reduced gradients and larger loads, though stronger horses, economies of scale in larger firms and greater ability to run all night also contributed to the greater efficiency. Loads per waggon horse (excluding the weight of the waggon) rose from about 6 cwt in the seventeenth century to 8 to 10 cwt in the 1750s and 1760s, about 13 cwt in 1820 and

15 cwt in the 1830s. Rates of carriage fell to perhaps a third of what they would otherwise have been.

Tolls themselves were not a major cost. In four examples of waggon firms from 1818 to 1830 they were 8 to 16% of total costs; in the two coach examples they were 5% in 1760 and 10% in 1829. Therefore, if any lessons can be drawn from the turnpikes they will be the lessons of success.

There is not space here to examine the wider impact of turnpikes and the transport improvements they made possible. The pioneer on this (albeit somewhat over-enthusiastic) was Pawson, and Szostak has also provided a useful analysis in his comparison of English and French transport and economic development in the eighteenth century. Indirect effects included greater ability to market goods over long distances, the growth of larger firms, greater freedom to locate industry close to sources of coal, more market-oriented and specialised agriculture, more enclosure, faster communication and diffusion of information, and urban growth.

Once railways appeared, turnpikes began to lose their traffic, and most were dis-turnpiked in the 1850s, 1860s and 1870s, becoming again the responsibility of the parishes. In 1888 County Councils became responsible for road maintenance. The Trunk Roads Act 1936 provided central government funding for major roads, including, subsequently, motorways. Thus the option of raising funding from large areas rather than local ones was adopted. Revenue was raised from road users through vehicle excise duty and in other ways, but was not hypothecated to road maintenance and improvement.

Tolls have of course never disappeared completely. In particular bridge and tunnel tolls have been imposed, from the Mersey Tunnel in 1934 to the second Severn Bridge in 1998, in order to cover costs and pay off the construction debt. Across the Channel in France tolls are levied more widely.

Modern proposals for tolls

The modern history of tolls as a form of road pricing begins with the companion report to Buchanan's *Traffic in towns* - the less well-known report by Dr Reuben Smeed on road pricing. The Ministry of Transport even awarded contracts to develop electronic charging. Singapore introduced road pricing in 1975, though in non-electronic form.

The UK's Conservative Government in the 1980s introduced the idea of tolls intended partly to reduce congestion but also to encourage the private sector to build new roads (in which it would emulate the bridge companies of the turnpike era but not the turnpike trusts, which were non-profit-making). A precondition for tolls on existing motorways was electronic means of charging, and these were not yet available. The major problem created by confining tolls to new roads was that these would always be competing with existing untolled roads, resulting in diversion of traffic. Legislation of 1991 provided for tolls and for DFBO (Design, Build, Finance, Operate) contracts, and in 1994 the Government reluctantly accepted the idea of shadow tolls: road users would not pay, and would not be aware of the tolls, but the Government would make payments based on the number of road users. Ten DFBO schemes were open in 1999. The only scheme involving actual tolls on users is the Birmingham Northern Relief Road - 27 miles parallel to the M6 - due to open in 2003, levying a £3 toll. However, roads of this sort are likely to be few, and therefore to have limited impact.

Much more important is the idea of using tolls as a form of congestion charging, with the aim of reducing congestion and pollution and the happy side-effect of raising revenue. The theoretical justification is that road space, especially in towns, is a limited and expensive resource, which tolls would apportion to those who value it most. In theory, if road users are willing to pay, the supply of road space could be increased, but it is primarily because of growing acceptance that increasing traffic cannot or should not be provided for that support for road charging has increased.

Legislation of 1999 for London and 2000 for elsewhere allows local authorities to establish road charging schemes and to use the revenue (at least for the first ten years) to improve transport. The Treasury at first argued that this involved a tax, but was eventually persuaded that it was a charge and therefore that the proceeds could be hypothecated.

The best-known scheme is London's, due to start in February 2003. It covers only a fairly small area of central London (largely bounded by roads newly created in the turnpike era), so it will not resolve the congestion problem of London as a whole. The toll will be £5 a day. It is estimated that it will reduce traffic in the area covered by 12% and raise ,200 million a year. The success or failure of the London scheme will make or break road pricing for the foreseeable future.

The other scheme, in operation from August 2002, is a town centre one in Durham, where the toll is £2. Three others are under active consideration: town centre schemes in Leeds and Bristol and one for a rural beauty spot (Derwent Lane) in Derbyshire.

Electronic technology is essential, as it is not feasible to stop everyone, at least in towns. The technology has now been tested (at Dartford in 1992 and Singapore in 1998), but not yet in a large and complicated scheme. The London scheme will rely on automatic recognition of number-plates in the central area (not just at the boundary).

There is also a proposal by the Commission for Integrated Transport to monitor all road use by satellite and impose congestion charges for certain roads at certain times.

Lessons (if any) from the turnpikes

The motivation for modern tolls is thus completely different from that in the turnpike era. The problem of raising enough money in politically acceptable ways to build and maintain roads has long since been cracked. However, the policy of building roads to meet increasing demand ('predict and provide') is no longer regarded as tenable, at least in towns and cities. The aim now is not to build more roads but mainly to reduce road use.

The main parallel is that something formerly free will be charged for, and that road users will pay broadly in proportion to their use of the roads covered. There are a few other parallels (not necessarily lessons) if we try hard. First, the main practical problem which can make or break schemes is the collection of tolls. This now depends on electronic technology working effectively. Familar problems include exemptions and evasion; one recent study showed that even if they were absolutely certain to be caught, 3% of drivers would seek to evade tolls. Secondly, it takes a long time to introduce and make politically acceptable a new method of charging for roads. The first turnpike proposal in England was in 1621/2, the first turnpike was established in 1663 and

the second in 1696; subsequently there were sometimes riots against turnpikes. The long gestation of modern road charging proposals and the extreme caution of central government towards taking responsibility for road charging are therefore not at all surprising. A third point is the extreme importance of getting one's road transport arrangements right. In the eighteenth and early nineteenth centuries road transport was vital to an industrialising economy, the only alternatives being coastal vessels and river transport. England industrialised without the railways, and without even an adequate canal link to London until 1806. Similarly, no-one with any knowledge of present-day transport needs any reminding about the crucial importance of road transport to the economy and daily life.

However these are all fairly obvious points; we do not need to look at the history of turnpike roads to learn them. Perhaps the lesson of the turnpikes is that there is no lesson. Let us try again, drawing on Sir Henry Parnell's remarks in 1833 on the local nature of the turnpike system:

> 'If rates on the land had been resorted to, the measure would inevitably have failed, because the landowners would, beyond all doubt, have preferred bad roads and low rates to good ones and high rates. If the roads had been vested in the hands of government, it may safely be said that this plan would also have failed, for government would never have been able to obtain the consent of Parliament to vote upwards of a million and a half a year for those roads only which now are turnpike roads. It is therefore to the turnpike system that England is indebted for her superiority over other countries with respect to roads.'

In other words, the turnpike system was the only way in which, in the circumstances of the time, a good road system could have been obtained. Payment for roads by the Government and counties has since become politically acceptable, but congestion and pollution indicate the disadvantage of not making direct charges for road use. The lesson (if it is a lesson) is that funding arrangements for roads need to be suited to the times, and to be based on what is politically acceptable, especially in a democracy where the majority of families have cars. The huge rewards for getting such arrangements right are obvious.

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The Lesson That History Forgot - one man operated buses: a necessary evil?

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Introduction

One of the benefits of looking at historical events after the passage of the years is that things seem so much clearer than probably they did to many of the participants at the time. Insulated from the burdens and pressures of that former age, we analyse from a distance, and seeing the way in which events unfolded can recognise, or at least acknowledge, that the source of some of our current problems can in part be found in policy decisions of the past. The purpose of this paper is to look at one such instance - namely some of the problems that still afflict the bus industry following the universal adoption of one- man-operation [OMO] (as it was then called) during the 1960s/70s. The first section considers the factors leading to the adoption of OMO, this is followed by an examination of the problems that beset its introduction, and finally some of the key lessons for current policy are identified.

Background

By the early 1960s the bus industry was facing serious problems. The immediate post-war boom in bus travel was but a fading memory, and the industry was struggling to come to terms with a changed world. Car ownership and use was rising rapidly; and the bus was losing customers at an alarming rate. The car is, of course, a status symbol, for not only is it seen as signifying personal prosperity, but at a higher level is considered a key component of individual liberty. Once in possession of personalised motorised transport the user has 'transport on demand' to set them free from the shackles of public transport. The figures tell the story. At the end of hostilities there were 1.49m cars licensed in Great Britain. This number had risen to 2.26m in 1950, 5.53m in 1960 and 11.52m in 1970.[1] Governments responded to growing car usage, and its attendant congestion, by expanding the infrastructure in the form of increased road construction. Primarily this was aimed at improving vehicular, rather than passenger flow. Unfortunately the bus industry could do little about the effects of traffic congestion, which continued to get worse; and buses had to fight for scarce road space like any other vehicle until the advent of bus priority measures.

Perversely, in an era of full employment the bus industry faced a new problem. Prior to the Second World War a job 'on the buses' was valued by virtue of the security of employment it offered compared to other manual occupations. As the economy and work opportunities grew elsewhere, the attractiveness of working in the industry declined. The shift work and poor basic pay was considered inferior to other possible occupations. Increasingly operators faced difficulty recruiting and retaining staffs. Although the extent of the problem varied, and was most acute in urban centres, the result was obvious - it became impossible to supply fully the advertised service. Faced with 'Hobson's choice', operators had no alternative other than to accept as employees people who were joining the industry as the 'occupation of last resort'. A common saying of the period was 'You can always get a job on the buses', and indeed you could. Without being too unkind, it is fair to say that persons were engaged whose commitment to serving the public was less than ideal. Sadly, and despite the best efforts put into training, the standard of service experienced by the passenger was adequate at best, and more often poor.

The industry responded to this situation as best that it could. Given the circumstance of large-scale organisation, a restrictive licensing regime, and highly organised labour it was inevitable that progress would be slow. Initially falling demand was met by , securing operating economies, such as simplifying fleet liveries or destination displays, and later by reducing frequencies and increasing fares. In order to tackle the C staffing shortage wages were increased, and some attempt was made to improve working conditions. Naturally this raised the cost of providing the service; thus accelerating the need for higher fares and causing patronage to contract further - the infamous 'cycle of decline'. Having said all of this, however, it was incumbent upon the industry to seek economies of greater substance that would offer the prospect of reducing costs of operation whilst retaining the existing level of service output, whether in terms of frequency or seat-miles. With labour costs typically accounting for half of total costs the attraction of OMO was obvious.

History shows that OMO had been a feature of the industry from the earliest days. Indeed there are plenty of examples on sparsely used services in rural and urban areas where this form of working (using normal control, single deck vehicles) was considered preferable economically to crew operation. Obviously, journey time is increased where the driver takes fares as passengers board the bus, but one suspects that this was of little consequence in an age where for the majority the substitutes, of either walking or cycling, were considered much less attractive.

As the post-war period progressed operators began extending OMO by converting services that hitherto had been staffed by a separate driver and conductor. Conversion tended to be limited on account of being prohibited by law from double-deck vehicles. The practice became widespread in rural areas, where although the staffing situation was less acute, the financial position was critical. In 1961 an official

examination into rural bus services by the Jack Committee noted that operators were 'increasingly availing themselves of the dispensations granted by the Traffic Commissioners authorising the operation of large single-deck vehicles without conductors, as a means of reducing costs'.[2] Progress tended to vary according to the climate of industrial relations, where as we shall see much discussion centred upon the payment arrangements for staffs involved in this way of working.

Interestingly in large urban centres the staffing and financial situation was reversed, with the former proving more problematic than the latter; and here OMO tended to be confined to services that were lightly used. Some years later as operators in big cities began experiencing greater financial strain, attention turned to considering the possibility of adopting OMO as the universal mode of service delivery. Of course, the extension of OMO to intensive urban routes required a change in the regulations to permit its application to double deck vehicles, and this was duly forthcoming from the Labour Government in 1966. The following year in the White Paper 'Public Transport and Traffic' the Government urged operators to convert to OMO without delay.[3] Under the Transport Act, 1968 grants became available for standardised vehicles designed specifically for the purpose, which among other things, were considered to have lower costs of production. By converting services using larger buses, it was possible to reduce frequencies and use fewer vehicles whilst still providing a given quantity of seat-miles. Although this was used as an argument to justify conversion, it had little to commend it.

In addition to seeking savings in operating costs, an attempt was made to arrest the 'cycle of decline' by way of public subsidy. For passengers this meant that the existing network and/or fares could be maintained at current levels for a period longer than otherwise would be the case. For managers, however, the growing level of subsidy had one undesirable outcome. Increasingly they became captives of local politicians, who in pursuing the 'vote motive', not only exercised increasing influence over where and when buses were provided and at what price, but also could bring 'pressure to bear on the type of operation too.[4]

It is no exaggeration to say that the combination of subsidy and OMO had become the 'industry recipe' - the new set of assumptions held in common about the way to manage decline.[5] Initially, optimism that OMO would prove significant in alleviating the worst of the industry's problems was high; and the sceptics were few.[6] One of those far from convinced was G.G.Hilditch, General Manager and Engineer at Halifax. In a paper to The Municipal Transport Association in 1968 he ventured to suggest that the benefits were more illusionary than real, and mocked' I wonder who is pulling whose leg?,[7] Some undertakings, such as Bradford, were considered to be positively backward, on account of their marked reluctance to embark on a scheme of conversion. King claimed that this was due to trade union caution, but management was sceptical too.[8] Most took a different view. F. Fishwick, from the Cranfield Institute of Technology, believed the case for OMO to be a 'strong one'.[9] Others, such as Thompson and Hunter, were openly critical of the industry for not introducing the concept on a widespread scale earlier.[10] Certainly once the idea took hold, and aided by the bus grant, operators pursued it with rapidity and vigour, though by the mid-1970s there was a feeling that in urban areas the loading of services meant that the scope for further conversion was limited.

In summary, the factors driving the move towards OMO were both varied and inter-connected. It is difficult to say whether the case was more pressing in urban than rural areas. ill the former staffing difficulties took precedence over finance, although staff shortages had a financial impact too, since existing staffs had to work extra hours to help cover for the shortage; and revenue was impaired when services failed. The pressure to reduce costs probably was greatest in rural areas, since companies operating under a commercial remit were the main providers. Regardless of which factor had greatest influence, the end result was the same: bus services became even less attractive relative to the competitor of choice, which by now very firmly was the car. Moreover, the car was improving markedly as manufacturers turned their attention to providing greater comfort, refinement, reliability and speed. In terms of attractiveness, the bus and the car were moving in opposite directions.

Problems

As is often the case a 'solution' to one problem, or set of circumstances, serves merely to create new ones, and OMO was no exception. In 1969 the Traffic Commissioners for the Yorkshire Area observed:

> We are satisfied that operators are trying to introduce one-man-operated services wherever possible as one means of absorbing rising costs. We appreciate, however, that in their attempts to do this they are faced with very real problems which prevent the policy from becoming the panacea which it is sometimes considered to be.[11]

The main difficulties centred around three issues: vehicle operation, productivity payments to staff, and the service offering to the customer in terms both of time and fares system.

Vehicle operation

A new generation of vehicle was required for OMO that permitted a passenger entrance at the front, adjacent to the driver. This meant that the engine had to be re- located from the front to the rear of the chassis. The new type of bus was more costly to buy than the traditional design, and early examples were notoriously troublesome. Hilditch summarised the general position thus:

> ... being thoroughly modern managements, we buy a 33 ft. long two-door double-decker, and perhaps it costs about £1,000 more than the sort of machine we used to employ in two-man days. To this we add the gadgets. A periscope, some automatic ticket-issuing equipment, a centre door interlock, and a counter to tell the driver when the top deck is full. We haven't any money to replace the existing fleet so we employ a loan and thus add interest charges, and because our bus weighs about 9.5 tons we know that the fuel and tyre bills must be higher. We know, too, that it must be slower in use, so either we reduce the frequencies or put in a bus or two. [12]

Had the problems ended there all might have been well, but unfortunately when the vehicles were put to work on OMO the results. were less than ideal. A study by Rhys, published in 1972, makes grim reading.[13] SELNEC [the South East Lancashire, North East Cheshire Passenger Transport Executive] found engine life halved, gearbox life was cut by a quarter, and the life of many other units substantially reduced. Lancashire United reported breakdowns and defects 50% higher than with front-engine vehicles, whilst Northern General found that the cost of maintaining a rear-engine bus in its third year was equal to that of a front-engine bus more than twice the age. Moreover, the addition-

al staff hours required for extra maintenance could be as high as 400%, and the number of spare vehicles required for a service maintained by 100 buses increased from a tenth to somewhere between one fifth to one quarter.

Faced with this evidence the industry could have been forgiven had it paused for thought, but by this stage the process was unstoppable. That so little disquiet was expressed publicly is puzzling. One suspects that outwardly managers were more than happy to appear to be operating services more efficiently, whilst inwardly coping with the vehicle problems under much sufferance, and seeking alternative suppliers. Nevertheless such problems impacted adversely upon the cost and reliability of the service, and did little to assist the industry at a time when it needed all the help it could get.

Productivity payments

An additional payment to a driver performing two jobs by acting as conductor is obvious. Unfortunately what at first glance appears quite straight-forward proved much more troublesome in practice. For many years the rewards for such work were governed by local agreement, but as OMO became more commonplace the subject moved up the national agenda. The issue boiled down to three questions: 'What additional payment should be made for the extra responsibility?' 'What payment should be made as a 'share' of the savings?' and 'Who should receive the payments?' Astute observers will note that nowhere in this list is there any mention of recompense to the passenger, who had to be content with 'crumbs from the master's table'; and be thankful that fares would rise by a smaller amount than had crew operation remained in force.

OMO enlarged considerably the job of a driver, providing as it did both more task variety and responsibility, and requiring additional effort and skill. The position of -drivers becoming conductors again, albeit in a different role, is an interesting one. The fact that many drivers formerly had been conductors and sought promotion to driving in order to escape from contact with passengers was quietly forgotten. Self- evidently their returning to such a crucial role was unlikely to enhance 'customer care'. By contrast the impact upon a person's health of combining two separate jobs together could not be put aside so easily. The job of driving was in any case becoming more demanding on account of increasing traffic congestion, and when this was combined with OMO it undoubtedly contributed to greater driver fatigue. To this extent the extra satisfaction of a job with more variety had to be balanced against the need for greater stamina.

With progress on OMO more advanced within the company sector than among municipalities it was in the former that national provision was made in 1960 for a 15% premia for staff undertaking this type of work. Later this was subject to further enhancements. In the municipal sector the situation was rather different. For many years OMO had been a feature in undertakings that served semi-rural areas, and in larger concerns on routes that were lightly used. Later it was the large to medium sized undertakings that became the most enthusiastic supporters of the concept. National negotiations had concluded a premia on a sliding scale percentage within the range 15 - 18%, based on vehicle seating capacity. Those municipalities not directly party to the national agreement, such as Birmingham, Coventry, Manchester and Reading, negotiated locally. In these latter cases higher premia applied. In Manchester, for example, the single-decker OMO rate was 15%, whilst that for double-decker was 25%. In addition there was a further 'productivity bonus' paid to platform1 staffs not engaged on OMO as recompense for dislocation caused by, and for assisting with, its introduction. Birmingham and Coventry also paid to all staffs a 'productivity bonus' related to the estimates of realised savings. One only could hope that such estimates were correct.

It must be said that the industrial relations climate generally at this time was exceedingly difficult. Trade union militancy was in the ascendant, and the bus industry was not immune to this. The sector had been highly unionised for years, and although it had been relatively free from industrial unrest, any form of action on the part of staffs caused serious and immediate dislocation to daily life.[14] In 1967 the three main unions representing platform staffs (Transport & General Workers Union, General and Municipal Workers Union, and the National Union of Railwaymen) had presented the 'Busmen Charter'. This, among other things, laid claim to a greater share of the savings from OMO amounting to a 40% premia on the basic rate.

The Labour Government of the day had established a National Board for Prices and Incomes to which matters such as the pay and conditions of workers could be referred. The Board examined the pay of bus men on three occasions.[15] The second report published at the end of 1967 had been commissioned to examine productivity in general following OMO agreements negotiated in Liverpool, Manchester and London. The report recommended an OMO 'acceptance' bonus payable to all staffs and percentage premia for those engaged in such work based on area of operation (urban and non-urban) and type of vehicle (single or double). In urban areas the rates were 20% and 22.5% respectively, and the corresponding figures for non-urban operation was 15% and 17.5%.

The issue of savings was highly contentious, and the Board made the following comment:

> The industry must also consider, as the picture about savings becomes clearer, the broad lines on which these should be shared between platform1 staff, passengers and the undertakings.[16]

This is one of the few documents where there is reference specifically to sharing savings with the passenger, but the claims of others proved more pressing. The savings secured by an undertaking were of real assistance, and in a highly competitive labour market any reduction in staffing establishment was welcome, whilst additional rewards for staff in whatever form were an aid to recruitment and retention. Having said all of this, one has the impression that the industry fell into the trap of believing that since OMO was good for the industry, it was good for the passenger, rather as it had done 40 years earlier when seeking control of unbridled competition. Sadly, however, the passenger was unable to see any benefit at all, in fact quite the opposite.

Service offering

Demand for bus travel shares many characteristics of transport in general. It is almost exclusively a means to an end, and for a purpose totally unrelated to the transport business. The principle aim for passengers is to be at another place, and thus cost (price),journey time (speed) and quality of service (especially frequency) are of crucial importance. Central to this is the concept of 'efficiency', which is seen in terms of a combination of time and cost - the quickest and lowest cost journey is considered to be the most 'efficient'.

The impact of OMO upon the service offering was profound. Self-evidently converting services to OMO impinged adversely on the speed of the service. Herein lay a paradox,

for whilst operators laid claim to greater labour efficiency, passengers viewed the service as less 'efficient' on account of the increased journey time. Quality was being eroded in other ways too. The conductor's traditional image was of humour and care of the passenger. Operators made much of the fact that such responsibility would pass to the driver, yet it was a forlorn hope to expect that a person in this new role could ever lavish the same amount of time, care and attention upon passengers as would a separate conductor. In too many instances the quality of the service offering at the point of customer contact was vastly inferior to what had gone before.

Transferring the fare transaction from one undertaken whilst the bus was moving to when it was stationary caused major problems - to passengers and other road users. The effect of the driver giving change and queries about fares typically increased the boarding time per passenger by a factor of two or three, from somewhere in the region of 1-1.5 seconds to 3 or more. One suspects that passengers' perception of this would be that the period of time was longer. Often conversion of lightly used services could be accommodated within the existing journey time, but usually more radical change was necessary. The extension of journey time beyond existing cycles had major implications for resources and the level of service. Operators faced the dilemma either of using additional buses to retain existing frequencies, or reducing the frequency in line with the existing number of vehicles. A great deal of effort, therefore, was put into trying to reduce boarding times. This included using two-door vehicles, automatic ticket issuing machines, pre-issued discount tickets, travel cards, and simplifying fares either through coarsening the scale, flat fares, or zonal fares, and using fareboxes, often on a 'no change' basis.

In the mid-1960s Manchester City Transport, under the managership of Ralph Bennett, was at the forefront of these developments. Early in 1969 J. Hall, who as Divisional Superintendent (South) had been heavily involved with the conversion programme, gave a paper to the North Western Section of The Chartered Institute of Transport. By this time Manchester was operating about a third of its mileage without conductors. The paper provides a fascinating insight into the innovative nature of the work and the problems encountered, showing just how much trial and error was involved. Hall and his colleagues were convinced that OMO of intensive urban services at speeds equivalent to two-man vehicles was possible - 'a "Mecca" that, could and must be reached, if the undertaking was to remain economically viable'.[17]

The Prices and Incomes Board, based on the experience of Manchester and Reading thought so too, when it commented:

> [On OMO services in urban areas] .. .loading times per passenger as compared with crew-operated vehicles increases on average by only 14 per cent; and it is predicted that with further simplification of fare collection and use of centre- exits, the time spent at bus-stops can be reduced below that required for the crew-operated front-entrance buses.[18]

The aim of seeking conversion on the time schedules of crew operation was a laudable one, but the idea that boarding times could be reduced below that for services operating with a separate conductor seems fanciful to say the very least. It was a measure of the thinking of the period that the impact upon the passenger of increases in boarding time of around 14% was viewed more as an inconvenience, or irritation, rather than striking at the very heart of one of the crucial elements of the service. The industry was banking heavily that passengers would be stoic in the face of such adversity.

Despite huge efforts, and the achievement of real improvements, the technology of the -time was found wanting. Equally serious was the objection raised to manipulating fare scales to suit the collection method. Under the system of road service licensing operators had already surrendered control of prices to the Traffic Commissioners, and were now in danger of going one step further by instituting fares structures according to the type of collection method employed. There can be few other industries where charging is subjected to this sort of distortion. Not surprisingly, there was not an easy remedy. Coarsening the scale by rationalising stages according to coinage was achieved in Manchester, but it suffered from the drawback of causing a step-change in fares at certain points. Moreover, subsequent revision can present particular problems when restricted to multiples of a particular coin. One alternative was to adopt a flat fare system, but these were suited best to short or circular routes. Sunderland Corporation, where Norman Morton was manager, pioneered the concept to an entire network in 1966 with a universal fare of 4d (about 2p), along with a phased conversion of all services to OMO using standee single-deckers. A number of problems beset the programme, and Morton resigned early in 1968 to take up a post at Newcastle University. A short while later the undertaking moved to a zonal system. Morton's own account of his experience highlighted both managerial short-comings and the risks inherent in adopting such a radical and unproven approach.[19] If nothing else it served as a warning to others tempted to copy the Sunderland model.

More troubling, however, was the considerable resistance from passengers to the very concept of OMO. As Hall observed:

> ... the failure of the public to co-operate fully may lie in the concept of self service which has already been established in the public's mind to mean that it results in some monetary advantage in return for participation and where this concept is apparent as in the case of self service cafeteria and in supermarkets, the public will readily co-operate. In our case, however, the user of a public service vehicle pays exactly the same fare on a self service vehicle as on a conductor operated vehicle and thus no obvious incentive exists that will induce him to make the extra effort required to obtain sixpenny coins prior to making a journey.[20]

He had a point. As far as one can tell the idea of passengers receiving monetary recompense for the deterioration in service was never given serious attention. Some operators, such as Coventry, Leeds, London, Manchester and Sunderland, offered pre-paid discount tickets aimed at reducing boarding time, but the discount was for bulk purchase rather than a reduction in price for the fact that service was worse. Sadly their use never quite reached a threshold sufficient to achieve boarding times close to those of crew operation on any sort of reliable basis. In time most fell from use, or were replaced by travelcards.

Early in 1973 the topic of passenger resistance was brought into sharp focus by a report published by the Consumers' Association in 'Which'. This had been prompted by the introduction of double-deck OMO in London. The findings, which largely came out against this mode of operation, made for uncomfortable reading. They set out their conclusions in stark terms:

> On balance, for the individual passenger, London's one-man buses provide a markedly less satisfactory service - slower [their bold], and less convenient. As London Transport have now changed their plans and say they will not cut route mileage, there seems no prospect of a cut in operating costs. So one-man buses won't help keep fares down.[21]

Some months later the Association issued a correction after meeting With London Transport who advised that although savings were difficult to forecast exactly they could be in the order of 15%.[22] Nevertheless, this did nothing to address the criticism, that the service was 'markedly less satisfactory' on account of being slower and less convenient.

The main justification for converting to OMO was that costs were reduced. Although gross savings were substantial, net savings varied considerably on account of the additional expenditure that accompanied conversion; and this was true especially in the case of urban routes. Indeed figures of the amount saved was a subject of some debate, ranging from 20% to somewhere in the region of 14%.[23] M. S. P. Kerridge, an economist with Henderson Hughes and Busby, challenged many of the commonly held views of the time, believing the industry had focused too much on the notion that the passenger was interested primarily in paying the lowest possible fare rather than speed of travel.[24] In regard to the savings from OMO the calculations showed a reduction in costs of 21 % were possible only by using traditional buses, and this was reduced to a paltry 5.3% when conversion was undertaken with rear-engine vehicles, although this increased to 15.8% with the bus grant. J. B. Naylor contested these figures and calculated savings of 25% with the grant, or 16% without it.[25]

One of Kerridge's more interesting arguments was that adopting OMO in areas of labour shortage could, paradoxically, make the staffing situation worse. A ready supply of additional drivers was by no means guaranteed, and whilst conductors could be trained to drive, they were not freely interchangeable, and some would not wish to take on more onerous duties. Others might find OMO unacceptable and chose employment elsewhere, such as in the road haulage industry, where a large increase in demand for drivers was anticipated on account of new drivers hours legislation. Kerridge was troubled by the move towards OMO and set out his major concern in the following terms:

> But the most serious effect may only become apparent in the long term, as passengers dissatisfied with the service begin to look for alternatives. The bus grant, by approximately trebling the savings to be made with one-man operation. .. enables the operator to make a net gain from conversion even if he suffers a considerable long-term decline in business.[26]

This was not what the industry wished to hear. Not surprisingly few wanted to entertain the thought that OMO, instead of proving beneficial, would actually have a negative impact by accelerating the 'cycle of decline'. The fact remains that it may have done just that.

Lessons from history

Professor John Hibbs coined the phrase 'the strange suicide of the British bus industry', and it is tempting to wonder whether in adopting OMO, or OPO [one- person-operation] as it is now know, the industry had indeed been seized by a collective death wish. Given the financial, political, regulatory and industrial relations climate of the time there really was no alternative other than to pursue OPO.

Unquestionably, OPO was necessary; although whether the industry in a different set of circumstances would have embraced the concept with such enthusiasm, or applied it universally is open to debate. Certainly the twin policy of public subsidy to support the network, accompanied by bus grants to encourage wholesale conversion, was a contradiction of monumental proportions. The situation was akin to bailing water out of a sinking ship, whilst simultaneously drilling more holes in the keel.

One then must consider whether OPO was evil; in other words, was it harmful? Examining the literature of the period one is struck by the extent to which the principal disadvantage to the passenger - that of increased journey time - was received with serious concern rather than real alarm. For there is no escaping from the fact that offering reduced frequencies and increased journey times, coupled with maintaining the existing price level, was not other than a highly unattractive proposition when compared to crew operation; and even more so in comparison to the car. Service reliability should have improved on account of the requirement for fewer staffs, but as we have seen this was offset by vehicle unreliability. As a colleague in the industry commented at the time:

> In the days of double manning we had the buses but no staff, now we're one-manning, we've got the staff but no buses.

If managers in the industry were slow to embrace OPO, they were slower still in pressing vigorously the case for seeking to retain crew journey times by way of extensive bus priority measures. A golden opportunity was missed, for some of the harm could have been ameliorated had widespread application of OPO been made conditional on such measures. Sadly, however, even where bus priority was put in place operators seemed reluctant to capitalise on the benefits when promoting their services.

The world has, of course, moved on. Today OPO (outside Central London) is the usual form of service delivery, and a generation has grown-up with no experience other than of bus services provided in this way. It is accepted without question. Yet in many respects little has changed. There is unfinished business here, as well as lessons for the future.

The system of OPO retains strong echoes of the production-orientated management that delivered it. Hibbs' rightly illustrates the situation as being a 'critical marketing failure'!? In any business the relationship at the point of contact with the customer is the one that really matters. Passengers, first and foremost, are 'customers', and without a customer there can be no business. For too long the bus industry was more than happy to employ staffs who were 'interested in buses'. This is akin to McDonalds recruiting people to work in their restaurants because they are deep-fat fryer enthusiasts. To state this so bluntly is to reveal its absurdity, but the skill of driving a bus is one that many can master, whereas the disposition best suited for serving members of the public is much harder to find. Whilst some operators have managed to change their way of doing business to one of customer focus, with a standard of care that is exceptionally good, there are many where the concept seems totally alien. Considering that the bus business primarily is a 'people' business this is a quite extraordinary state of affairs.

To be sure many of the technical problems experienced during the early days of OPO have been resolved: the reliability of second and third generation vehicles is much improved, and indeed performance generally in terms of comfort and speed has altered beyond all recognition. Sadly,

however, the potential benefit to the passenger of a quicker journey has not been realised, and in any case improvement would be offset by the slowness of the OPO process and, without bus priority, the increase in traffic congestion.

The Government's desire to improve bus service frequency and reliability is welcome, but the bus will not be able to compete effectively in a world where many are under time pressure like never before, unless journey times can be reduced by an appreciable margin. This is not an argument to revert to crew operation, although this may be an option in certain circumstances, but many operators make little attempt to improve the speed of the OPO process. As Higginson has observed:

> Despite the introduction of electronic ticket machines, the dilemma of services that are cheaper to operate, but slower and thus less attractive to passengers', has still not been fully resolved.[28]

Whilst ore would be loath to suggest a general coarsening of fares scales, there is certainly a case to be made for moving away from standardised fares structures towards one more finely tuned to each service. The argument for considering each route separately as a distinct market, with its own unique demand characteristics is a strong one. The wider use of differential pricing according to day, time or direction of travel would be a welcome development too. Whichever method is used once the fares have been determined some of them, such as at the busiest loading points, might benefit from further refinement to produce fares that can be paid with a maximum of two coins, or three at the most. To take up Hall's argument one could advocate that now passengers expect to pay the driver on boarding a bus, consideration might be given to discounting the fare of those with the correct change as a direct encouragement to others to follow suit.

The industry still has much to do to put its house in order. All too often car users, who once were former customers, when returning to sample bus travel find that their worst fears are confirmed. Government is keen to help, but as the story of OPO shows only too well, one should be wary of accepting assistance in matters of policy that encroach upon managerial freedom, and the freedom to act in the best interest of the customer. For there is no escaping one very important fact: the bus business is one of the toughest in the land.

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Bearing the heat and burden of the day
'Pirate' bus firms then and now

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Introduction

I have heard it said that Nicolas Ridley, when the Transport Act 1985 was being resisted by the establishment of the bus industry with some force., expected that as an outcome of his regulatory reform the industry would be transformed, and that the drivers would start running bus services; in other words, small firms would take over from the state and municipally owned businesses of the period._ Perhaps, like Margaret Thatcher, he remained unaware of the growth of large-scale enterprise that marked the latter half of the twentieth century - in 1923, at the time of `the Grouping', the largest commercial concern in Britain was the London and North Western Railway. Economies of scale and international competition have since then led to the dominance of a number of industries by very large public limited companies, and small businesses exist largely at the fringes of the economy. 1923 had seen the disappearance of the remaining small railway companies, but while these had hardly been competing in the railway market, small bus and coach companies have remained active players in their share of the market, more or less to the embarrassment of both the large businesses and the government of the day.

Mr (later Lord) Ridley's expectations were not fulfilled, and while the subsequent privatisation of the bus industry was an untidy and contentious affair, small bus firms are with us as they have been since Shillibeer introduced the Omnibus to London in 1829, and for all of that time, they have been something of a nuisance, in the eyes of the establishment of the day. Here we shall look at some of this experience in the light of economics and marketing, and try to understand what part, if any, they might be expected to play.

Let me first declare an interest.No doubt because of my background in radical Dissent I have always favoured small scale enterprise, where the proprietor, as entrepreneur. must remain close to the market if the firm is to survive. This is most noticeable in the case of road haulage and in what I like to call `the coaching trade', both of them parts of the market where firms remain small, and economies of scale are plainly limited. It was this that took me into the bus industry, working for Premier Travel, and later led me to set up with a friend of mine, and purchase Corona Coaches. I have observed at first hand the point at which diseconomies of scale occur as a bus firm expands, and the limited but important place of economies of scope. And my study of the economics of public choice in terms of transport has convinced me of the need to recognise that the administrators and the politicians have their own agenda, which means that their pursuit of `the public interest', however defined, must not be relied upon to succeed.

One final remark is called for here, since Michael Robbins has recently reminded us of the origins of the term 'pirates', which I shall be using loosely here to describe the `independents', as they have been seen. In a letter to *The Omnibus Magazine* (Robbins 2002, quoting Barker & Robbins 1974, p223n) reminds us that reference to the London independent horse bus operators (or their buses) `in a derogatory way' appears to date from the 1880s. It later disappeared, but after the new generation of motorised independents appeared in 1922 they were commonly called pirates, and two such firms adopted the word as their fleet name. The term has been used in a derogatory, if not abusive sense from time to time ever since, demonstrating the kind of ignorance that still refers to coaches as `charas'.

The London pirates, 1829-1907

My first case study of small scale competition must of course be the London horse bus trade. Straight away we meet the effect of legislation, although in this sense a. statute more closely resembling that of 1985 than that of 1930. The Hackney Coach Act 1831 legitimised the omnibus and was seen to apply the principles of Free Trade to the growing business, being designed to encourage competition. Yet already the competition had become so great that, as Barker & Robbins put it (Barker & Robbins 1963. p. 24): "...a group of the very operators who had been so loud in their advocacy of such competition were already curbing it on London's busiest route." Before long there were complaints about `crawling and racing', and in 1838 an Act was passed which required all drivers and conductors of Metropolitan Stage Carriages to take out licences and to wear a metal badge showing their licence number. (Conductors at that time were widely known as `cads'.) If they caused obstruction or other trouble they were liable to a fine of up to a pound.

This was an early example of legislating for quality, without interfering with the contestability of the market, which was still open to all comers. But the `racing and chasing' that accompanied competition led as early as 1831 to a move to self-regulation and the introduction of quantity controls designed to limit if not to forbid new firms from entering the market. Initially on the 'New Road', from Marylebone to the City, these Associations spread until all the main London routes were organised in the same way. In other words, the firms operating on each route formed themselves into a cartel. In this their practice resembled closely that of the Shipping Conferences which had developed from the middle of the century. Members of an Association provided specified trips, regulated by Inspectors, with the better earners shared on an equitable basis. If a newcomer appeared on the route

members of the Association were delegated to 'nurse' his buses, running theirs in front and behind, and seeking to attract passengers from him, no doubt with the assistance of the cads.

Such interlopers, if they survived could be invited to join the Association, and doubtless to take part in seeking to drive out the next one to appear. The system worked to the general satisfaction of the operators, and presumably of the public (there is a famous picture of Mr Gladstone riding in an omnibus, which Mr Blair might do well to emulate.) After a rapid expansion at the time of the Great Exhibition of 1851 there was a severe recession, and after its appearance in 1856 the London General Omnibus Company (LGOC) bought its way into the Associations, acquiring businesses as, in very different circumstances, they were to do after 1924. The system lasted until the motor bus appeared, after which the LGOC acquired its competitors or reached agreement with firms like Thomas Tilling, and then in 1912 became part of the 'London combine' upon its acquisition by the Electric Railways group. In 1916 the LGOC bought the two remaining 'independents', while with the Common Fund Act of 1915 the foundations of today's Transport for London had been laid.

Motor Buses - the first twenty years

The period immediately following the first phase of the 20th Century European war was marked by three developments that are central to my study. First was the growth of the .area agreements', originating in 1916, which by 1930 had taken the shape of a national cartel, associated with the four main line railway companies (which sought to exploit the bus industry for financial returns.) Second was the growing transfer of municipal transport from trams to motor buses, with the growth of a 'public interest' policy, nowhere more so than in London, where in 1933 the London Combine became the London Passenger Transport Board. Municipal Transport Committees were predisposed to monopoly And third was the rapid expansion of 'independent' operators, predominantly small businesses, often funded by ex-service gratuities and taking advantage of the sale of military vehicles and the hire purchase policies of expanding manufacturers, at home and abroad. These small firms were quickly labelled 'pirates', and acquired a bad name for 'racing and chasing', by no means everywhere deserved.

Both the cartel and the municipal operators were represented by various associations, and tended to dominate the trade press at the time. The pirates on the other hand had little organisational power until the 1930s, and they were not represented in evidence before the Royal Commission on Transport, 1929-1931. The 'establishment' labelled them as 'pirates', and condemned them for abstracting demand, and profit, which was supposed to belong to those who were 'bearing the heat and burden of the day'; in other words, they were accused of running only during the peak, and thereby inhibiting the cross-subsidy that was supposed to be essential for off-peak and other low demand services to be provided. After the passage of the Road Traffic Act 1930 this led to supposed loss-making mileage being inflated, in order to fend off lower cost competitor; the pirate. The attitude of the establishment was well expressed by the slogan of Mr O C Power, Traffic Manager of the Midland "Red" company: *Get off my route!*

The weakness of this policy was exposed by Ponsonby in two key articles published after the second war (Ponsonby 1958, Ponsonby 1963), but by then the competition debate had passed its height. (These papers are still of considerable importance, and it is to be hoped that they might be republished.) Ponsonby in effect exonerated the pirates, and demolished the 'heat and burden of the day' argument, by pointing out that competition which had the effect of reducing the fleet required only for part of the day, and idle for the remaining period, was actually benefiting the establishment operators, whose costs were thereby reduced. (I have been told that Birmingham City Transport in the 1950s had some 40 per cent of its fleet idle between 10 a.m. And 3.30 p.m.)

Some case studies

1 The London pirates, 1922-1924

The London General Omnibus Company after 1919 restricted its purchase of new buses to its associate company, AEC, and it observed agreements whereby it did not operate directly competing services where there were tramways; either municipal or operated by other members of the combine. The post-war boom, combined with a serious shortage of buses, together with the protection of the tramways, led to overcrowding, and, for a time, military lorries were used as buses. But the market remained contestable, and into the gap there appeared on 1 August 1922 the Chocolate Express, to be followed by a new generation of pirates, amounting to some 500 vehicles seventeen months later. Many of these vehicles were markedly superior to those of the LGOC, and it was the independents who introduced covered tops, pneumatic tyres, four wheel brakes and other improvements, many of them becoming known for the efficiency and courtesy of their crews. Although many of them concentrated on the peak, changing routes along with shifts of demand, they were also responsible for the introduction of new services on cross-suburban routes as well as services in the outer area, which had been neglected by 'the combine'. Condemned as pirates and accused of 'skimming the cream of the traffic', while it was not uncommon for 'racing and chasing' to take place, they were popular with passengers, and attracted demand away from the combine to the extent that the LGOC and its associates had neglected the market.

On Ponsonby's analysis it is doubtful whether the LGOC would have been damaged if the new situation had been allowed to continue, but the tramway operators were affected immediately. London's trams carried heavy loads, but many of their passengers preferred the new and up-to-date buses that appeared on their routes. In less than a year the combine's tramway companies had lost so much traffic that they announced their intention of cutting tramwaymen's wages. Ernest Bevin then submitted a claim for an increase of eight shillings a week, which brought the LCC and other municipal tramways into the dispute, and by then the LCC was having to subsidise its tramways from the rates. The outcome was a strike, with the combine busmen called out to support the tramwaymen, leaving only the 'pirates' on the streets, which ended after seven days on 28 March 1924. I have described the fascinating political background elsewhere (Hibbs 1972, Hibbs 1989, pp. 88-97; see also Barker & Robbins 1974, pp. 222-229 and Barker & Savage 1974, pp. 170-173), which saw Ernest Bevin and Lord Ashfield forcing the Conservative government's hand, while Herbert Morrison voted against his own party.

The consequence was the London Traffic Act 1924, which was defended in the House of Commons as a measure to reduce congestion. (The same argument was to be heard again when the Royal Commission on Transport endorsed the route licensing to be introduced under the Road Traffic Act 1930.) It was in practice a blatantly protectionist measure, the details of which, once again, I suggest you should follow up elsewhere. Initially there was a confused period, with Restricted Streets Orders preventing further expansion just where demand was greatest, while in January 1926 the Minister

ordered a number of operators on tramway routes to reduce their frequencies. Later in that year the independents attracted public support when they continued to run during the General Strike, but 1924 Act had ended the contestability of the London bus market, and with it the days of the independent operators were numbered. Having now acquired a saleable monopoly, they accepted favourable terms, and when the London Passenger Transport Board was established in 1933 there were only 59 independent firms left in the capital. The whole period is discussed in Barker & Robbins 1974, pp 222-227)

2 The Potteries

The Five Towns, with Newcastle-under-Lyme, saw some of the earliest motor bus services, operated by the Potteries Electric Traction Company (PET). After several failures success was achieved in 1913, and in due course bus services were developed which did not compete with the company's trams. These were single deck cars, because of the low railway bridges along the 'main line' and they were unpopular with the people of the Potteries. This was reflected in the policy of Stoke-on-Trent Corporation, which set its face against the tramways and was prepared to license all comers to run buses. By 1925 there were 86 independently owned buses licensed, 75 of them running on the PET's main line, while the company's 27 buses were operated on routes away from the tramlines.

Just as in London, the financial consequences for the trams were serious, and by 1922 the company was unable to pay a dividend. In 1926 the Council negotiated with the company for the removal of the tramways, but without success. PET then asked the Council to allow its buses to operate on the tram routes, but this was refused. The company then used such powers as there were to appeal to the Minister of Transport, and Sir Henry Maybury, by then engaged in drafting what became the Road Traffic Act 1930, conducted an enquiry. The outcome found the company willing to withdraw the tramways (the last car ran on 11 July 1928), while the Council allocated licences for 70 new buses. After a financial reconstruction the company's name was changed to Potteries Motor Transport (PMT) in 1933.

This left the independents (the word 'pirate' seems not to have been used) still competing along the main line, and the majority of them joined one or other of two associations, while after 1928 PET set up a Joint Committee of Omnibus Operators, and, most unusually, included the services of all members of the Committee in their own timetable, while interavailability of return tickets was also arranged. The Road Traffic Act 1930 gave the independents an effectively saleable monopoly, but the company did not set about acquiring them until 1941, keeping many of them as subsidiaries for some time thereafter.

3 Some other examples

While small firms appeared all over the country in the 1920s, there were certain areas where they seem to have been concentrated. In Essex there were 34 firms in the area around Grays and Tilbury (of which 11 did not even succeed in obtaining road service licences.) Others were on Canvey Island, while they were present in some numbers in Paisley and south west from Glasgow. Many established themselves in the Welsh valleys, where the development of the Red & White company led to their acquisition. There a number of them formed associations, which continued until after the second war, whereas in Essex the passage of the Road Traffic Act led to their acquisition - around Grays by either London Transport or Eastern National, and at Canvey by a local businessman. On the other hand, in the corner of north east Essex, west and south of the River Stour, a number of small firms established themselves, and seem to have had an unwritten agreement as to which villages they served and on what days.

What is plain from these and other examples is that the tendency to concentration of ownership permitted by the road service licensing system offered a solution to the 'pirates' problem. Either by acquisition or by merger 'stability' was restored, and competition was no longer to be permitted since the market was scarcely contestable. This, as theory would predict, was to limit innovation for the following 50 years.

The heat and burden of the day

These words were spoken with much feeling on occasion from the 1920s on, and were commonly used, to my knowledge, in the 1950s. They summed up the attitude of the 'establishment' to the 'pirates', who were accused of 'abstracting' - se 'stealing' revenue which for some reason belonged to the established operator. This offence was defined as 'skimming the cream off (or, more usually, of) the traffic'. The argument was seldom based on the established operator's profits; it was cross-subsidy that was at the heart of the argument. The implication was always that the pirate "had no reason to be there". The argument from abstraction was built into the licensing system after 1931, when the objection to an application for a new road service licence that trespassed upon the established operator's interest took the form that "The application, if granted, would lead to abstraction of traffic from the objector's services". (:Let me confess here that I was quite capable of objecting in these terms, and blocked several useful applications in order to protect my company's interests.)

The real issue that underlay the argument was expressed in the commonly used term 'wasteful competition'. The thrust of the Road Traffic Act 1930 was to do away with this, though it was hard even at the time to see what sort of competition would be left. There is a telling passage in the Minutes of Evidence of the Royal Commission on Transport of 1929-19-311 (Question 5589), where Major H E Crawturd pressed a witness, R J Howley of the British Electric Traction Company, whom he accused of ".....going dangerously near telling us a monopoly is less efficient than those with whom you are competing". The Chairman did not encourage further debate on the subject. In the outcome we find a key clause in the Road Traffic Act 1930, which required the Traffic Commissioners, in considering the issue of road service licences, to ".... prevent wasteful competition with alternative forms of transport, if any, along the route or any part thereof, or in proximity thereto". It was to be 1969 before the economic consequences of this policy were to be fully analysed (Ponsonby, 1969), and it was still being defended in that year by in a well received text (Dyos & Aldcroft 1969, pp 356-362).

The lessons that we may draw from the 1920s are not without significance today:

First, we see how the defence of territory, even to ownership, not just of routes but of passengers, led the 'established' operators, whether 'combine' or municipal, to accuse the pirates in terms that did not then and do not now stand up to economic analysis.

Second, so soon as the Road Traffic Act 1930 had given saleable grandfather rights, more and more of the 'pirates' were only too ready to sell out, or to combine themselves.

Third, the outcome after 1931 was the stifling of innovation and change, at the cost of customers and prospective customers. For now on there was no threat to the establishment, and it is fair to say that an element of stupor enwrapped the bus industry.

Finally, we may add, the imposition of price control and the exaggeration of 'loss-making mileage' in order to stave off newcomers from 'abstracting traffic' led directly to the 'strange suicide of the bus industry' that marked the period from 1945 to 1985 (and is not without expression today.)

The conclusion to be drawn must be clear; that to constrain the contestability of the market succeeded in undermining both its allocative efficiency and its ability and incentive to identify and satisfy effective demand. But Baumol had not then defined contestability (Baumol, 1982) - and it would seem that there are those who have not read Baumol, even now.

Whither now?

The Transport Act 1985 (Mr Ridley's Act) made a stab at restoring contestability with its 'deregulation' clauses, but seriously confused the issue with its policy for privatisation, while retaining a constraint on access and exit through the requirement to register a service in advance. (I prefer to label the Act in terms of regulatory reform and restructuring, which I believe better defines its objectives and function.) Mr Ridley's expectation of an industry of small firms was not fulfilled, nor could it be. But the pirates did return, and the attitude of the establishment since 1956 has been cautious, to say the least.

Here I can only speak from what can be seen m the technical press, or learn from one's colleagues. Outwith the conurbations, the territorial cartel rapidly re-established itself, expanded, and complicated, by the sale of municipal companies. After some adjustment, and one major collapse, the establishment has settled down, and seems to have learned to live with a spread of local competition. As to the companies themselves, their reaction to a more competitive environment has varied quite widely, from those who have moved on to become market-oriented and consumer driven to those who remain technology based, with little or no attempt to grow their market. On the whole, the new pirates, like their forebears, have had to put customers first, in order to establish a business, but on the down side there have been those who have come in for a quick buck, often with very downmarket buses, which give the industry a bad image. Baumol, however, defines a contestable market as one that pen-nits 'hit-and-run' competition.

It appears that within certain of the conurbations themselves the pirates attracted the greatest opprobrium. Greater Manchester and Merseyside stand out in terms of the number of new entrants, which were given a bad press that has in turn given the outcome of 'deregulation' itself a bad name. I shall conclude with a brief look at the contrast between Greater Manchester and the West Midlands, which suggests, I believe, that Ponsonby_ 's analysis of competition is still a valid criterion, the more so in that it has been neglected.

From what I have been able to learn, the Greater Manchester Passenger Transport Executive (GMPTE) failed to understand its costs, and cut a great deal more bus mileage than would have been necessary if the importance of escapable cost had been understood and applied. Furthermore, the economist's analysis of cross-subsidy seems to have been ignored, despite the path-breaking report of the National Bus Company and the Institute for Transport Studies of the University of Leeds (NBC/Leeds, 1984). It would appear that in each case the responsibility for policy continued to rest substantially with the PTEs, which appointed General Managers to the companies that the 1985 Act required them to establish. The independence of these officers (which in effect they remained) was thereby constrained, and the provision of bus services remained politically biassed. One suspects that management in pursuit of profit, or even of a due return on assets, so as to limit opportunity costs, was largely foreign to the thinking of the Executives.

In contrast, the Chief Executive of the West Midlands PTE moved to become General Manager of the company, West Midlands Travel (now Travel West Midlands.) He had promised a keen and competitive approach, and evidence of the company's command of costing lies in the very small proportion of mileage that was deleted, much of which was provided immediately under contract to the PTE itself. As a consequence the number of newcomers in the West Midlands was very much smaller than in Greater Manchester or Merseyside, many of them identifying and filling niche opportunities in the market (some of which had been open to exploitation as far back as the days of Birmingham City Transport.)

Since the impact of the Transport Act 1985 these three conurbations have seen many of the newcomers settle down to become respected and capable operators, very far from the image of the 'pirate'. Yet a certain attitude - distrust, or perhaps dislike - seems to remain where the smaller firms continue, perhaps because they offer a more preferred standard of service on the routes over which they operate. It may be that this is the continued image of the pirate, 'skimming the cream off the traffic', but it may be due to a more fundamental distrust or dislike of the market. To this I will finally turn.

Neo-classical economics appears to treat transport as a utility, and thus as a 'natural monopoly'. Since Professor Littlechild refuted a similar argument in the case of electricity generation it is perhaps surprising to find it still assumed for passenger transport (I know of no similar argument with regard to the highly competitive freight transport industry.) In a classic statement, Stubbs, Tyson & Dalvi say "The simple canons of market economics cannot be applied to transport for a variety of reasons" (Stubbs, Tyson & Dalvi 1980), including the uniqueness of a journey in space and time, externalities and indivisibility. This is of course to argue that contestability is either (1) impracticable or (2) impossible, and ergo;a market does not exist. But the statement cannot be supported so long as the market is defined as for *the movement of people*, within which various modes compete, including not least the private car. The argument, which is open to behavioural criticism (for example, it is questionable how far people decide "...to travel on a bus at a particular time"), suggests that bus trips, unlike car trips, should be provided by a benevolent public authority, no doubt by franchise, a view to be found also in the European Commission. It allows no opportunity for innovation or risk, for public authorities responsible for public funds must always be risk-averse. Since 1986 the bus industry has seen innovation, undertaken at risk, from large as well as small operators, while the possibility that a new competitor may appear, as Baumol says, is in itself a part of the efficiency drive inherent in the market. Thus it would appear that the Passenger Transport Executive Group, which it seems continues to misdefine the market, should recognise the value of the small competitive business

Conclusion

In this paper I have sought to record the history of the 'pirate' bus operators, and to account for the prejudice with which they have from time to time been treated. I hope to have presented prima facie the argument that they have made useful contributions to the satisfaction of effective demand, as well as to economic efficiency. Insofar as they require quality regulation for safety alone, there is good reason to require the same for their larger competitors. Even the nationalised bus companies remained subject to the Vehicle Inspectorate (as British Railways remained subject to Her Majesty's Inspectors). 'The Lesson from History' that I present here is that there remains a place for the small firm in a competitive market - and, of course, I am making the central economic assumption, that a competitive and spontaneous market tends always to optimise efficient allocation of scarce resources, and to maximise customer satisfaction.

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A supplement to "Bearing the heat and burden of the day"

Roger Atkinson

The verbal message that was relayed to me was twofold : John would finish his paper when he came out of hospital. Whoever read the completed three-quarters of the paper to this symposium would find the conclusion obvious and could concoct it himself or herself. This second part has not proved to be easy. One could round the paper off very quickly and simply by saying that it has, hopefully, proved to you that there is still an ample place for competition with the big battalions by the small bus operator at the present day. But, I am afraid, I find that too facile a note to finish on.

I want to spend the last few minutes departing from John's unfinished draft and raising three aspects of present day bus operation where there may be lessons to be learned from history. I am putting forward my personal views and questions; not John's. I hope to be forgiven for this.

In all these three aspects, I see an entrenchment of regulation and control, with enormous influence exercised by the "local authority", defined not as an old-style local authority, but as a PTE, shire county or unitary authority. They are :

1 Park & Ride
2 The renascent tramways : Metrolink, Sheffield Supertram,Midland Metro and Croydon Tramlink
3 Quality contracts or quality partnerships

In each of these, an authority with power to regulate has immediate power and influence. On Park & Ride it provides the car park site. On tramways it owns the roads, provides the capital costs and awards the contracts. With quality partnerships, the local authority does the upgrading of the infrastructure, building the lay-bys, marking them in red tarmac, raising kerbs, erecting bus shelters. The bus operator associated in the partnership provides new buses and runs them in accordance with the agreement.

The next question is whether there remains any scope for competition. I would postulate the answer "Yes", although the difficulties would be great and the evidence is thin.

1. Park & Ride. I take the Chester example. Four sites, with contracts awarded by the City Council. The centre of Chester has a busy trading day each Sunday. Car parking can be difficult from 11.00 a.m. onwards on Sundays, and of course, there is competition from out-of-town shopping complexes, where parking is easier and free. Sunday Park & Ride is — and this is of long-standing — only provided on seven Sundays from late November to early January. What would be the obstacles if an operator offered to provide a commercial Sunday year-round service from any of the sites ? I am not providing the answer; I am pointing out a possible opening. And it is an opportunity to reflect on John Hibbs' "Third lesson" in his paper :

   > "The stifling of innovation and change, at the cost of customers and prospective customers. For now it is fair to say that there was no threat to the establishment and it is fair to say that an element of stupor enwrapped the bus industry".

2. The trams. First Manchester (now simply "First") provides a frequent bendi-bus service between Manchester and Bury, competing with Metrolink, whose intermediate stations (say, Prestwich) are ill-sited. But no competition on the Altrincham line where the stations are better sited. Transport for London still maintains bus 130, Croydon - New Addington, because the bus is, for many users, more convenient than Tramlink. I throw out the thought that with trams, competition is not merely "not impossible", but if they follow the course of converted railways they are in fact quite vulnerable to competition.

3. Quality partnerships. This audience is going to be far better versed in this than I am. (We don't have quality partnerships in Chester). Is there scope for competition; or is a monopoly absolutely watertight when a quality partnership is arranged ?

Those are simply thoughts I put to you. Even at the end of a mentally exhausting day you may be able to point to some of the lessons that we can learn from history. I will close with just one — that grand schemes of great cost are attractive to politicians; day to day operational improvements virtually never are. A tramway or guided busway will attract millions of pounds; minor improvements to public transport infrastructure are "too costly".

Roger Atkinson

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