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What type of body?

Keith Roberts

When I first wrote this article under the above heading, it appeared in, 'Historic Commercial News,' the house magazine of the Historic Commercial Vehicle Club, in Summer 1978. It began by teasing the reader as to what was meant by this title. Obviously, as it appeared in a commercial vehicle club magazine, it had something to do with transport, but what? I have decided to dispense with such frivolity and come straight to the point.

The traditional battery electric commercial vehicle has played a significant part in the history of commercial vehicle road transportation in the UK, but has appeared in transport media rarely. So trust the reader will allow me this little piece of nostalgia, and in so doing, record a little more on the history of these neglected machines.

Today, if I asked a young person if they could describe a battery electric vehicle, they would most probably refer to an advertisement they had recently seen for one of the new electric cars slowly coming onto the market. If I asked them to describe an electric commercial vehicle, they would most probably look at me blankly. If I had asked the same question say, fifteen years ago, the respondent would undoubtedly refer to the ubiquitous milk delivery vehicle. If the question

were put forty years ago, a reply could include; home delivery of bakery products, collection/delivery of laundry; home delivery of soft drinks/alcoholic drinks; mobile grocery vans, street sweeping vehicles and many other types. Going back even further, bodywork on electric chassis would be supplied for delivery of parcels by the railway companies, distribution of beer to public houses from a central brewery, coal deliveries, etc. By now the title will be apparent.

Early electric vehicles

The history of battery electric cars goes back to the closing decade of the 19th century, but we are only interested in the commercial aspect, so our story starts at the beginning of the 20th century. The railway companies were the first to show an interest, but with no British manufacturer, they looked to the American market. The first recorded heavy duty chassis was imported by the Great Western Railway, who built a body at their Swindon works, and it entered service in 1904 (source: British Railways). Within a few years a new company, The London Electrobuses Co. Ltd., were operating double-deck buses in the metropolis, and by 1909 had 14 in service. Bodywork looked very much like that on a petrol engined bus, without the engine compartment (therefore no bonnet), with batteries in two tanks, mounted between the axles. Each vehicle weighed five and quarter tons including accumulators (battery in today's terminology), and used two separate motors for driving the rear wheels.

However, they were not successful and were sold on.

Developments also occurred using smaller chassis with box bodywork, for deliveries in heavily populated areas (mainly London), users including well-known names such as Harrods, Selfridges, Carter Paterson and others. Entering the second decade, most tradespeople used horse drawn vans to carry their goods, and were finding the cost of maintaining a horse(s), with feedstuff, stabling, labour costs etc., becoming expensive. Consider further, the limited range of the horse, and another market for the 'electric' develops.



Photographed on the 1st January 1918, this 'GV' electric vehicle was supplied to the Great Northern Railway, Leeds Depot, and used for general local haulage duties.



An American manufactured 'Walker' electric van, owned by the London store, Harrods (built in 1919). This vehicle has been restored and is still part of the company's transport collection. Photographed on Maderia Drive, Brighton seafront, on the occasion of an Historic Commercial Vehicle Club 'London-Brighton run' The problem worsened during the first world war, when many petrol engined lorries were requisitioned for war service, together with many thousands of men (and horses!) joining the forces.

Despite these privations for transport operators, apart from the railway companies, other businesses introduced battery electric road vehicles (BERV) including a new market with municipal authorities.

Municipal vehicles

In large towns and cities, housing was laid out in rows of terraced properties, formed into compact districts, with refuse disposal facilities not too far away. The BERV proved a most suitable chassis when used in a refuse collection role. These early municipal vehicles looked rather archaic, with their comparatively high loading line, and lack of protection against contents being blown all about the roads.

During the First World War, mainly heavy electric chassis were used, notably by the railway companies, the breweries and a few municipalities. One interesting development occurred in 1916 when five electric buses entered service in Lancaster, running over a 2.9 mile route. The single deck bodywork had seats for 22 persons and a running speed of about 10 mph. They were still in service in 1924.

Post 1914/1918 war showed no real changes in BERV designs, with sales aggravated by return of war subsidy lorries, together with damaged and rebuilt i.c.engined machines. However, those who used 'electrics' successfully, stayed with them. Some municipalities experimented with them as feeder transport to their tramway systems during the 1920's. Royal Mail did try out some lightweight versions experimentally in the London area.

Delivery vans

In 1928, a bakery company based in Southport, built a light weight electric delivery van for their own use, which proved successful, more followed, and in 1930 products went on general sale under the product title, 'Victor Electrics.' Early Victor models looked like a petrol van, with a bonnet covering what normally would be the engine. Under the bonnet, was a metal tank which held a number of cells, part of the total number making up the battery. This really was the beginning of light weight electric vehicle production in the UK, with several other manufacturers entering the market around this time, although all chose to use the forward control frontal design eventually. To describe them as a box on wheels would be accurate, and they rarely had a payload in excess

of 1 ton. As many traders were in the process of changing from horse drawn transport, the BERV became an attractive alternative. Easy to drive, with just two pedals controlling speed and braking, an electric motor driving through a differential to the rear wheels (usually), a lead acid battery (most of the time) and a simple means of controlling the electricity between battery and the motor.



An unidentified electric vehicle in service with Leicester Co-operative Society, again dating from around the WW1 period. Note the milk churns which it is believed were for wholesale supplies, from the dairy to the distribution point.



Two 'Morrisson-Electric' vans built to the 'National Standard' war time specification (refer text), and supplied new in June 1942. Note, not yet registered, and war-time blackout single headlight.

These characteristics were attractive to employers, as often unskilled labour was recruited to drive them. These machines also proved low in cost to run, with a nominal amount of electricity to charge the battery, very low maintenance costs, a clean and hygienic load area for conveyance of foodstuffs, low insurance rates, and an extremely long life, often up to 20 years. The battery was always treated as fuel purchased in advance,

having a two year guarantee originally, rising to four in later years.

The dairy trade

During the early 1930s with milk becoming available in bottles, the dairy trade became the dominant purchaser of 'electrics' and remained the largest user right through to the decline of doorstep delivery, (beginning in the 1970s). No doubt prompted by success in home deliveries using BERV, other electric vehicle manufacturers appeared. The company I was associated with, would eventually become the largest manufacturer, trading as 'Morrisson-Electrical,' starting in 1933. In the mid-30's, several electricity authorities put some 'streamlined' (futuristic - author!) models into their transport fleets, used for promoting sales of electrical appliances, or for transporting staff to read meters. By the end of 1939 thousands of BERV were in use, and then came the war. With new vehicle production severely curtailed during war time, a standardisation sub-committee was formed by the Electric Vehicle Association, recommending a standard BERV chassis of 1 ton capacity, basic composite body, and common running components, with all manufacturers agreeing. However, due to material shortages and Government restrictions on retail deliveries, the scheme was never fully realised.

Post war, many of the large fleet operators built up large fleets of 'electrics,' especially the Co-operative Societies, who used them to deliver dairy products, bread and confectionery, and laundry services. Another 'new' market appeared, for mobile shops (including: grocery, butchery, fruit and veg., ironmongery) to serve new housing estates built on the outskirts of towns and cities. With all the mass produced i.c. engined vehicle manufacturers' output going for export, BERV makers not normally involved in exporting, were able to capitalise on this situation, and sales continued to rise.

Use in the NHS

With formation of the National Health Service at the end of the 1940's, another new market opened up, as we shall see. Following formation of the NHS, new hospitals were planned and built, old ones being updated, with large sums of money spent on new equipment. Typically most hospitals dated from the Victorian era, built in large grounds with wards and service areas spread out. What better way to provide transportation

within hospital grounds, than the humble electric vehicle, noiseless, fumeless, simple to operate, very low maintenance costs, and a long life expectancy, and bodywork to suit any requirement. The NHS remains one of the largest users of BERV's right up to present day, but visitors or patients to a hospital rarely notice them (almost every hospital in the UK has one or more), as they seldom venture outside private hospital grounds.

[Editor's note: In addition to the historic role of electric vehicles described above, it is noteworthy that interest in electric buses is growing rapidly. In Britain, examples of all-electric operation can now be seen, such as one of the Coventry park-and-ride services. Nottingham City Transport has recently ordered 20 new all-electric vehicles, which will make it the largest all-electric bus operation in the country].

Is the PHRG for me?

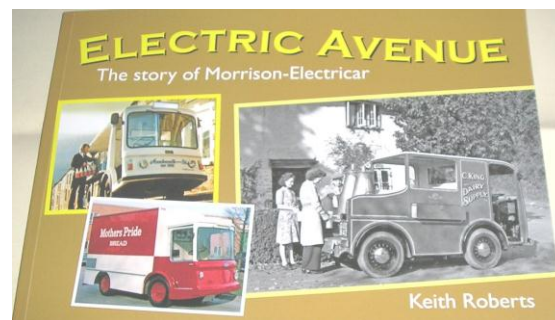
Most enthusiasts will have heard of the Omnibus Society, founded in 1929 to study the industry, but many will not have heard of the *Provincial Historical Research Group* (PHRG). Although the full title is rather long, it does describe a vibrant group which does just what it says on the tin, and its chairman Paul Lacey explains the aims and success of this approach through the following:

Yes, we are *provincial*, though only in the sense that we do not specifically include the London Transport area, although in reality there are few of us without some interests in that area.

We are indeed *historical*, but then history only started yesterday, and we are not fixated on any particular period, leaving scope for interest by all age groups.

Certainly we are *research*-based, but range of topics is quite staggering. Within our ranks are many of the well-known contributors to well-known magazines and the bookshelves, without whom many valuable histories would not have been recorded for posterity.

And then again, we are a *group*, which means that we can help each other with research queries, sources of archival material (outside the Society) and locating photos, some of which could be missed by the lone researcher. We also hold our AGM in different parts of the country, with the 2013 one at the Oxford Bus Museum.



Readers are reminded that the author's book 'Electric Avenue', giving a detailed account of the Morrison-Electricars story, as reviewed in our issue 65 (March 2011) and is still available from Bryngold Books Ltd., 100 Brynau Wood, Cimla, Neath, SA11 3YQ (www.Bryngoldbooks.com) at £10.99 plus £2.00 P&P (ISBN 978-1-905900-16-9)

The bi-monthly newsletter provides an interesting and well-presented mix of articles, projects in progress, queries and appeals.

As an active researcher for fifty years, I have come to appreciate the great number of contacts I have made through like-minded specialists, many of whom I see listed within the ranks of the PHRG, so I know what the group has to offer. Even if you only want to read the results of the work of others, there is wealth of interest arriving on your doormat six times a year. For a free sample copy, please contact the editor, David Grimmett, Fourways, Main Road, Carhampton, Somerset, TA25 6LZ.

Please note that membership of the PHRG is an option when joining the Omnibus Society, full membership details of which can be obtained from Ralph Barker, Stoneyflats Crescent, South Queensferry, East Lothian EH30 9XX.

Beeching Anniversary

The fiftieth anniversary of the publication of the 'Beeching report' (formally known as The Reshaping of British Railways) in late March was noted in a range of media coverage. This included an interview in the Radio 4 'Saturday Live' programme on 30 March with R&RTHA member John Edser, who was a young member of the planning team in BR at that time.

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ASSOCIATION BUSINESS

From the Chairman

Another meeting of the Management Committee took place on 22 February, 2013, at Oxford. John Howie had completed briefing Royston Fisher as to the Treasurer's duties. Pending the appointment of a Secretary, the Chairman would continue to conduct the secretarial function.

On the subject of the publication of the 'Companion', plans are proceeding, but some further work has been completed relating to graphics and captions, the launch event and estimated final costings. Further details will be circulated to members when the launch event is finalised. Work is also progressing on the Tilling Group history project, in respect of finalising the text and selecting suitable photographs. The Committee expressed their appreciation of Tony Newman's interim report and confirmed that it remained necessary to consider and approve a financial plan, being prepared by John Howie, ensuring that the cost of publication and distribution would, at minimum, break even, and that no residual burden would fall to the Association.

Next considered was The *Journal*. Peter White, Editor, reported that the late distribution of the November edition [No.70] was attributable to printing and distribution problems, that nevertheless it had been possible to distribute the February edition [No.71] to accommodate the requirement to give due notice of the AGM. It was agreed that the May edition [No.72] should be available at the 'Wales on Wheels' event [17/18 May]. Preliminary consideration was given to the desirability of producing a comprehensive index of past items published in the journal. The committee recorded its appreciation of Dave Bubier's assistance in producing the *Journal*.

Thereafter attention turned to the Website. John Ashley was still in the process of overhauling the site but had reiterated the need for a regular supply of new material. We are seeking to identify university departments with an interest in transport history, with a view to co-operation. It was agreed that copies of the *Journal* would be sent to CILT.

A key topic was Research Co-ordination. Tony Newman reported on a useful meeting with Stewart Gillies, Information Services Manager for the British Newspaper Archive Online Project at Colindale on 11 February. The large scale move of hard copies from Colindale to the Additional Storage Building at Boston Spa will accelerate during this summer. From 10 June the first of a series of embargos will begin and initially affect 24,000 titles. About 100 high-use periodicals will not be affected until the autumn, but after that the Colindale site will close. It is intended to provide a dedicated reading room at the St Pancras site where access to newspaper content will be available on microfilm or digital copies, without charge to registered readers. In association with the online publisher 'brightsolid' over 6 million pages have already been digitised and over the next seven years a further 34 million pages will be processed, 'brightsolid' having experience with Findmypast, Genes Reunited, Friends Reunited and the UK 1911 Census online.

It is also possible to view the digitised collection online by subscription for individuals, but not institutions. The current rates are £79.95 giving unlimited access for 12 months, £29.95 for 600 pages in 30 days, £9.95 for 120 pages over 7 days and £6.95 for 100 pages over 2 days. There is a possibility that a new category of subscriptions for societies but not public libraries might be introduced by 2014. During Tony's meeting he was given a number of demonstrations about how to make readable copies of small paragraphs which were located in newspapers already processed. The quality of such copies is dependent on the Optical Character Recognition [OCR] process and with some newspapers that used small or poor quality print this can be a problem. However, the opportunity to search and find items is now enormously increased. Lists of newspaper titles available are regularly updated and can be viewed on the website British Newspaper Archive Online. The committee expressed its appreciation of Tony's comprehensive report.

Focussing upon the Autumn Meeting [18/19 October, 2013, Coventry], the Committee confirmed that proceedings would commence, on the Friday [18 October], with the Annual Dinner at the Ramada Hotel, at which Peter Read, author, poet and actor,

would give his postponed readings from Charles Dickens on the theme of transport; to be followed, on the Saturday [19 October], with four formal presentations at the Transport Museum on a common theme to be confirmed.

Over the Christmas period, Philip Kirk, in an act of supererogation, had surveyed members' specialist interests. The committee was appreciative of Philip Kirk's analysis and it was agreed that it be circulated, with revisions from the current year.

On the subject of the London Bus Museum [LBM], the committee agreed to enter into reciprocal arrangements whereby the two associations would each nominate a committee member to facilitate liaison [John Ashley was nominated by R&RTHA], appropriate articles and notices would be published in each other's journals and websites, and the possibility of collaborative events would be explored.

The year's activities largely determined, attention turned to the 2014 Programme. The committee resolved that the emergent pattern of incidence and location of events be confirmed with a spring meeting in Coventry, a summer event elsewhere, possibly in collaboration with other organizations, and an autumn annual dinner and conference in Coventry. It was further agreed that each event should normally have a distinctive focus, that for the spring meeting relating to transport at the eve of World War 1, that the summer event, subject to consultations with LBM, be held at Brooklands and feature its various transport exhibits, and that for the autumn meeting the theme be the highway and motoring organizations.

The Committee resolved that the next meeting of the Committee would be held on Friday, 31 May, 2013, at Oxford.

The Annual General Meeting duly took place in Coventry on 16 March with a goodly attendance. The year's accounts were received and approved, Andrew Waller was re-appointed a director, and Ken Swallow, thanked for his term of office, was succeeded by John Ashley. Tony Newman presented his comprehensive report on research developments and the chairman reported on the Association's work in the past year, noting in

particular, that it had been essentially a task of stabilizing business and re-establishing routine. Attention was now turning to wider strategic matters, in fulfilment of the Association's purposes. He cited the possible need to focus upon major themes such as a questioning of the tacit assumption that 'all transport was good and more of it was better'. The formal business completed, refreshments were taken [the new arrangements of pre-ordered food delivered to our accommodation, seemed to work well]. Thereafter, Peter White gave a fascinating account of passenger transport in Zimbabwe, lavishly illustrated. For many, a surprising revelation was the creation in a developing country of a heavy duty truck and bus manufacturing capacity. Peter was warmly thanked for his contribution to the day's proceedings. The day was rounded off by a splendid guided tour of the Museum, familiar, of course, to most, but an opportunity for gaining new insights and encountering amongst exhibits fondly-remembered vehicles.

At the prompting of Sir Peter Hendy and Annette Gravell [University of Wales Trinity Saint David], John Ashley and the chairman had a very successful meeting with Alan Kreppel. As most colleagues will know, Alan had been managing director of South Wales Transport and, subsequently, Cardiff Bus. Alan has agreed to join us and specifically will chair Sir Peter's session at the '*Wales on Wheels*' event and will be contacting former colleagues urging their enrolment in our company!

As mentioned, in turning attention to future development, it has been necessary to go back to our founding fathers! In this, the chairman has been immeasurably helped by Tony Newman, Andrew Waller and Roger Atkinson who have done much to fill wide gaps in the chairman's understanding. The chairman remains very impressed by what he sees as a founding principle: the need to establish a 'clearing house' for serious endeavour in our field, but more of that elsewhere and, possibly, on another day...

As observed in an earlier edition, should you suspect that the bus has deviated from its route, please ring the bell and get in touch with me.

Bob McCloy, Chairman

Wales on Wheels 2013

Call or email John Ashley (0770 9900 788, john@globespinner.net) to book into the R&RTHA Spring Conference at the National Waterfront Museum in Swansea on Friday 17 May and Saturday 18 May 2013. The museum, specialising in industrial history, is the newest member of the National Museum of Wales (www.museumwales.ac.uk/en/swansea).

Accommodation is in the seafront Marriott hotel, just five minutes' walk from the museum.

Friday

1200 Welcome and lunch, Waterfront Museum
1430 Swansea Museum Collection Centre
1600 Swansea Bus Museum
1800 Cocktails, Waterfront Museum
1930 Dinner, Marriott

Saturday

1000 Tramways Centre visit

1100 Professor Peter White 'The Experience of Express Coach Deregulation'

1200 Panel Discussion on 'Heritage Transport Conservation' (with representatives from National Waterfront Museum, London Bus Museum, Swansea Bus Museum, and Seamark Trust)

1300 Lunch

1400 Professor Stuart Cole CBE 'Integrated Travel South Wales - Trains and Buses'

1500 Sir Peter Hendy CBE 'Transport and Politics: the Experience of the Mayor and Transport for London since 2000'

Exhibitors

Potential participants include:

Swansea Bus Museum, The Omnibus Society, Swansea Museum, Skewen Motor Club, Pontarddulais Car Club, Classic Car Club, Neath Port Talbot College, Gilbern Club, Welsh Area Fire Engine Restoration Society, the 'Babs' land speed record car, Swansea Metropolitan University School of Applied Design, the London Bus Museum, Traveline Cymru, and Seamark Trust.

ORIGINS OF THE R&RTHA

Roger Atkinson

A seminar was convened under the auspices of the Railway & Canal Historical Society on 28 November 1987. It was held at the then Birmingham Polytechnic, Perry Barr. I was invited by Professor John Hibbs; others were invited by the late Professor Theo Barker or through the Railway & Canal Historical Society. They were widely cast, and included (but this list is not comprehensive):

Professor Theo Barker, Professor John Hibbs, Philip Groves, Ian Yearsley, Geoff Morant, Peter Jaques, John Birks, Reg Westgate, John Dunabin, Peter Stevenson, Grahame Boyes, Richard Storey, Paul Truelove and myself.

The Societies whom these names represented almost certainly embraced at least the following, but again this not a comprehensive list, particularly as it includes neither commercial vehicle societies nor museums; it is simply the best that I can offer.

Railway & Canal Historical Society, Tramway Museum Society, Omnibus Society, PSV Circle, The Kithead Trust, Modern Records Centre (Warwick University) and the Transport Ticket Society

There was considerable discussion on holdings of archives, and numerous other societies or bodies for potential membership were put forward. But no actual organisation appears to have emerged. Indeed, organisation – as distinct from general enthusiasm – appears to have been very slow to emerge; when it did, it once again owed a debt to movers and shakers in the Railway & Canal Historical Society.

The second seminar

A second seminar was held on 18 March 1989. This was convened by John Hibbs and held at the same location. Attendance was fewer than on the earlier occasion, being confined to: Roger Atkinson, Theo Barker, John Birks, Grahame Boyes, Stan Denton, John Dunabin, John Hibbs, Richard Storey and Ian Yearsley. This meeting set up the Roads and Road Transport History GROUP. It was agreed that a Conference be mounted in the Midlands within the next eighteen months.

However, there was clearly more action being taken than the Agenda (above) betrays. For example at its

April 1989 Annual General Meeting, the Transport Ticket Society agreed to become affiliated to the Roads & Road Transport History Group. So, the R&RTHG had a functioning existence at least as early as March/April 1989 (and could legitimately celebrate its 25th Anniversary early in 2014, having missed a conceivable slot in November 2012).

A third meeting, to finalise the arrangements for the Conference, was held at the Rolls-Royce Heritage Trust premises in Parkside, Coventry, with Ray Cook (of the Roll-Royce Heritage Trust) as Secretary, on 10 March 1990. Gordon Knowles of the Railway & Canal Historical Society thereafter appears to have become Secretary

Subsequently, a Conference was held at Lanchester College, (Coventry Polytechnic) on 16 March 1991, which brought the following speakers, under the Chairmanships of John Hibbs, in the morning, and Richard Storey in the afternoon:

Dorian Gerhold on London Carriers and Coachmen of the Late 17th Century

Winstan Bond of the Tramway Museum Society on Recent Tramway Research

John Birks on the National Bus Company Commemorative Volume and NBC Archives

Theo Barker leading an audience-participation discussion on road-rail freight competition.

The attendance list was phenomenal:

20	from the Omnibus Society
25	from the Railway & Canal Historical Society
7	from the Tramway Museum Society
3	from the Transport Ticket Society
22	unaffiliated
1	unidentified
78	total

Charles Dunbar, then in his 90th or 91st year, attended as guest of honour.

Committee Meetings continued at Parkside. The formation of the Roads & Road Transport History Conference was then arranged, with an inaugural meeting on 14 March 1992. I was present at this meeting at Parkside, and was made Treasurer of the new R&RTHC. Charles S Dunbar was to be invited to be President, an office which he accepted.

The corporates were designated Founder Members in a 1992 Subscription List were:

The Commercial Vehicle and Road Transport Club

The Kithead Trust
London Transport Museum
The Museum of British Road Transport, Coventry
N B Traction Group, Aberdour, Fife
The National Motor Museum, Beaulieu
The Omnibus Society
PSV Circle
The Railway & Canal Historical Society
The Tramway Museum Society
The Transport Ticket Society

The newsletter

The R&RTHC Newsletter was launched in November 1991, under the Editorship of Grahame Boyes. It opened with an introduction to the Roads & Road Transport History CONFERENCE. This gives us an immediate problem. Newsletter No.1 had appeared in November 1991; but in these Notes I have said that the inaugural meeting of the body was on 14 March 1992; oh, dear!

Skating round that slight hitch, and looking at Newsletter No.1, it told of early discussions in Railway & Canal Historical Society in which a significant portion of the membership declared a wish to widen their interests, taking as an example railway branch line histories often failed to chronicle the rise of competing bus and road haulage operators that were to lead to the demise of the railway. It also noted the dominance of tramway histories, compared with the neglected story of road haulage; also that pre-twentieth century road transport history was a sparse field.

The rest of the report in Newsletter No.1 coincides, I think, quite happily with the story that I have set out above, right through to the setting up of the R&RTH Conference. It said then went to say that "The Conference's objective has been defined as 'To promote, encourage and co-ordinate the study of the history of roads, road passenger transport and the carriage of goods'. Full (corporate) membership will be open to transport museums, libraries etc., as well as to societies, but individuals will also be welcome to join as non-voting associate members".

Except for remarking that individual members, virtually immediately, attained voting rights and, in practical terms, equivalence in status to the representatives of the corporate members, there was formally maintained for many years an unspoken, yet conscious, distinction between the two. May I leave it at this for the moment?

Book reviews

Dr Robert McCloy **Travels in the Valleys** Published by the Swansea Branch of the Historical Association, c/o The National Waterfront Museum, Oystermouth Road, The Maritime Quarter, Swansea SA1 3RD Paperback, 190pp £12.99. ISBN 978-0-9574178-0-9

The value of the bus is shown in the travel patterns of miners from small villages to small collieries; its flexibility and its ability to move very large numbers of workers in small quantities where the railway was better suited to mass transit.

Dr McCloy shows how J M Keynes' concept of public works to reduce unemployment was applied by Merthyr Council to the development of a bus operation, but juxtaposed with keeping workers (like miners) in 'offensive' clothing off the buses and not take seats of 'ordinary' passengers and achieving arms-length management before its day with councillors and officers jointly contributing significantly to policy formulation and detailed operational issues. They were also sufficiently business – aware to realise that private bus companies competition to their tram systems was to be feared. And the high level of unemployment reflected the high numbers of applicants for posts at all levels including 123 for the Superintendent post.

Professor John Hibbs' forward (whose views on bus economics are as opposed to mine as Mr Holmes and Dr Moriarty), predicted a theme in Dr McCloy's book 'that regulation sapped entrepreneurial energy' ... 'prevented market pricing' [and] 'was not suited to provide competition with the motor car'. Market pricing in the 1920's resulted in my grandfather walking seven miles to the coal mine to save the fare. Hmm...

This theme continues through the book. It refers to Barbara Castle whose efforts in closing the rail network I was critical of in my Western Mail column recently. She revisited centralised state ownership and regulation. Dr McCloy appears to criticise both. My view remains with co-ordination by a regional Joint Transport Authority as provided for in the Transport (Wales) Act 2006; but ownership depends on the concept of free-standing companies whether locally or nationally owned if they achieve service improving objectives.

– which was such an important part of everyday activities. Much of today's bus economics issues are

included – *pay as you enter*, which may not seem obvious for a half cab, orderly queuing at bus stops, flexitime to reduce the peak vehicle requirement – all came from the 1930's. And we would now surely wish that the Swansea tram system and the Mumbles Railway remained and not closed by transport philistines concerned only with immediate internal costs with such lack of vision of future economic externalities.

The great 1930's operators – The South Wales Transport Company Limited, United Welsh Services Limited, J James , Ammanford and Rees and Williams, Tycroes – brands which should also have been kept (under a franchised operation of course) because of their market standing and, alright, nostalgia for me as a young Llanelli user in the 50's and 60's

But as the study concludes “the question of regulation is likely to inform the future”. One hopes Dr McCloy is shifting his ground from Hibbsism to Cole/Whiteism!

Travel in the Valleys is a well- researched and very readable social history of the Swansea, Cardiff and Newport valleys. It is in my view vastly interesting than other studies because it sees life in south Wales through the bus industry – the companies, employees and travellers

Stuart Cole CBE, Emeritus Professor of Transport, University of South Wales

Walter Burt Dunfermline and West Fife's Trams and Buses Amberley Publishing, The Hill, Merrywalks, Stroud, Gloucs GL5 4EP (orders@amberley-books.com) 96 pp, paperback. ISBN 978-1-4456-1147-1, March 2013

In a similar style to the book on Kirkcaldy and central Fife reviewed in issue 70, this is essentially a photographic study, with informative captions and a brief introductory text. The tramway was company-operated, closing in 1937. Prior to this, in 1924, the tramway company had commenced running its own bus services. Subsequently, Walter Alexander and Co became the dominant operator, in the area. Earlier tramway and bus views are in sepia tone, and later views in colour, highlighting the contrast between the original blue livery, and the red livery adopted in Fife after break-up of the Alexander's fleet. The subsequent operations under Stagecoach are recorded, together with other operators, notably Rennies, who ventured into local bus service operation after the 1985 Act.

'Travels in the Valleys'

How I enjoyed reading Robert McCloy's book - and how it took me back to my own visits to South Wales in the '50s and early '60s.

Robert refers to the Traffic Commissioners' annual reports of the time and their omission of any broad analysis, despite the comments they might express in summarising their decisions on individual fares applications. The editing hand of the Ministry was evident. The reports were bland indeed. How much more useful they would all have been had they allowed themselves more in the way of perceptive observations!

There is a good deal in the book about bus operating costs. Costing was not the operators' strong point. We read that '54% of the routes cover their costs' (at Newport in 1954). Were these the individual route costs or the undertaking's total operating costs? The overall pence/mile figure for the whole undertaking was known so the 'profitability' of a route would be "determined" by that. Might that have been why it seemed that for Newport the 30 service was making a 'loss' whereas for Cardiff it was making a 'profit'?

I was intrigued to read that as early as January 1940 Swansea's borough engineer was giving his highways committee his outline of post-war road building, with the Luftwaffe's attempt to wipe the place out still some twelve months in the future. Bravado indeed! No doubt his plans changed after February 1941? Certainly in Liverpool the devastation of May 1941 gave the post-war redevelopment advisory committee something of a blank canvas, but whether what emerged helped 'towards the provision of an effective and efficient system of transport' could be debated.

One of the book's illustrations is of a contractor's bus en route to the steel works construction site at Llanwern. You could not go far without seeing one. Maybe this was before the introduction of the 'MOT test' for commercial vehicles? No doubt the buses were not being run by psv operators and therefore not subject to any CoF exam? They were well past their prime.

Colin Scott's recent book on Western Welsh prompted me to chart from it the net profit figures for the company's post-war years, and which Robert quotes from an earlier book. It produces an..

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THE BRITISH TRAM: BASKET-CASE OR BAROMETER?

Ian Souter

1. The Basket Case?

1.1 In the Beginning

This paper is based on the author's presentation to the October 2012 meeting in Coventry

The urban tramcar concept appeared in Britain from the USA in 1860. Following the passage of the Tramways Act in 1870, tramways

became the country's favoured mode of urban travel for the next 50+ years, but with exceptions: see Table 1 (1879-1899).

TABLE 1: PROFILE OF UK TRAMWAYS 1879 – 1969

Year	Route Miles	Passengers (millions)	Vehicles	Passengers /Route Mile (millions)	Passengers /Vehicle (millions)	Vehicles /Route Mile
1879	284	141	1376	0.50	0.10	4.85
1889	842	441	3647	0.52	0.12	4.33
1899	984	893	5988	0.91	0.15	6.09
1909	2398	2636	11648	1.10	0.23	4.86
1919	2569	4802	13451	1.87	0.36	5.24
1919	2569	4802	13451	1.87	0.36	5.24
1929	2323	4613	13922	1.99	0.33	5.99
1937	1234	3261	9215	2.64	0.35	7.47
1949	582	1991	4705	3.42	0.42	8.08
1959	137	247	672	1.80	0.37	4.91
1969	11	12	115	1.09	0.10	10.45

Sources: Munby's Inland Transport Statistics; Individual Operator Histories

Note: The 1969 data refers only to Blackpool/Fleetwood where the tramway caters for a significant seasonal peak in passengers.

In brief, the Tramways Act required tramways to

1. Secure parliamentary authority to build a street tramway
2. Pave and maintain the road surface between the rails + 18" each side.
3. Cede the operation of each tramway to local authority direction after a nominated period (usually 21 years).

Electric traction had evolved in the 1880s and gradually, starting in the USA from c1889, became the preferred traction mode. There had been pioneering applications of electric traction in the British Isles from 1883 but American

technology prevailed. In the meantime, British tramways were in turmoil over issues of ownership as the 21 year clauses in the Tramways Act matured. A critical resultant was the deferring of improvements until c1900 when there was an expansion of electrification without equal in global terms – see Table 2. The demand for new electric tramcars saw wholesale imports of American equipment plus the establishment of new car building plants in Britain alongside established horse car and railway vehicle builders. Unfortunately, the rapid reduction in demand from c1904 when the initial electrification schemes were

TABLE 2: OPENING OF ELECTRIC TRAMWAYS IN EUROPEAN MAJOR CITIES

COUNTRY	SAMPLE SIZE	PERCENTAGE of SAMPLE OPEN BY 1st JAN. of:						
		1885	1890	1895	1900	1905	1910	1915
BRITISH ISLES	28	0	0	0	46	92	100	100
FRANCE (1900)	10	0	0	50	70	80	90	100
GERMANY (1900)	34	5	5	38	91	100	100	100
ITALY (1900)	11	0	0	27	63	72	100	100
RUSSIA (1900)	19	0	0	5	31	57	84	84
(All Europe)	137	1	2	22	58	86	95	97

SOURCE: Operator Opening and Closing Data

(Sample size = number of urban locations with electric tramways and a population >150,000.)

completed saw two of the new car manufacturing plants liquidated - shades of .com bubbles c100 years later.

1.2 Heading for Trouble

Despite the undermining of the support industries, the electric tram in Britain prospered for some 25 years, responding to society's insatiable demand for improved mobility – see Table 1 (1899-1919). The all time peak for tramway passengers was in 1919; thereafter, trolleybus and motorbus passenger numbers rose significantly until they too peaked (c1948 and 1955 respectively).

Post 1919, tramways had few champions outside certain local authorities. In the face of evidence to the contrary, the 1930 Royal Commission on Transport declared “. that tramways, if not an obsolete form of transport, are at all events in a state of obsolescence..” and recommended no more be built. By 1935, half of the tramway operations in the British Isles had closed, a rate of attrition by far the worst in Europe: see table 3. Of the 28 tramways in the country's major cities, 18 had confirmed their closure decision by 1940.

1.3 The contagion spreads

Of much greater significance than the run-down of tramways has been the run down in British local public transport usage from its 1949 peak - by 1997, 73% of the 1949 peak passengers had been lost. Whilst the trend away from public transport has been viewed as an inevitable sign of 'social progress', the consequences have been far reaching and are now matters of national and international concern. Note that British and US experience is not shared universally: see Table 4.

The hypothesis is offered that the factors behind the early run down of British tramways have also been behind the run down in public transport as a whole. Absolute total passenger numbers reported for 1950 are the base level for the comparison for each country reported. Different approaches to recording “passengers” will account for some of the differences in relative levels shown.

TABLE 3: CLOSURE OF EUROPEAN ELECTRIC TRAMWAYS IN MAJOR CITIES

COUNTRY	SAMPLE SIZE	PERCENTAGE of SAMPLE OPEN BY 1st JAN. of:									
		1925	1930	1935	1940	1945	1950	1955	1960	1965	1970
BRITISH ISLES	28	100	96	96	85	78	50	25	7	0	0
FRANCE (post 1919)	11	100	100	100	90	90	90	72	36	27	27
WEST GERMANY	22	100	100	100	100	100	100	100	95	95	91
ITALY (post 1945)	13	100	100	100	100	84	84	69	61	46	38
SOVIET UNION (EUROPEAN-post '45)	16	87	100	100	100	100	100	100	100	100	100
(Western Europe)	105	100	98	98	94	91	82	70	59	51	46
(All Europe)	143	100	98	98	95	93	87	78	69	65	62

SOURCE: Operator Opening and Closing Data

(Sample size = number of urban locations with electric tramways and a population >150,000.)

**TABLE 4: INTERNATIONAL TRENDS OF PASSENGER NUMBERS
(All Local Road Transport Modes Combined)**

Year	Britain	Germany	Spain	USA
1950	1.00	1.00	1.00	1.00
1955	0.85	1.22	1.11	0.64
1960	0.74	1.30	1.25	0.51
1965	0.66	1.22	1.75	0.42
1970	0.52	1.11	1.76	0.36
1975	0.46	1.19	1.69	0.36
1980	0.38	1.19	1.47	0.41
1985	0.34	1.07	1.42	0.40
1990	0.30	1.29	1.38	0.41
1995	0.27	1.49		0.36
2000	0.27	1.51		0.42

SOURCE: National Transport Statistics

Observe then:

Experience in the USA was initially similar to that in the UK, but changed from the 1970s after the US government endorsed the underwriting of local public transport, principally to arrest urban decay.

Passenger numbers in both Spain and Germany have increased since 1950.

2. The Barometer

Some influences on the attrition of British tramways are offered for discussion:

- The changes in passenger demand post 1949 say more about society than the competence of transport operators.
- Legislation can have unintended consequences too. Britain was near unique in global terms in requiring the authority of the national parliament to construct a street tramway – a slow and costly process. Contemporary light rail schemes are similarly afflicted.
- Since the 1890s public debate in Britain on matters of public transport provision have been dominated by issues of ownership of the utility, not what it was expected to provide for society.
- ‘Healthy industries have healthy suppliers’. The British electric tramcar was crippled from an early stage by turmoil within the supply industry, and whilst local employment was retained by the later continual rebuilding of older vehicles, there was no development of industry wide standard designs offering a lower unit cost and ease of transfer of material between operators.
- Both tram and trolleybus were ultimately powered by home produced coal and were closely linked to the British coal based economy with its labour intensive production units and heavy peak transport demands at shift change times. The replacement modes were oil fired but national government has been ostensibly indifferent as to the source of the fuel, although heavily reliant on oil taxes.
- Whilst the above factors all played their part in undermining tram, the greatest threat to tram, and to public transport, has been/still is the spread of urban population. This influence appears to be little understood by transport historians

and transport professionals alike. Whilst population spread is a global trend, the rate of development in Britain post 1919 was exceptional, and was/is highly reliant on the availability of fuel oil. Not only has housing moved out but so has everything else a population does – employment, shopping, leisure/entertainment, education, health, etc. The scattered sites for these activities draws citizens to use their own, personal, transport rather than a public transport network which penalises the user (in respect of cost and time) to negotiate traditional ‘hub and spoke’ route networks. Suburban housing almost defies serving by any fixed route public transport mode.

- This same population spread has also influenced other core aspects of society: consider the frequency of local government reorganisations in the UK since the 1970s.

3. Conclusions

The cost, constraints and lack of planning meant that tram in the British Isles was poorly equipped to respond to changes in society. These weaknesses caused tramcar in Britain to disappear much earlier than in the rest of Europe, some weaknesses progressing over the ensuing years to undermine all local transport provisions in the country and more besides.

‘Those who ignore the lessons of history are
condemned to re-live them!’

How many passengers?

Ian Souter’s paper above raises the question of how we measure passenger numbers on public transport systems. Most commonly, operators reported a total based on ticket sales, although this is subject to some errors (for example, multiple-issuing where more than one ticket of a fixed denomination was issued to make up the total for a given journey, a separate ticket being issued each time interchange took place, assumptions regarding the number of trips per season ticket, etc.). A further issue arising is the trip *rate* (i.e. trips per head of population, usually expressed as an annual figure). Clearly, a change in total trips could arise simply from a change in population, rather than a change due to

the attractiveness of the public transport service (such as fares or frequencies), or external factors (such as car ownership). These rates may be derived by dividing the operator-reported trips by the catchment area population served. These have been required recently as a local authority performance indicator by central government in Britain, revealing high trip rates for the Nottingham, and Brighton & Hove, networks, for example.

Another means of deriving the trip rate figure is to carry out household surveys, such as the National Travel Survey (NTS) in Britain, and equivalents elsewhere (such as the 'Mobilität in Deutschland', MiD, in Germany). These have the advantage of recording use of all modes consistently (walk, cycle, public transport, car, etc.) and also overcoming some of the multiple-counting problems associated with ticketing systems. A recent study by Ralph

Puehler and John Pucher ('Demand for Public Transport in Germany and the USA: Analysis of Rider Characteristics', *Transport Reviews*, September 2012, pp 541-567) uses such data to compare public transport usage in Germany, the USA and Britain in the last decade. This confirms a very low per capita use in the USA (24 trips per person per annum), the highest in Germany (at 139), and an intermediate level (although much closer to the German than US figure) in Britain (116). These are broadly consistent with findings in Ian's paper, but suggest a smaller difference between Germany and Britain than a total trips index based on the 1950 figure, given that Britain had an exceptionally high per capita public transport trip rates at that time.

Peter White

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It produces an almost straight line graph of decline from 1957 through to 1969, at which point NBC reconstruction kicks in with thumping deficits from 1970. How were the mighty fallen!

It was interesting in passing to be reminded how 'fuel tax' was a preoccupation of the operators in the '50s. Nothing changes!

What I had not realised about Merthyr was that it had been suggested that it should be evacuated and closed down. Poor Merthyr! However, for me visiting the town in those days as a 'transport buff' a redeeming feature was two of the bus operators. Morlais Services was a substantial operator of colliery etc buses and even built their own bodywork for half-a-dozen for themselves. The other was D J Davies who not only ran a local bus service to Cefn Coed but built bodywork at Treforest for a number of other operators - and owned the Wheatsheaf Inn in Merthyr I believe. I hope one day somebody will research these two - or maybe someone has already done it?

But I have digressed enough!

Ken Swallow

Merthyr in the early 1980s

As a follow-up to Robert's book and Ken's comments above, it is worth noting the position of Merthyr municipal undertaking in the early 1980s. A study was carried out on the operations, in which R&RTHA committee members Peter White and Martin Higginson were involved. By that time the operation was conducted entirely by one-person-operated single-deckers, in an orange and white livery. A certain amount of peak industrial traffic commuter remained, although on a smaller scale than in previous years. Operations extended outwith the Borough itself, as far as Cardiff on the joint service. A striking feature was that about half fleet in the operation on a working day was required largely for peak school demand. The organisation survived the initial period of deregulation, as a company owned by the local authority, but eventually succumbed to very strong competition in the area.

PRW

REBUILDING BRITAIN FROM 1945

Following the feature in our last issue, based on Glen McBirnie's talk to the October 2012 meeting, some further illustrations from his collection.

Below:

Albion eight-wheeler JRK834 is an example of a covered bulk cement tipper, operated by Hall & Co., who were forerunners of the RMC Group. Halls were basically builders' merchants, as well as national suppliers for sand and gravel. This view dates from the 1950s, showing the vehicle on hire to Rugby Cement's Rochester works, as well as operating out of CMC mills in the Kent area. Fleet no 1522 is looking rather the worse for wear with damage to both the front and second steer wings. Possibly a 13 to 15 ton load would be normal.



Below: A word from the boss to the driver of this Kew Dodge, which dates from 1953. Perkins engines were to be standard in the Aberthaw fleet. No 13 (JTX44) was probably used both for bags and bulk. Note the period cars behind.



Using the same basic cab design and front-mounted panelling as Aberthaw JTX44, this Rugby Cement ET6 Ford Thames Trader dates from 1956. Pilot tipping gear was fitted under the bodywork, which was taxed for 6-7 tons of bulk cement at the 13 ton gross vehicle weight. All loads were sheeted. Here again, petrol engines were replaced by Perkins diesels. Fleet no 237 is shown having just been delivered from the coachbuilders/painters.



XWB986 and 987 are seen on the Ketton works weighbridge. Ketton Cement of Albion Works, Sheffield and Ketton near Peterborough, operated these Commer two-stroke tippers from 1956 onwards. They were used specifically for bulk loads in the construction of airfield rebuilding. All Ketton tippers were for many years backloaded with coal from NCB mines in the Staffordshire area for return trips to the cement works near Peterborough.



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