

**WINDOWS OF OPPORTUNITY:
HOW HAVE RAILWAYS AND
PASSENGERS SEEN AND
USED THE VIEW FROM THE
TRAIN?**

STEVEN MARTIN PAUL COCHRANE

M. A.

UNIVERSITY OF YORK
RAILWAY STUDIES

JUNE 2013

ABSTRACT

Inspired by a previous study into the 1950s British Railways Diesel Multiple Units, this dissertation examines the experience of the view from the train window. Taking as its beginning the work of Wolfgang Schivelbusch and George Revill the study embraces more unconventional views, including the ‘forward panorama’ of the diesel multiple unit, the elevated railway and the observation car; it looks at how railways have exploited views in their publicity and the circumstances in which they have been restricted by circumstance and design, together with passengers’ reactions to such restrictions. The early regulation of passengers’ travelling conditions, seldom commented on, provides a framework for the provision of window views for all classes of traveller. Apocryphal stories of invention are noted together with the information provided to the passenger by the railway through the glass medium.

The effects on passengers which resulted from the ‘tilting’ train’s appearance and the importance of ventilation bring health issues into examination; throughout health appears as a consideration and similarities are drawn between institutional architecture and the design of railway coaches. The most severe health consequences, including decapitation, and the use of the window view in crime, real and imagined, are also discussed.

LIST OF CONTENTS

List of Illustrations	4
Acknowledgements	6
Author's Declaration	7
1. Explanation	8
2. Regulation	32
3. Invigoration	45
4. Exploitation	55
5. Observation	66
6. Information and Beautification	88
7. Limitation	93
8. Elevation	111
9. Desperation, Decapitation and Defenestration	119
10. Inclination	128
11. Inspiration	134
12. Augmentation	137
13. Termination	150
Bibliography – Primary Sources	153
Bibliography – Secondary Sources	168

LIST OF ILLUSTRATIONS

1.1	Sir Horace Winslip and Steed at lunch	9
1.2	The mechanics providing Sir Horace's railway vision	9
1.3	Sir Horace and Steed arrive at their Destination	25
2.1	Eastern Counties Railway Composite Carriage	44
3.1	1900s Ward, Sheffield Royal Infirmary: through ventilation in practice	46
3.2	Royal Victoria Hospital, Belfast, 1953: lack of therapeutic view	47
3.3	Classroom with distraction free windows	49
3.4	1933 LMSR poster exhibited at Birmingham New Street Station	51
4.1	LNER Knaresborough poster	58
4.2	LNER Durham poster	59
4.3	1910 GNR poster	60
4.4	LNER Felixstowe poster 1934	61
4.5	GER 'Luxurious' Poster	62
4.6	Pullman Poster	63
4.7	Southern Electric Poster	64
4.8	'A Hint to Railway Travellers'	65
5.1	View from the 'Coronation' observation car	76
5.2	LNER 'Coronation' poster, 1938 by Frank H. Mason	78
5.3	'Coronation' Observation Car poster, 1938	79
5.4	Emett's Observation Coach	82
5.5	The 'Devon Belle' Observation Car	83
6.1	Railway Puzzle. To find the name of the station	91

7.1	A Bright Outlook	99
7.2	‘Sunshine Roof’ and ‘The Tube Train’	102
8.1	Liverpool Overhead Railway Posters, c. 1900-1910	114
8.2	Liverpool Overhead Railway Sightseeing Guide (c. 1950)	118
12.1	LNER 1932 Armstrong-Whitworth railcar’s forward panorama	140

ACKNOWLEDGEMENTS

It is conventional for the student to thank his Supervisor and members of his family; in following that convention my thanks are as heartfelt as only I know. It is not even stretching the truth to say that their contributions decided the dissertation's outcome. In addition I gratefully acknowledge the financial assistance given to me by the Historical Model Railway Society.

Professor Colin Divall has fulfilled all my expectations and hopes as my Supervisor; his encouragement, support and inspiration throughout have made all the difference to me – I only wish I could have been the less wayward and more organised student that he deserved.

Joyce and Marie are the closest people to me; their patience has been tested countless times but they have always responded with love and understanding. The only reward they receive in return is my undying love.

AUTHOR'S DECLARATION

The author confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others. It has not been submitted for examination at this or any other institution for another award.

This dissertation, excluding bibliographical footnotes, contains 29961 words.

1 EXPLANATION

Towards the end of the steam era in Britain and at the height of the Beeching closure programme the fantasy television series ‘The Avengers’ made popular viewing. Each self-contained episode placed its vaguely government-sponsored heroes, Steed and Mrs Peel, in a mysterious situation usually involving one or more eccentric, often upper class, characters as well as sundry diabolical masterminds. Sir Horace Winslip is a railway eccentric far beyond Ian Carter’s standard ‘enthusiast’.¹ He invites Steed, visiting during an investigation, to lunch in his stationary coach which is mounted so as to replicate a railway dining car, complete with table lamp and, prominently silhouetted against the ‘sky’, the same tassels on the window blinds that are used in two of the best known nineteenth century railway paintings, Abraham Solomon’s ‘First Class – the Meeting’ (both the original and Bowdlerized versions) and Leopold Augustus Egg’s ‘The Travelling Companions’. Railway art historians have pointed to these tassels whose inclination suggests the train’s gentle motion and in the ‘Avengers’ they obligingly wave as lunch proceeds in a (probably) unconscious example of popular culture imitating fine art. (Figure 1.1).²

¹ Ian Carter, *British Railway Enthusiasm*, (Manchester: Manchester University Press, 2008), pp. 1-23.

² For example: C. Hamilton Ellis, *Railway Art*, (London: Ash & Grant, 1977), p. 75; Ian Carter, *Railways and Culture in Britain: the Epitome of Modernity*, (Manchester: Manchester University Press, 2001), p. 268; Christopher Matthews, ‘Love at First Sight: the Velocity of Victorian Heterosexuality’, *Victorian Studies*, vol. 46, no. 3 (Spring, 2004), pp. 428, 432; Julian Treuherz, ‘The Human Drama of the Railway’ in Ian Kennedy & Julian Treuherz (ed), *The Railway: Art in the Age of Steam*, (Liverpool: The Nelson-Atkins Museum of Art, Kansas City, Missouri and National Museums Liverpool, 2008), pp. 84 & 96.



Figure 1.1
Sir Horace Winslip and Steed at lunch
Source: Screen Capture from *The Avengers*: ‘The Gravediggers’



Figure 1.2
The mechanics providing Sir Horace’s railway vision
Source: Screen Capture from *The Avengers*: ‘The Gravediggers’

The whole contrivance is operated by a railway-uniformed servant and the coach rocks gently while an image – notably of a rural scene complete with windmill representing the technological past, just as (we presume) Sir Horace and the railway do – floats past the window at a distance on a rolling screen accompanied by appropriate recorded noises and drifting, fan-driven smoke, for the Winslip railway is inevitably steam-powered. To simulate a tunnel a black curtain is drawn between window and scenic image (Figure 1.2). By way of explanation for this curious set-up Sir Horace offers:

‘Can’t possibly enjoy a meal any other way. Brought up on trains, you know. My father made all his money out of trains and now if I attempt to eat a meal without the gentle rocking and the scenery flashing by I get the most dreadful indigestion’.³

At least one study of surgical recovery rates has found that hospital patients given a natural view including trees and water have fewer negative outcomes than those who see only other buildings suggesting that the view’s therapeutic benefit may not be as laughable as Sir Horace’s eccentricity suggests.⁴ Steed and Mrs Peel rarely travelled by train; in 1965 the car was the obvious way for sophisticated, go-ahead people to travel in the age of a growing motorway system. The choice of vehicle acted as shorthand for their status too: a vintage Bentley acknowledged the former’s ‘gentlemanly’ position and the latter, as a liberated and resourceful woman was suited to her Lotus; one could hardly imagine either travelling second class or even on the classless Underground.

Sir Horace’s peculiarity is therefore exemplified not only by his Victorian dress and appearance but principally by his wholesale devotion to railway

³ ‘The Gravediggers’ (1965) directed by Quentin Lawrence in *The Avengers: The Complete Series 4*, DVD, (London: StudioCanal, 2010).

⁴ Roger S. Ulrich, ‘View Through a Window May Influence Recovery from Surgery’, *Science*, New Series, vol. 224 no. 4647 (27 April 1984), pp. 420-21.

travel, which is clearly hinted as outdated. The essence of this eccentric's railway simulator is the passage of the visual panorama beyond the carriage window which the traveller is simultaneously involved in but detached from. An unusual entertainment from the early days of public railways presented a similar picture and brought a vicarious experience of travel on the new-fangled Liverpool and Manchester Railway to the people of London. This was the so-called 'Disyntrechon' – a word which has not been widely adopted – which is best described in the 1833 'Railway Companion', a small book which devotes more of its pages to the 'succinct...history' than the actual traversing of the Liverpool-Manchester line:

'A mechanico-graphicoramic view of the Liverpool Rail-road, under the above title is open at the Bazaar in Baker Street, Portman Square. The pictorial portion...was painted by artists of acknowledged talent, from sketches made upon the spot, and presents a faithful delineation of all the prominent and interesting features of the road: to this a real Rail-way, traversed by locomotive engines and trains of carriages of corresponding proportion with the view, is attached.'⁵

A handbill for the exhibition, reproduced by Michael Freeman, commends the spectacle to both those who have travelled on the railway so that they may be delighted by its miniature representation as well as those who have not so that they may better appreciate this wonder of the age without having to go to the expense of visiting it. It notes that the background picture 'is in constant motion'; this was perhaps the first model railway and conveyed a scale vision of how the country would appear to the traveller's eye while enjoying this new method of travel.⁶ Francis Klingender sees this, together with the publication of images of the line and its trains as one facet of a

⁵ A Tourist, *The Railway Companion: describing an excursion along the Liverpool line accompanied with a succinct and popular history of the rise and progress of rail-roads*, (London: Effingham Wilson, 1833), p. 47.

⁶ Michael Freeman, *Railways and the Victorian Imagination*, (London: Yale University Press, 1999), p. 71.

public relations exercise on behalf of the railway company; Freeman agrees, describing the well-known contemporary ‘Ackerman’ prints of the Liverpool and Manchester Railway as ‘an exercise in corporate advertising’.⁷ Since it transpires in the ‘Avengers’ that Sir Horace (albeit naïf and deceived) is financing the development of 1960s science fictional ‘rays’ to bring about the ‘jamming’ (mechanical, not traffic) and thereby downfall of the motor car – presumably he is frustrated by British Railways’ pusillanimous struggle against the enemy and government’s encouragement of it – it can be concluded that his version of the ‘Disyntrechon’ also represents a similar railway PR exercise demonstrating the principal joys of train travel to the unconverted. Małgorzata Nitka, who devotes a chapter of her book to vision from the train, quotes a similar reference to the ephemeral nature of the passing scene by Ralph Waldo Emerson: ‘The towns through which I pass [...] make no distinct impression. They are like pictures on a wall.’⁸ Such images could almost be those ‘non-places’ which Peter Merriman, in the context of a discussion on motorways, says ‘effect a certain detachment between the individual and the spaces he or she traverses.’⁹ Today’s technology can facilitate the presentation of such an illusion, for example in a narrow Madrid bar which is set out like a train interior with a series of video screens as ‘windows’ that play passing urban and country scenes, recorded from trains worldwide, synchronised to pass from screen to screen and perhaps intended to create an illusion of escape from its city centre

⁷ Francis D. Klingender, *Art and the Industrial Revolution*, (London: Evelyn Adams & Mackay 2nd edn revised and edited by Arthur Elton, 1968), pp. 145-52; Freeman, *Railways and the Victorian Imagination*, p. 217.

⁸ Małgorzata Nitka, *Railway Defamiliarisation: the Rise of Passengerhood in the Nineteenth Century*, (Katowice: Wydawnictwo Uniwersytetu Śląskiego [University of Silesia Publishing], 2006), Chapter 2 ‘A Crisis in Vision’, pp. 53-84, 79.

⁹ Peter Merriman, ‘Driving Places: Marc Augé, Non-places, and the Geographies of England’s M1 Motorway’, *Theory, Culture & Society*, vol. 21 (2004), p. 148.

location.¹⁰ But even in the early twentieth century the Paris Exposition presented a panoramic display of the Trans-Siberian journey which relied upon a series of painted screens moving at different speeds passing a series of windows; today's technology provides an equivalent experience on the internet with one hundred and fifty hours of film shot through the window of an eastbound train.¹¹ Perhaps the edited highlights of the Paris version would be preferable? Had he not been a real person, Brigadier Tom Lloyd could have existed as an 'Avengers' character; the series seldom featured an Army officer of lesser rank. As founder of the appropriately fictional-sounding Railway Conversion League, an organisation which was devoted to stripping railway routes of their rails and replacing them with tarmac, he could have acted as foil to Sir Horace. But even Tom Lloyd, while preaching the worsening inefficiency of rail and the evident superiority of road, makes some acknowledgement of that special attraction of train travel which many aver, even if it is by ironically suggesting another deceit, a road coach fitted out to simulate a railway vehicle, 'the air conditioningarranged to admit icy blasts and sometimes soot.'¹²

Naomi Royde-Smith, popular novelist and playwright of the 1930s, bisexual socialite, editor of the 'Saturday Westminster Gazette' and enthusiastic train traveller, whom we shall meet again in 'Inspiration', uses this metaphor in reverse. Writing of the London Midland and Scottish Railway's (LMSR) 'Coronation Scot', streamlined rival to the London and North Eastern Railway's (LNER) more heavily promoted and more sophisticatedly

¹⁰ [on line] <http://www.parolio.com/portfolio/the-passenger/> (accessed 9 April 2012).

¹¹ William Uricchio, 'A "Proper Point of View": the Panorama and Some of its Early Media Iterations', *Early Popular Visual Culture*, vol. 9, no. 3 (2011), pp. 225-238; 'Siberia Across Your Screen', *Railway Gazette International*, vol. 166 no. 3 (2010), p. 63.

¹² Brigadier T. I. Lloyd, *Twilight of the Railways – What Roads They'll Make! Railway Conversion as the Cure for Britain's Transport Troubles*, (London: Foster Groom, 1957), p. 52.

art deco 'Coronation' she describes: '...the countryside ...looks less like scenery than a horizontally striped green wallpaper with a misty pattern of beech trees and churches spread on its agreeable surface.'¹³

One of essentials of the railway journey and, in the opinion of many, one of its main attractions is the view from the window; some evidence is the continuing production of books which promise armchair journeys on scenic rail routes.¹⁴ Gayle Letherby and Gillian Reynolds, analysing the opinions of a collection of contemporary rail travellers, find that many nominate looking at the view as principal activity during their rail travel.¹⁵ A 1900 'Railway Magazine' journalist short of copy decided to enquire into the pleasures of various 'celebrities' while travelling by train, having discovered that Gladstone, surprisingly, amused himself by timing the speed of trains. He was disappointed by the results which showed that some did not wish to commit themselves and of those who did the popular activities were, as ever, reading, sleeping and studying business or other briefing papers with a good proportion choosing 'smoking' as an activity. Only one professed to admire the view – 'the landscape, the skies and the beauty of England' - and this was, appropriately, that era's financially most successful artist, Sir Laurence Alma-Tadema. The research's outcome was probably influenced by the journalist's choice of celebrity, which included senior railway officers, who

¹³ Naomi Royde-Smith, 'Two Famous Trains: Impressions of the Coronation Scot and Her Sister', *The Times London Midland and Scottish Railway Centenary Number*, September 20 1938, pp. iv-v.

¹⁴ For example: Julian Holland and David Spaven, *The Times Britain's Scenic Railways*, (London: Times Books, 2012), Benedict le Vay, *Britain from the Rails: a Window Gazer's Guide*, (Chalfont St Peter: Bradt Travel Guides, 2009).

¹⁵ Gayle Letherby and Gillian Reynolds, *Train Tracks: Work, Play and Politics on the Railways*, (Oxford: Berg, 2005), pp. 76, 78, 119-23, 127-29, 185, 188.

would not, one imagines, admit to frivolity while travelling.¹⁶ Paul Theroux puts his own worldly slant on the train window view:

And the notion of travel as a continuous vision, a grand tour's succession of memorable images across a curved earth – with none of the distorting emptiness of air or sea – is possible only on a train.¹⁷

Wolfgang Schivelbusch's influential work is the obvious beginning for the study of the view from the train which, I argue, is one of the essentials of the railway journey, and for many travellers a major pleasure too. Originally 'Geschichte der Eisenbahnreise: zur Industrialisierung von Raum und Zeit im 19. Jahrhundert', more specifically translated as 'The Railway Journey: the Industrialization of Time and Space in the 19th Century', it is usually given the flabby, English subtitle, 'Trains and Travel in the Nineteenth Century'. There are two important concepts relating specifically to time and space that Schivelbusch introduces. The first of these is the 'machine ensemble' so called because the train was not an individual method of transport as was the horse but part of a system with interdependent components.¹⁸ The 'machine ensemble' dovetails well with the fundamental proposal of Charles Lee, later expanded by Michael Robbins, which defines a railway in terms of a series of elements working together to produce the system, a definition which also forms the basis of John Geise's single sentence explanation and which superseded more limited ones such as, for example, C. F. D. Marshall's.¹⁹

¹⁶ R. R. Dodd, 'How some Celebrities occupy their Time when Railway Travelling', *Railway Magazine*, vol. 7 (1900), pp. 68-73.

¹⁷ Paul Theroux, *The Great Railway Bazaar: by Train Through Asia*, (1975; 2nd edn, Harmondsworth: Penguin, 1977), p. 98.

¹⁸ Wolfgang Schivelbusch, *The Railway Journey: Trains and Travel in the Nineteenth Century* (trans. A. Hollo, Oxford: Basil Blackwood, 1980), Chapter 2, 'The Machine Ensemble'.

¹⁹ Charles E. Lee, *The Evolution of Railways*, (1937, London: The Railway Gazette, 2nd edn 1943), p. 104; R. M. Robbins, *The Railway Age in Britain and its Impact on the World*, (1962; 2nd edn, Harmondsworth: Penguin, 1965), Chapter 1; John Geise, 'What is a Railway?',

Michel Foucault's book, 'Machines à Guérir', has a verbal and functional association with Schivelbusch's 'machine ensemble'.²⁰ Borrowed from Jacques Tenon, French Revolutionary-era hospital reformer and pioneer of the pavilion design, the phrase alludes to the beginning of active treatment of disease, previous efforts having mainly been limited to the palliative.²¹ As Schivelbusch's railway machine ensemble was a transport system comprising locomotives, carriages/wagons, rails, signalling, telegraphs and stations so the nineteenth century hospital as curing machine brought together systems of hygiene, nutrition, medicine, nursing and prayer to carry the patient on a journey of treatment towards recovery. The somewhat surprising links between health, hospitals, windows, ventilation and the view form a recurring background theme in this research.

Another concept is 'panoramic perception'.²² Schivelbusch shows that the train provided a new type of sensory locomotion which, more or less, tended to divorce the traveller from his or her surroundings, the nineteenth century engineering necessity of a line as flat and straight as possible removing some of the undulations of the landscape through which the railway passes and which are seen and felt at first hand when travelling by foot or horse. He quotes from Victorian-era writers who relayed their experiences of journeys in such terms, including John Ruskin's '...travelling

Technology and Culture, vol. 1, no. 1, (Winter, 1959), pp. 75-76; C. F. Dendy Marshall, *A History of British Railways Down to the Year 1830*, (Oxford: Oxford University Press, 1938), p. 1.

²⁰ Michel Foucault, *Machines à Guérir: aux origines de l'hôpital moderne*, (Paris: Pierre Mardaga, 1979).

²¹ Jacques Tenon, *Mémoires sur les Hôpitaux de Paris*, (Paris, 1798); Harriet Richardson (ed.), *English Hospitals 1660-1948: a Survey of their Architecture and Design*, (Swindon: Royal Commission on the Historical Monuments of England, 1998), pp. 5-6.

²² Schivelbusch, *The Railway Journey*, Chapter 4, 'Panoramic Travel'.

becomes dull in exact proportion to its rapidity', and adopts Dolf Sternberger's 1938 'panorama' to describe a flattened perspective which, the train 'eliminating all resistance, difference, and adventure', was more expansive than travel by road and, by limiting sensory perception to the visual, a defining experience of modern travel which regards rain, noise, dust, wind and cold as all things to be at least modified if they cannot be eliminated.²³ Ford Madox Ford too observes that, in a train, 'One is behind glass as if one were gazing into the hush of a museum; one hears no street cries, no children's calls.'²⁴ Those things closest to the observer pass too quickly to be appreciated and he or she is left to focus on points farther away which, through the agency of perspective, appear more slow-moving and are thereby easier to take in. In this context it is noticeable that Sir Horace's moving screen is situated some distance from the 'travellers' since close objects occupying the intermediate space become invisible. Since he writes about train travel in the nineteenth century Schivelbusch restricts his panorama to the lateral; as I show later (in 'Augmentation') the twentieth century brought more frequently an extension to that panorama which included both forward and backward views, and alluded to early cinema's so-called 'phantom ride'. In their work on roads and landscapes, Christof Mauch and Thomas Zeller carry forward Schivelbusch's idea of panoramic perception into the world of twentieth century motoring because as cars became faster and smoother, as trains had done before, the attention of travellers increasingly focused forward through the windscreen farther away from the front of the vehicle towards the middle distance.²⁵ The nineteenth

²³ Schivelbusch, *The Railway Journey*, pp. 63-64.

²⁴ Ford Madox Ford, published as Ford Madox Hueffer, *The Soul of London: a Survey of a Modern City*, (London: Alston Rivers, 1905), p. 50.

²⁵ Christof Mauch & Thomas Zeller, *The World Beyond the Windshield*, (Athens, Ohio: Ohio University Press, 2008), p. 7.

century railway view was not exclusively lateral either; early poorer-class travellers, for example, had views that were ‘all-round’ even if restricted, or more importantly sheltered, by adjoining vehicles because they were open on all sides. This point is given proper emphasis by Susan George in her work on the early excursion train passenger.²⁶ She considers Schivelbusch’s panoramic perception an essentially middle class view of the world, not reflected in the travelling conditions of the poorer classes; this is, of course, valid but she studies excursion trains and therefore does not embrace all conditions for all classes in ordinary service trains.²⁷ Another form of all-round view is the coach end platform, whether or not combined with saloon end windows, which is familiar from American Wild West films. These were occasionally used in Britain on lines that perhaps required a more perfect appreciation of place such as the roadside Wisbech and Upwell Tramway which stopped anywhere en route, and were usual practice on urban street tramways themselves, of course.²⁸ End platforms in Britain however, unlike in the Westerns, were not for travelling on; the ‘Railway Magazine’ was vaguely shocked by a reader’s suggestion that their introduction as retiring areas would be liberating for passengers.²⁹ The primitive open coach/wagon would perhaps not qualify as fulfilling Schivelbusch’s ‘panoramic perception’ because his new view of the world from the nineteenth century train requires, as part of the machine ensemble, its moderation through the structure of the vehicle in which the passenger travels.³⁰ Ian Carter

²⁶ Susan Major, ‘The Million Go Forth’: Early Railway Excursion Crowds, 1840-1860, unpublished PhD thesis, University of York, 2012.

²⁷ Major, ‘The Million go Forth’, pp. 39, 202-06, 288-96.

²⁸ Scott Damant, ‘The Wisbech and Upwell Tramway’, *The Railway Magazine*, vol. 4 (1899), pp. 112-18.

²⁹ Peter Paye, *The Wisbech and Upwell Tramway*, (Usk: Oakwood Press, 2009), p. 72; ‘The Why and the Wherefore’, *The Railway Magazine*, vol. 6 (1900), p. 79.

³⁰ Schivelbusch, *The Railway Journey*, p. 66.

illustrates this experience with the well-known journey to Birmingham in when Dickens' Mr Dombey watches the passing countryside:

‘...through the fields, through the woods, through the corn, through the hay, through the rock, among objects close at hand and almost in the grasp, ever flying from the traveller, and a deceitful distance ever moving slowly with him...’³¹

Carter does not comment directly on these words but the parallax paradox that Schivelbusch sees is neatly encapsulated in Dickens' ‘objects close ... ever flying ... deceitful distance ... moving slowly’. More scientifically described as ‘motion parallax’, Hiroshi Ono and Nicholas Wade trace its perception in the course of transport to the observations of the eighteenth century astronomer, John Herschel. It is closely linked to induced motion which is the apparent movement of a stationary object, such as a tree, when viewed in motion, as in a train.³² Michel de Certeau too reminds us that, ‘...these things do not move....They have only trompe-l’oeil movements’³³ and R. N. Young describes what he sees during a railway journey west from London to illustrate motion parallax as the determinant of our three-dimensional perception, something that is lost in photographs.³⁴ Nitka writes about what she calls ‘defamiliarisation’, the process whereby the perception of distance, velocity and time is radically altered by the

³¹ Ian Carter, *Railways and Culture: the Epitome of Modernity*, (Manchester: Manchester University Press, 2001), p. 91; Charles Dickens, *Dealings with the Firm of Dombey and Son, Wholesale, Retail and for Exportation*, (London: Bradbury and Evans, 1848), p. 200.

³² Hiroshi Ono and Nicholas Wade, ‘Depth and Motion in Historical Descriptions of Motion Parallax’, *Perception*, vol. 34 (2005), p. 1265; Nicholas J. Wade & Dieter Heller, ‘Visual Motion Illusions, Eye Movements, and the Search for Objectivity’, *Journal of the History of the Neurosciences: Basic and Clinical Perspectives*, vol. 12 no. 4 (2003), pp. 377-80.

³³ Michel de Certeau, *The Practice of Everyday Life*, (trans. Steven Rendall, London: University of California Press, 1988), p. 112.

³⁴ R. N. Young, ‘Two Dimensional Landscape Photography and the Three Dimensional Landscape’, *Landscape Research*, vol. 17 no. 1 (1992), pp. 38-46.

development of the passenger railway and its ‘estrangement from nature’.³⁵ Nitka puts it as, ‘what is static is mistaken for the dynamic, what is stable is perceived as the changeable.’³⁶ Although such phenomena were, as by Hershel, observed before the passenger train’s arrival, the novel directness and smoothness of the train’s velocity, also exemplified by the *Dombey and Son* quotation, together with its significant increase in speed compared to the horse, made them more evident. Paul Theroux, in a memorable passage in ‘The Great Railway Bazaar’ makes this point too alluding in passing to perhaps the most famous railway poem - Robert Louis Stevenson’s ‘From a Railway Carriage’. Often used to demonstrate the use of rhythm in verse to suggest regular movement, as by Letherby and Reynolds, the poem concerns itself with what is seen as the train hurries along.³⁷ Its lines: ‘Here is a cart runaway in the road / Lumping along with man and load’ are brought to mind by Theroux’s description as he looks from his train somewhere in central Europe. An overworked horse has just expired still between the shafts of its cart which it was struggling to drag from mud; the scene he describes takes in the reactions of those who witness it. Because it is in the middle distance the image remains relatively stable for some time: ‘The train, the window frame holding the scene for moments, made it a picture.’³⁸ Both writers may also be contrasting, consciously or unconsciously, the sweeping progress of the train with the plodding uncertainty of its animal predecessor.

Schivelbusch too comments on the ‘uncannily smooth’ progress of the train and the similarities frequently drawn by contemporaries to (how they imagined) flying.³⁹ All these factors, including the relative smoothness and

³⁵ Nitka, *Railway Defamiliarisation*, pp. 14, 25.

³⁶ Nitka, *Railway Defamiliarisation*, p. 67.

³⁷ Letherby and Reynolds, *Train Tracks*, pp. 84-85.

³⁸ Theroux, *The Great Railway Bazaar*, pp. 40-41.

³⁹ Schivelbusch, *The Railway Journey*, pp. 83, 118, 131, footnote 16, p. 197.

regularity of the steam train, contributed to, in Nitka's words, the 'monotonous theatre of motion'.⁴⁰ Tony Weller, coachman, and originally a character in Dickens' 'The Pickwick Papers' (1836-37) reappeared in 'Master Humphrey's Clock' (1840); he is sceptical of the panoramic perception's attractions. His occupation naturally predisposes him to hostility towards railways but some of his objections to them stem from the train's isolation of the passenger from his or her surroundings:

'...vere's the comfort o'sittin' in a harm-cheer lookin' at brick walls or heaps o' mud, never comin' to a public house ... never goin' through a pike, never meetin' a change o' no kind (horses or otherwise) ...'⁴¹

Not only physical but sensory isolation is alluded to here. The automatic association of travel with physical effort, human or horse, was broken by the arrival of the steam locomotive; Schivelbusch illustrates this revolution with a quotation from Thomas de Quincey's vivid 1849 description of coach travel in terms of the straining horses' appearance. He allies the muscular exertion to the 'sensory perception' of distance which disappears as the impression of physical exertion diminishes; this theme is explored in more detail by Nitka who also comments on the relative uncertainty of a horse-powered journey compared with the machine.⁴² Apart from the loss of horses, to Tony Weller the smoothing construction of cuttings and embankments produces a debasement of the view – the 'brick walls or heaps o' mud' which had not yet, in 1840, had time to blend into the countryside's structure.

He continues:

'... always comin' to a place ... the wery picter o' the last, with the same p'leesemen standin' about, the same blessed old bell a ringin' ...

⁴⁰ Nitka, *Railway Defamiliarisation*, pp. 23-24.

⁴¹ 'Mr Weller on Railways', quoted in Jack Simmons (ed), *Railways: an Anthology*, (London: Collins, 1991), pp. 92-93.

⁴² Schivelbusch, *The Railway Journey*, pp. 15-16; Nitka, *Railway Defamiliarisation*, pp. 25-26, 46, 85-89.

everythin' the same except the name, vich is wrote up in the same sized letters as the last name, and vith the same colours.'⁴³

The early manifestation of what we call today 'corporate identity' is perceived by Tony Weller as a depressing sameness, a lack of differentiating identity. But, if everywhere in the railway world looked the same - as he alleges - the company had to provide some means of telling the passenger where he was; even today other travellers, bus or coach, for example, seem to be treated differently because it is assumed they know where they are; there are few nameboards at bus stations. Peter Merriman asserts that Marc Augé's picture of the motorway journey where progress is delineated not by places but signs *to* places off the motorway, otherwise bypassed and ignored, is not unique to these roads.⁴⁴ As if on such a motorway journey, Tony Weller recognises different places on the railway only by the written clues supplied by authority. The railway company's visual identification of individual stations, one component of Schivelbusch's 'machine ensemble' and an important aspect of the stationary phase of the journey is examined in more detail later ('Information and Beautification').

Analysing 'The Railway Journey', Sean O'Reilly points out that, though 'simple yet masterful,'⁴⁵ the remarkability of the panoramic perception holds true for that generation for which it was a novel experience and that Schivelbusch fails to address the later development of photography and film, the camera being another contrivance through which the outside world can be perceived. But since Schivelbusch's journey was strictly limited to the nineteenth century, this can perhaps be forgiven. O'Reilly goes on to praise

⁴³ Simmons, *Railways: an Anthology*, p. 93.

⁴⁴ Merriman, 'Driving Places', p. 154.

⁴⁵ Sean O'Reilly, *Panoramic Perception in Wolfgang Schivelbusch's 'The Railway Journey'*, [Online], http://isites.harvard.edu/fs/docs/icb.topic837305.files/OReilly_Schivelbusch.htm [accessed 30 January 2012], p. 1.

his analysis of the growth of reading as a travelling occupation; this leads directly from the passing image with the reasoning that if the mind can transform that image into an imaginary backdrop then it can equally engage itself in imagination stimulated by the printed word. To Schivelbusch the introduction of bookstalls at stations and the increase in specific ‘railway literature’ are both evidence of the growth of the habit of reading during the journey but Jeffrey Richards and John MacKenzie point out that, not only did the railway bookstall serve the whole community but it was also a facet of the station’s role as gateway to the wider world of place, news and information.⁴⁶ Beth Muellner observes, however, that Schivelbusch’s conclusions hold true not simply for the middle and upper classes but also for middle and upper class men.⁴⁷ At a physical and practical level reading while travelling was also facilitated by the noticeable smoothness of train travel; even today it seems that relatively few car and bus passengers read.

George Revill looks at Schivelbusch’s work anew, developing the arguments in both his book, ‘Railway’, and a contribution to the ‘T²M Yearbook 2012’.⁴⁸ He observes that, although a groundbreaking work in the 1970s, there has been a tendency since then to accept it as received wisdom and, although the book has illuminated our understanding, this tendency has also acted as a brake on further exploration of its topics. It is too easy, he says, to accept

⁴⁶ Schivelbusch, *The Railway Journey*, pp. 66-72; Jeffrey Richards and John M. MacKenzie, *The Railway Station: a Social History*, (Oxford: Oxford University Press, 1986), pp. 298-303.

⁴⁷ Beth Muellner, ‘Nineteenth-Century German Women Writers on the Railroad’ in Steven D. Spalding and Benjamin Fraser (ed), *Trains, Literature, and Culture: Reading and Writing the Rails*, (Plymouth: Lexington Books, 2012), p. 32.

⁴⁸ George Revill, *Railway*, (London: Reaktion Books, 2012), pp. 21-61; ‘Perception , Reception and Representation: Wolfgang Schivelbusch and the Cultural History of Travel and Transport’, in Peter Norton, Gijs Mom, Liz Millward, Mathieu Flonneau (eds.), *Mobility in History: Reviews and Reflections, T²M Yearbook 2012*, (Neuchâtel: Editions Alphil-Presses universitaires suisses, 2011).

the train travel experience as ‘detachment, isolation and ultimately alienation’⁴⁹ and, since the railway became more a part of landscape and of society, it was becoming ordinary as well as continuing as a force for change. Thus Revill gives an example from Proust to show how the scene the writer views from the train as it stops at a station represents the continuity of everyday life in contrast to the writer’s journey of newness and adventure. Looking back through our own journeys we might recall an occasion of waving goodbye to a loved one at a significant departure, leaving home for the first time, perhaps – how much more impersonal with powered doors and sealed windows – the station bustle and routine and the other passengers all oblivious to the emotion we feel. Revill uses Edward Thomas’s ‘Adlestrop’ which is, after ‘From a Railway Carriage’, perhaps the second most famous railway poem, to illustrate how a railway journey is more than just motion; the train stops and starts as well, the stops producing a less transitory, perhaps more easily recollected picture.⁵⁰ ‘Adlestrop’ is a more quietly contemplative work than Stevenson’s and concentrates on the point in a journey when the train stops for no given reason at the small, quiet station. Nothing happens but the poet integrates the railway with the rural scene as he contemplates the station nameboard, the plants and crops and the still summer cloud formation; all is brought into delightful focus by the song of a blackbird. Revill connects the moving scene with the stationary scene: ‘The experience of landscape from a railway train can be one simultaneously of isolation and connection.’⁵¹ For Steed and Sir Horace the train makes no unscheduled stop, for this is journey perfection, but arrival at the destination is announced as the contraption slows and three-dimensional

⁴⁹ Revill, ‘Perception , Reception and Representation’, pp. 34-35.

⁵⁰ Revill, *Railway*, pp. 52-53.

⁵¹ Revill, ‘Perception , Reception and Representation’, p. 36.

platform paraphernalia appears accompanied by the uniformed man-/company servant (Figure 1.3).



Figure 1.3

Sir Horace and Steed arrive at their destination

Source: Screen Captures from *The Avengers*: ‘The Gravediggers’

This scene sadly misses that which would make it complete, a station nameboard, that sole differentiator between places, according to Tony Weller and which is the specifically *railway* component in Thomas’s poem. Simmons quotes from an account of an 1837 journey by Charles Greville in which the stops form an important feature of the complete entertainment and Letherby

and Reynolds find passengers who, confused by the blur of present-day speed, consider the stops to be the only recognisable parts of the journey.⁵² Nitka also recognises temporary halts as an intrinsic to the journey experience, describing them as brief respites from its relentless progress, a time to draw breath and ‘a welcome change from the exasperating obscurity’.⁵³ She says such places are rendered ‘legible and knowable’⁵⁴ the quality of legibility being perhaps a reference to the station name. Unscheduled stops to Nitka represent something quite different; ‘the unexpected stillness of the train may have an oddly unnerving, truly destabilising effect on one’s perception.’⁵⁵ Alarming, she asserts that this feeling can escalate into panic as the halt lengthens, a sensation that is perhaps more realistically restricted to the tube train claustrophobic in a crowded train stopped between stations, recognizable and a far cry from the tranquility revealed to Revill in Thomas’s poem. Nitka also differentiates the stop as experienced by the coach passenger who ceases to be a traveller and ‘re-enters the world one has never completely excluded oneself from.’⁵⁶

On the other hand the train that does not halt intermediately, one of the ‘express’ train’s characteristics in Simmons’s analysis,⁵⁷ announces its importance by that fact; an even more important version is the ‘non-stop’ relying not only on that there are no station stops but also that the train actually keeps moving throughout the journey, in other words on the

⁵² Jack Simmons (ed), *Journeys in England: an Anthology*, (Odhams 1951; 2nd edn, Newton Abbot: David & Charles, 1968), pp. 199-200; Letherby and Reynolds, *Train Tracks*, p. 36.

⁵³ Nitka, *Railway Defamiliarisation*, pp. 67-69.

⁵⁴ Nitka, *Railway Defamiliarisation*, p. 68.

⁵⁵ Nitka, *Railway Defamiliarisation*, p. 67.

⁵⁶ Nitka, *Railway Defamiliarisation*, p. 80.

⁵⁷ Jack Simmons, *The Express Train and Other Railway Studies*, (Nairn: David St John Thomas, 1994), pp. 23-36.

maintenance of a continuous panoramic vision, the time from departure to destination spent in a single movement before the eye. When the first non-stop 'Flying Scotsman' ran from London to Edinburgh in 1928 – at the time a distance world record – its status, reinforced by the technical and publicity tour-de-force of Gresley's corridor tender and the first use of a headboard on a main-line train, brought out crowds at King's Cross and along the route; John Walton considers these non-stop trains appealed particularly to the 1920s widespread (male) interest in railways although his date for the Scotsman's non-stop debut is incorrect.⁵⁸ Sandy Mulla sees the publicity value of the 'non-stop' tag as at least the equal of a speed increase; in fact this train ran slower than its predecessor *because* it did not stop and the journey time remained the same; Michael Bonavia implies the publicity 'race' between train and plane in 1928 suggested a greater speed than was actually run.⁵⁹ Ossie Nock comments that 'a signal stop would have destroyed all the publicity value of the non-stop' and Keith Farr details the special attention which was paid to the punctual running of those other trains which might have caused adverse signals.⁶⁰ When the first run was recreated on its fortieth anniversary difficulties with the water supply caused the train to slow to walking speed, which made for some appropriately tense moments in the BBC film of the event, but because it did not actually stop, to the huge relief

⁵⁸ 'Inaugural London (King's Cross) – Edinburgh (Waverley) Non-Stop Runs L.N.E.R.', *The Railway Magazine*, vol. 62 (1928), pp. 461-67; Dave Peel, *Locomotive Headboards, the Complete Story*, (Stroud: Sutton Publishing, 2006), p.154; John K. Walton, 'Power, speed and glamour: the naming of express steam locomotives in inter-war Britain', *The Journal of Transport History*, 3rd Series, vol. 26, no. 2 (March 2005), pp. 5-7.

⁵⁹ A. J. Mulla, *Non-Stop: London to Edinburgh Steam*, (Gloucester: Alan Sutton, 1989), pp.1-13; Michael R. Bonavia, *A History of the LNER, II: The Age of the Streamliners, 1934-39*. (London: Allen & Unwin, 1982), pp. 43-44; Gordon P. Olly, 'Spotting the "Flying Scotsman"', *LNER Magazine*, vol. 18 (1928), p. 338.

⁶⁰ O. S. Nock, 'The London-Edinburgh Non-Stops', *The Railway Magazine*, vol. 114 (1968), pp. 274-79; Keith Farr, 'Legend of the Non-Stop Part 1', *Backtrack*, vol. 17 (2003), pp. 275-80.

of the organisers, the spell remained unbroken.⁶¹ An unscheduled Adlestrop stop would be disaster for a non-stop! When the East Coast main line was electrified one ‘Railway Magazine’ correspondent thought the re-introduction of a non-stop London-Edinburgh service would be the most appropriate way to ‘attract public attention, admiration or comment’ on the improved service.⁶²

The idea that a train did not need to stop proved useful elsewhere too – in 1924-25 the so-called ‘Never-Stop Railway’, an example of rail technology that was never developed further, ran at the Wembley Exhibition; propelled by a revolving screw whose pitch altered so that it ran sufficiently slowly at stations and ten times faster between them, its uniqueness was proclaimed by the name ‘Never-Stop’.⁶³ It was presented as a novelty for the purpose of the exhibition and the original 1911 concept, when it had been seen as a potential urban transport method in London, was scorned by ‘Railway Magazine’.⁶⁴ Ingenuity was employed to bridge the gap between the prestigious ‘non-stop’ concept and the need to pick up and set down passengers. The technical solution was the ‘slip’ whereby a separate portion (one or more coaches) was detached from the tail of a moving train to run under its own kinetic energy to a controlled stop at an intermediate station which the main train ran through at speed. A significant number of slip

⁶¹ O. S. Nock, ‘Non-Stop Again’, *The Railway Magazine*, vol. 114 (1968), pp. 395-400; ‘4472 – Flying Scotsman’, [on line] http://www.bbc.co.uk/iplayer/episode/p011vfqw/4472_Flying_Scotsman/ accessed 1 May 2012.

⁶² J. Reside, ‘Electrified E.C.M.L. Deserves a “Flagship” Service’, (letter), *The Railway Magazine*, vol. 136 (1990), p. 700.

⁶³ T. W. Sale, ‘The Never-Stop Railway’, *The Railway Magazine*, vol. 73 (1933), pp. 350-51.

⁶⁴ ‘Continuous-Travel Railways’, *The Railway Magazine*, vol. 29 (1911), pp. 433-34.

coaches were operated but they did not survive the steam age.⁶⁵ The prestige of a train was thereby also determined in proportion to the number of slip portions it conveyed, the GWR's 'Cornish Riviera Express' being the leader, even if its non-stop run was not so far as the northern lines were able to arrange. No scheme was successfully devised to address the inherent weakness of the slip coach – that there was no way to attach a separate portion to an already moving train. Trains used for the carriage of mail utilised a more versatile technology – the so-called 'apparatus' in the Travelling Post Offices – which was equally adapted to the picking up or dropping of relatively indestructible mail bags without stopping; a technique particularly useful for smaller quantities for which stopping the train would not generally be worthwhile.⁶⁶

For the train that did halt the brevity or otherwise of the stop could be indicative of the train's importance as well as the place's, the most important not stopping at all, even at important junctions such as Crewe and York and the second-rank only stopping briefly. At the other end of the scale, Molly Hughes wrote about a journey from London to Cornwall where, as the country became more and more rural, 'We stopped at all of them [stations]. And when I say stopped I mean stopped. There was none of the hurry of Reading or Bristol.'⁶⁷

Nigel Thrift quotes Andrew Charlesworth who, writing in the context of the possible breaking down of rural road carriage in the wake of the railway

⁶⁵ G. W. T. Daniel, 'Familiar Features of Operation – VI Slip Coach Services', *The Railway Magazine*, vol. 77 (1935), pp. 13-16.

⁶⁶ Brian White, *A Look at the Night Mail, Travelling Post Offices – A History*, (Bridlington: Friends of M30272M T.P.O. Group [2006]), pp. 42-80.

⁶⁷ M. V. Hughes, *A London Child of the 1870s*, (Oxford, 1934), quoted in Richards and MacKenzie, *The Railway Station*, p. 176.

onslaught, makes the point that the train's stopping points were much less frequent than the road carrier; a similar contrast between transport modes still exists.⁶⁸

Previous writers have acknowledged the importance of the view from the train. In this dissertation I take their work further and examine how railway companies have provided or neglected to provide a view, the consequences for passengers and their reactions. In 'Regulation' I analyse the early provision of windows and an important aspect of the regulatory impact on companies that has previously almost been ignored. Having provided windows for all classes the railways were able to supply effective ventilation which was a subject of particular concern to travellers in an age when the science of disease and its prevention and cure was less well understood. 'Observation' deals with the provision by railways of extended means to savour the view, particularly employed on so-called scenic routes and 'Augmentation' describes the extension of views to the front and behind the train as an accident of designs incorporating newer technology. New technology is also discussed in 'Inclination' when the tilting-train, an answer to one comfort problem created a new and more serious one for its passengers by providing unexpected views through its windows.

The use that companies had for window views in their publicity, both in books and on posters is analysed in 'Exploitation'. One railway, the Liverpool Overhead exploited its view in a most unusual way, and with unimagined consequences – which did not in fact ensue. It even provided its own version of the main line companies' lineside guide. 'Information' is essential at the time when the train stops and provision of simple facts about location has sometimes proved frustrating for the passenger. To sooth these

⁶⁸ Nigel Thrift, *Spatial Formations*, (London: Sage 1996), pp. 117-18.

worries the railway has at times attempted to provide some 'Beautification' of its estate.

The influence of the view from the train as a stimulant to the creative imagination is looked at in the section 'Inspiration' and its stimulant for the creation of violent situations both fictional and real-life in 'Desperation, Decapitation and Defenestration.' Circumstances when the view has been limited, and the passengers' reactions, are discussed in 'Limitation.'

2 REGULATION

Nineteenth century British governments generally adopted a laissez-faire attitude towards the growth of the railway system and to the increasingly powerful railway companies. As the practical limits of effective competition on one line between two places were better appreciated, these companies began to appear more monopolistic. What government economic regulation of their activities there was Terry Gourvish describes as limited and ineffective.¹ The earliest form of state intervention was, naturally, taxation; railway duty, initially at ½d/mile/four passengers, later 5% ad valorem on fares, was imposed from 1832. If regulation represented a stick against the companies, the duty also provided an opportunity to exploit its remission as a carrot to encourage compliance. Having levied taxation, state intervention through regulation focused less on economic effects than directly on the condition of the traveller, parliamentarians having seen with their own eyes the destructive ability of the new technology in the case of William Huskisson's death at the opening of the Liverpool and Manchester line in 1830. Legislation for safety did not seriously emerge until, in particular, the Regulation of Railways Act 1889 which laid down requirements for the block system (isolating one train from another by space, not time), interlocking of points and signals, and continuous automatic brakes.²

While safety legislation may seem the obvious priority today, government regulation actually took an interest in the comfort and well-being of the passenger forty five years before the 1889 act provided for these important

¹ T. R. Gourvish, *Railways and the British Economy 1830-1914*, (London: Macmillan, 1980), pp. 49-50.

² 34 & 35 Vict. c. 78, *Railway Regulation Act 1871*, Section 7; 52 & 53 Vict. c. 57, *An Act to Amend the Regulation of Railways Acts; and for other purposes*, Section 1.

safety devices. It was not content to rely on the power of suggestion but opted for direct intervention in the detailed management of the companies in the way of the facilities provided for passengers. Although what became known as ‘Gladstone’s Railway Act’ promised to be the most radical in the way of economic regulation by means of its nationalization provisions and is best remembered for its creation of the ‘parliamentary’ train, one of its lesser-known features had a direct bearing on the passenger’s place and his view out of the train. Although this act, formally 7 & 8 Vict., c. 85, was not originally given a Parliamentary ‘short title’ it is usually referred to as the Regulation of Railways Act 1844, including in subsequent legislation,³ but some authorities,⁴ have referred to it as the ‘Cheap Trains Act’, risking confusion with the 1883 Act which *was* given that name as a ‘short title’ and whose provisions allowed for ‘workmen’s’ fares below 1d/mile, and the abolition of duty on 1d/mile fares at the same time repealing most of the 1844 Act.⁵ The 1844 Act was promoted personally by William Gladstone as President of the BoT.

Section 6 provided not only, as is well known, that ‘...carriages ...shall be provided with Seats, and shall be protected from the Weather’ but continued ‘in a Manner satisfactory to the Lords of the said Committee’ [of Privy

³ For example: 46 & 47 Vict., c. 34, Schedule.

⁴ For example: W. M. Acworth, *The Railways of England*, (1889, London: John Murray, 5th ed, 1900), p. 56; Ian Carter, *Railways and Culture in Britain: the Epitome of Modernity*, (Manchester: Manchester University Press, 2001), pp. 40-41, footnotes 68, 72; Andrew Dow, *Dow’s Dictionary of Railway Quotations*, (Baltimore, MD: Johns Hopkins University Press, 2006), p. 155; E. T. MacDermot, *History of the Great Western Railway, Volume 1, 1833-1863*, (London, Great Western Railway, 1927), p. 828, Michael Robbins, *The Railway Age in Britain and its Impact on the World*, (London: Routledge, 1962; 2nd edn Harmondsworth: Penguin 1965), p. 96; *Jack Simmons, Journeys in England: an Anthology*, (2nd edn; Newton Abbot: David & Charles, 1969), p. 30.

⁵ 46 & 47 Vict., c. 34, ‘Cheap Trains’, 1883.

Council for Trade and Plantations, i.e. the BoT]. In other words a government department assumed responsibility for determining whether or not the accommodation for third class passengers met an acceptable standard; in Samuel Laing's phrase such passengers were, 'objects of the protection of the Legislature'.⁶ Until it was repealed in 1883, and for the first and last time, government regulated the detailed approval of railway passengers' accommodation, and questions of light and ventilation were critical in determining whether the 'protection from the weather' was adequate, the provision or otherwise of a view through glass protective windows constituting a gold standard in this process. Not that regulation of accommodation standards was entirely new even if previous provisions had been minimal. A series of Acts had been applied to the provision of stage coaches, consolidated in 1832.⁷ Although principally concerned with safety, particularly for the carriage of outside passengers, Section 40 of the 1832 Act incidentally – almost by accident – provided for a minimum outside seat width of fifteen inches which was later used as a reference point for the BoT's approved carriages.⁸ As the carrot of encouragement, duty was not chargeable on such fares and, although the Act's compulsory provision for 1d/mile trains did not extend to railways already in being, the carrot was sufficient to induce such companies to incorporate them. The Act is described by Edward Cleveland-Stevens as 'the most direct attempt that has

⁶ Parliamentary Papers: 1844 (318) *Fifth report from the Select Committee on Railways; together with the minutes of evidence, appendix and index*, p. 469, Q 646.

⁷ 2nd & 3rd Geo IV Cap. 120; *An Act to repeal the Duties under the Management of the Commissioners of Stamps on Stage Carriages and on Horses let for Hire in Great Britain, and to grant other Duties in lieu thereof; and also to consolidate and amend the Laws relating thereto*.

⁸ Parliamentary Papers: 1845 (419) *Railway carriages. Lithographed plans of carriages sanctioned by the Railway Department of the Board of Trade, for the conveyance of third class passengers; with returns relative to railway carriages*, p. 8.

been made to give the State a share in railway working',⁹ but it was the measures providing for nationalization as well as those for third class fares of 1d/mile that prompted his description. Robert Miller, in his comparison between the communication revolution produced by both early British railways and the development of information technology, 'Railway.com', plays down the regulatory impact simultaneously claiming that it and the Acts of 1840, 1842 and 1844 provided 'minimal economic regulation' although accepting that, 'The 1844 ... Act ... allowed for the eventual nationalisation and for the compulsory provision of cheap "parliamentary" trains.'¹⁰ Jack Simmons is silent on this important regulatory detail of Section 6¹¹ and Maurice Kirby is surely too restrictive when he describes the 1d/mile fares as its 'only noteworthy feature'.¹² Iain McLean and Christopher Foster only nod towards Section 6 in their analysis of the regulatory aspects of the Act.¹³ In its accommodation standards regulation the Act was perhaps just as revolutionary as in its nationalization provisions – which, in any case, were never brought to fruition.

The railway companies, having been appalled at the early prospects of such interference which, in Geoffrey Alderman's words, prompted the 'first large-

⁹ Edward Cleveland-Stevens, *English Railways their Development and their Relation to the State*, (London: George Routledge, 1915), p. 115.

¹⁰ Robert Miller, *railway.com*, (London: Institute of Economic Affairs, 2006), p. 40.

¹¹ Jack Simmons, *The Railway in England and Wales, Volume 1 the System and its Working*, (Leicester: Leicester University Press, 1978), pp. 37, 193-94.

¹² M.W. Kirby, 'Railway Development and the Role of the State, in R. W. Ambler (ed), *The History and Practice of Britain's Railways*, (Aldershot: Ashgate, 1999), p. 26.

¹³ Iain McLean and Christopher Foster, 'The Political Economy of Regulation: Interests, Ideology, Voters, and the UK Regulation of Railways Act, 1844', *Public Administration*, vol. 70 (Autumn 1992), pp. 313-31.

scale campaign by the railway interest against the government¹⁴ were perhaps relatively relieved by the Act's final text and therefore did not rebel against the details of Section 6. This provision was derived directly from Clause 25 of the 1844 Railways Bill¹⁵ which was not amended following debate but the desire to improve third class accommodation, as well as to provide cheaper fares, dated to the Sonning Cutting accident on the Great Western Railway in 1841, which Parris sees as the catalyst to improvements in passenger standards; in that sense one may see Section 6 as an extension of safety legislation too.¹⁶ In evidence to the Select Committee Laing pointed towards the second Chartist petition: '...I recollect....the grievances of the third-class passengers having rather a prominent place in the celebrated Chartist petition, signed by 3,000,000 of people....'¹⁷ This petition of 1842 called for, inter alia, the affordability of 'the means of travelling and transit' to be extended to the poorer classes.¹⁸ Laing, as law clerk in the Railway Department, was to have a prominent place in the drafting of the 1844 Act; at the committee hearings he answered more than a quarter of the questions put to witnesses. Subsequently he had a busy career which included becoming Chairman of the London Brighton & South Coast Railway twice and an MP four times including Financial Secretary to the Treasury. Apart from Laing's evidence to the Committee (which Parris

¹⁴ Geoffrey Alderman, *The Railway Interest*, (Leicester: Leicester University Press, 1973), pp.16-17.

¹⁵ Parliamentary Papers: 1844 (397) *Railways. A bill to attach certain conditions to the construction of future railways, authorized or to be authorized by any act of the present or succeeding sessions of Parliament, and for other purposes in relation to railways.*

¹⁶ Henry Parris, *Government and the Railways in Nineteenth-Century Britain*, (London: Routledge & Kegan Paul, 1965).p. 47.

¹⁷ Parliamentary Papers: 1844 (318) *Fifth report from the Select Committee on Railways; together with the minutes of evidence, appendix and index.*, p. 39, Q 540.

¹⁸ Reproduced in: R. H. Gretton, *Commercial Politics (1837-1856)*, (London: Bell & Sons, 1914), pp. 36-37.

believes was ‘what Gladstone wanted it to hear’),¹⁹ it is clear from Gladstone’s Commons speech that he believed the standards of accommodation clauses in the Bill were fundamental:

‘... he [Gladstone] felt strongly that the case of the third-class passengers by those trains was becoming a national question of great importance, ... he did think it was wise to make a provision ...whereby those persons - being, as they were frequently, the least able to bear exposure to the cold, and obliged to remove frequently in search of bread, from one part of the country to the other - might be able to transfer themselves at the charge of 1d. a mile, without such exposure to the severity of the weather as amounted in many cases to severe personal suffering. It was on that ground they had introduced Clauses which ... were of the nature of interference.’²⁰

Laing’s evidence to the Select Committee – before the Bill’s publication – shows that at that time the Board envisaged that protection from the weather certainly did not necessitate windows and that ‘tarpauling’ would be adequate.²¹ Railway companies were initially concerned that improving the third class standards would encourage the leakage of those who could afford to pay more; there is some evidence for this tendency. The Great Western’s official history records that it was obliged to abandon its open second class carriages.²² Charles Robertson quotes from ‘Chambers’ Journal’ of 1844 that – when the weather was warm and dry – open third class coaches were ‘much used’ by the rich too, on the ground that the open air view was much better, the cheaper fares being only a subsidiary reason.²³ He claims that the

¹⁹ Parris, *Government and the Railways*, p. 56.

²⁰ *Hansard: HC Deb 8 July 1844 vol. 76 c484*.

²¹ Parliamentary Papers: 1844 (318) *Fifth report from the Select Committee on Railways*, pp. 42-43, Q. 591 & Q. 603.

²² E. T. MacDermot, *History of the Great Western Railway Volume 1*, (London: G.W.R., 1927), p. 641.

²³ C. J. A. Robertson, *The Origins of the Scottish Railway System 1722-1844*, (Edinburgh: John Donald, 1983), p. 241.

Edinburgh and Glasgow Railway was accused of making second class deliberately bleak to force passengers to prefer first class; the Scottish companies were frequently concerned that, despite privations, those who could afford to pay more travelled third class even before the 1844 Act.²⁴ Mr Harding, secretary of the Glasgow and Greenock Railway, had pointed to a shift in passengers on his line from first and second class to third solely with the provision of better conditions for third class passengers – simply covering the third class, which still had no seats, reduced numbers of superior class tickets sold by 16%. Taking the risk of appearing as the stereotypical Scotsman, he admitted that the railway was considering removing the roofs again as a consequence.²⁵ In the House of Commons this fear was also expressed by the Tory opposition to the Second Reading debate on the 1844 Bill.²⁶

Parris carefully documents the history of this regulatory aspect.²⁷ He records that the Board expended much energy in enforcement of the 1844 Act of which the approval of carriages was the principal burden. It went beyond the letter of Section 6 making the conditions of its approval ‘parliamentary’ carriage the standard by which other carriages were also improved. An important milestone in this process was the issue of Minute 410 in 1844 which defined the Act’s ‘protection from the weather’ to mean ‘capable of being entirely closed ...with provisions for the admission of light and air.’ Already it was emerging that only windows could fulfil this requirement fully – so much for Laing’s primitive ‘tarpauling’. Removal of the onerous Excise

²⁴ Robertson, *The Origins of the Scottish Railway System*, pp. 241-43.

²⁵ Parliamentary Papers: 1844 (318) *Fifth report from the Select Committee on Railways*, p. 422, Q 5351-55.

²⁶ *Hansard: HC Deb 8 July 1844 vol. 76 c513*.

²⁷ Parris, *Government and the Railways*, pp. 94-98, 118-19.

duty regime on glass in 1845 stimulated its manufacture and, since the duty was charged by weight, particularly affected the more robust, and therefore heavier, plate glass. The overall result was more plentiful supply of a cheaper product.²⁸ In 1845, as a guide for companies, the Board issued ‘Lithographed Plans’ which were descriptions, complete with illustrations, of those carriages which it had found met the standards laid down in Section 6; helpfully it included the text of Minute 410.²⁹ Some ingenious ways had been devised to meet the letter of the requirements and secure approval without allowing a proper view out – glass only in the roof, at the carriage ends or in the doors on one side only, for example. Shutters and Venetian blinds were substituted for windows in some cases which could let in light and air and probably excluded rain. The London and South Western Railway’s (L&SWR) approved carriages had curtaining together with glass roof lights but the Newcastle and North Shields Company managed by fitting ‘transparent canvas blinds’. The specimen most resembling a contemporary first class coach was that of the Midland, the company later celebrated for improving third class standards in the years 1872-75. This was even provided with a lamp and the Board carefully noted with approval the size of the glass panes in the doors, some of the windows in others being of minimum size. Of the thirty four designs described, nineteen had glazed areas to allow light to enter. Overall, Parris considers the companies provided more than the minimum required by the Act but less than the Board aimed for.³⁰

²⁸ Stephen Dowell, *A History of Taxation and Taxes in England from the Earliest Times to the Year 1885, Volume IV, Taxes on Articles of Consumption*, (1884; 2nd edn, London: Longmans Green, 1888), pp. 290-303; Charles R. Hajdamach, *British Glass 1800–1914*, (Woodbridge: The Antique Collectors Club, 1991), pp. 125-30.

²⁹ Parliamentary Papers: 1845 (419) *Railway Carriages*, pp. 8-9.

³⁰ Parris, *Government and the Railways*, p. 97.

Having approved the L&SWR's vehicles with roof lights the Board was, ten years later, obliging it to provide windows in the sides and in 1858 opening windows were fitted to its parliamentary carriages, apparently to avoid the danger of passengers fainting.³¹ As always, the vexed question of ventilation and its health dangers or benefits had raised its head.

In 1844 the Eastern Counties Railway Board noted that the BoT had 'requested' 'covered sides with openings for light and air'³² but by 1845 the stick of the potential reimposition of duty was being used against it to enforce compliance.³³ A letter to 'The Times' in 1851, however, shows that the company was not punctilious in its adherence to the law because a passenger in rural Norfolk complained that his parliamentary coach had no seats and resembled 'nothing more than a bullock truck.'³⁴ The same company in 1857 was subject to requests from the Board to substitute glass for its louvred boarding in the parliamentary carriages, which it attempted to resist, but the next year it faced having to withdraw its parliamentary coaches if they did not meet a minimum standard of sixty square inches of glass; the parsimonious ECR had only agreed that all its *second* class coaches should have glass at the end of 1856, something the Liverpool and Manchester had provided from 1844.³⁵ By 1848 the Commissioners of Railways report

³¹ R. A. Williams, *The London & South Western Railway Volume 1: the Formative Years*, (Newton Abbot, David & Charles, 1968), p. 235.

³² TNA RAIL 186/69 ECR Board of Directors 19 November 1844.

³³ Parris, *Government and the Railways*, p. 98.

³⁴ 'Icenian' (letter), *The Times* 23 Jan 1851.

³⁵ TNA RAIL 186/43 ECR Traffic, Locomotive and Permanent Way Committee, 8 July and 19 August 1857; RAIL 186/15 ECR Board of Directors 18 March 1858. Parris notes this requirement in the 1860 'Regulations' - *Government and the Railways*, p. 200; TNA RAIL 186/55 ECR Traffic, Locomotive and Permanent Way Committee, 22 and 31 December 1856; Thomas J. Donaghy, *Liverpool and Manchester Railway Operations 1831 - 1845*, (Newton Abbot: David & Charles, 1972), p. 62.

showed that the majority of companies were providing windows for parliamentary trains, mostly in the door; a few, however, still provided only skylights.³⁶

Charles Lee takes a less sanguine view of regulation's effect; he believes the evidence of the 'Lithographed Plans' shows that carriages that had been approved did not meet the standards required, but in support of this statement he quotes detailed requirements, lamps for example, which were not in effect as early as 1845, as confirmed in the Commissioners of Railways' 1848 report.³⁷ He also quotes, without a reference, from a contemporary source two of the benefits of the window view which were all too often missing: "The want of "look-out" deprives the trip of its instructive pleasures; the deficient ventilation and exposure...become fertile sources of disease..."³⁸ These quotes and Lee's list of requirements come from the 'Pictorial Times' and seem to represent the journalist's interpretation of what was desirable, not what was strictly required.³⁹ Lee does comment, perceptively, that none of the carriages featured allowed a seated passenger to see out of the window. His judgement is perhaps too harsh on the BoT which, the evidence shows, continually attempted to improve standards, but there is little doubt that, on the whole, companies were less keen to do so and initially seemed to take particular trouble to deny passengers other than those who paid the highest fares the pleasure of a view. Examination of the

³⁶ Parliamentary Papers: 1847-48 [938] *Report the Commissioners of Railways*, Appendix 39, pp. 164-71.

³⁷ Charles E. Lee, *Passenger Class Distinctions*, (London: The Railway Gazette, 1946), pp. 21-23; Parliamentary Papers: 1847-48 [938] *Report the Commissioners of Railways*, p. 13.

³⁸ Lee, *Passenger Class Distinctions*, p. 23.

³⁹ 'Parliamentary Trains', *Pictorial Times*, 13 September 1845, reproduced in Anthony J. Lambert, *Nineteenth Century Railway History through the Illustrated London News*, (Newton Abbot: David & Charles, 1984), pp. 106-08.

Department's official reports shows it took these opportunities to massage the companies' philanthropic image in praise, for example:

‘..the greater number of [them] evinced the utmost alacrity in complying with the provisions of the Act, as well as great liberality in the mode of providing for the accommodation of passengers travelling by the parliamentary trains. Most of the railway companies adopted windows, which raised the third class carriages to the description of second class...’⁴⁰

Thus the adoption of more windows became more or less an indicator of class; such was the case in the road coach situation too. Edwin Pratt records that the coach of the 1640s was without windows. It was technological improvements in glass manufacture that enabled windows to be made that could endure the rigours of coach travel (plate glass alone was sufficiently durable) with its limited springing. Samuel Pepys was of the class able to afford glass in his coach and he was moved to complain to his diary of the cost of replacing a door window.⁴¹

Examination of a number of illustrations, together with preserved examples, of stage and mail coaches in the pre and early railway era shows that, almost without exception, the only windows were those in the doors.⁴² Royal Mail

⁴⁰ Parliamentary Papers: 1846 [698] [752] *Report of the officers of the Railway Department to the Lords of the Committee of Privy Council for Trade: with appendices I. & II. for the years 1844-45*, pp. xxvii-xxviii.

⁴¹ Edwin A. Pratt, *A History of Inland Transportation and Communication in England*, (London: Kegan Paul 1912), p. 39; G. A. Thrupp, *The History of Coaches*, (London: Kerby and Edean, 1877), p. 102; Walter Gilbey, *Early Carriages and Roads*, (London: Vinton, 1903), pp. 45-47.

⁴² Thrupp, *The History of Coaches*, Plate 34 (1787); W. Outram Tristram, *Coaching Days and Coaching Ways*, (1888; 4th edn, London: Macmillan, 1901), pp. 19, 200; Gilbey, *Early Carriages and Roads*, pp. 85 (1750), 108; Charles G. Harper, *Stage-Coach and Mail in Days of Yore, a Picturesque History of the Coaching Age, Volume 1*, (London: Chapman & Hall, 1903), frontispiece; C. Hamilton Ellis, *Popular Carriage: Two Centuries of Carriage Design for Road and Rail*, (London: British Transport Commission, 1954), p. 8; Marylian Watney, *The Elegant Carriage*, (London: J. A. Allen, 1961), pp. 72-74 (1784-1800); Jack Simmons, *Transport Museums in Britain and Western Europe*, (London: George Allen and Unwin, 1970), plate

coaches in particular were of standardised designs since they were employed on a unified network from 1784 and displayed this glazing pattern.⁴³ The so-called ‘glass coach’ favoured by royalty and in pantomime is defined by custom as a carriage with quarter-light windows, that is in the panels on either side of the door. With windows in the doors and not in the quarters passengers could properly see out – or others see in – only by making the effort of leaning forward; the ‘glass coach’ was an indicator therefore of a more luxurious form of travel and, by implication, that its passengers were richer or more important. Hence the first class on the Liverpool and Manchester Railway were known as ‘glass coaches’ because they adopted this pattern of glazing.⁴⁴ The nice distinctions between class and description are summed up by the engine-driver in Dickens’ ‘Mugby Junction’ who informs his listener that, true to railway parlance even today, ‘No, we don’t call them carriages, we call them “coaches”’.⁴⁵ He makes the comparison because the road *coach* was a superior form of carriage, larger and for the ‘quality’ and the railways wanted to see themselves as providing a superior form of transport, if only for first class passengers. Thus subtle drawing of class distinctions is displayed in some composite coaches which feature juxtaposed first and second class compartments. Examples are a Stockton and Darlington four-wheeler of 1845, in the National Railway Museum collection, an Eastern Counties Railway carriage (Figure 2.1) and a ‘Teak’ composite South Eastern

18a; Ivan Sparkes, *Stagecoaches and Carriages: an Illustrated History of Coaches and Coaching*, (Bourne End: Spurbooks, 1975), pp. 27, 45 (1780), 46, 49, 57 (1816), 67 (1835), 73 (1792), 81 (1831), 92 (1835), 95 (1836), 96 (1837), 101 (1780), 103.

⁴³ Frederick Wilkinson, *Royal Mail Coaches: an Illustrated History*, (Stroud: Tempus, 2007), pp. 200-33.

⁴⁴ R. H. G. Thomas, *The Liverpool and Manchester Railway*, (London: Batsford, 1980), p. 181.

⁴⁵ Charles Dickens, ‘No 2 Branch Line, the Engine Driver’, *Mugby Junction, the Extra Christmas Number of All the Year Round for Christmas 1866*, (London: Chapman & Hall, 1866), p. 27.

Railway vehicle of 1851. Philip Bagwell quotes the example of the Manchester and Leeds Railway which in 1838 was quite definite about its requirements: first class coaches should have every comfort; second class should have ‘windows in door but *none in panels*’ [my italics] and no cushions.⁴⁶

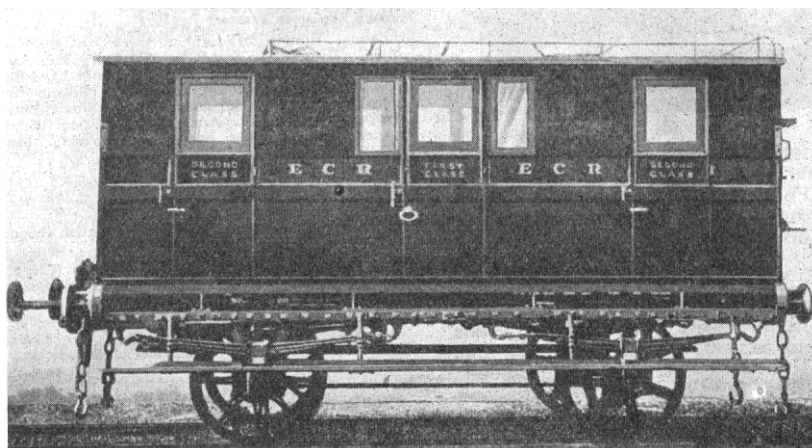


Figure 2.1

Eastern Counties Railway Composite Carriage

Source: *The Railway Magazine*, vol. 95 (1949), p. 64.

⁴⁶ David Jenkinson (ed), *The National Railway Collection*, (London: Collins, 1988), p.7; ‘Illustrated Interview No 42 – Mr Harry Smith Wainwright’, *The Railway Magazine*, vol. 9 (1901), p. 194; Philip S. Bagwell, *The Transport Revolution from 1770*, (London: Batsford, 1974), p.108.

3 INVIGORATION

Having established glass windows in railway coaches as a necessity, not a luxury, the attention of both passengers and companies was turned to the health considerations which arose. An early concern was the effect on the eyes of objects zipping past the passenger; one 1845 traveller wrote that, ‘I strained my eyes till their very nerves began to crack’¹ and the ‘Lancet’s’ inquiry warned that the eyestrain resulting from such experiences was gravely underestimated by passengers.² Particular blame was placed on the telegraph wires, paralleling the track and which Schivelbusch sees as ‘an integral element of the machine ensemble’, one technology reinforcing the other.³ Ralph Harrington interprets this concern as a failure to come to terms with new technology by employing the ‘pre-industrial gaze’.⁴

Ventilation was another cause for concern. Although scientifically unproven and gradually becoming discredited, the theory that infection resulted from miasma, or ‘bad air’ persisted during the late nineteenth century, not least because it retained influential adherents including Florence Nightingale.⁵ Prevention of miasma went hand-in-hand with the encouragement of ventilation to drive out bad air and promote health. In hospitals ventilation was considered vital; ‘sanitary’ (i.e. washing and toilet) areas were deliberately

¹ *Chambers's Edinburgh Journal for July 19 1845*; quoted in ‘Seeing the Country by Steam’, *Great Western Railway Magazine*, vol. 37 (1925) p. 228.

² The Lancet, *The Influence of Railway Travelling on Public Health*, (London: Robert Hardwick, 1862), pp. 43-45.

³ Schivelbusch, *The Railway Journey*, p. 38.

⁴ Ralph Harrington, ‘The Railway Journey and the Neuroses of Modernity’, in Richard Wrigley and George Revill, (eds), *Pathologies of Travel*, (Amsterdam: Rodopi, 2000), p. 251.

⁵ Jeremy Taylor, *The Architect and the Pavilion Hospital: Dialogue and Design Creativity in England 1850-1914*, (Leicester: Leicester University Press, 1997), p. 3; Florence Nightingale, *Notes on Hospitals*, (3rd edn, London: Longman, Green, Longman, Roberts and Green, 1863), pp. 1-24.

isolated from patient accommodation – no en suite bathrooms – and air circulation was promoted by designs to eliminate so-called ‘hospital disease’ which supposedly resulted from pools of stagnant air skulking in unventilated areas. The expansion of hospital building which took place in the nineteenth century was roughly contemporary with railway development and good ventilation was one of the principles adopted by hospital architects, leading to the widespread adoption of the pavilion principle, a design which connects separate ward blocks at their heads by corridors.⁶ The pavilion dominated from the 1850s to the 1930s and had achieved ‘best practice’ status by 1860 despite its disadvantages of building cost and excessive land use highlighted in an 1863 official survey. The pavilion pattern allowed



Figure 3.1

1900s Ward, Sheffield Royal Infirmary: through ventilation in practice

Source: commercial postcard in writer’s collection

windows along both sides of the ward which were kept open as much as possible in order to promote through ventilation from side to side (Figure

⁶ Taylor, *The Architect and the Pavilion Hospital*, pp. 5-7.

3.1); a view for the patients, although secondary, was still a consideration.⁷ Beds were arranged between windows just as railway design places windows between opposing pairs of seats either in the traditional British compartment or open coach.⁸

An innovative design for the new Royal Victoria Hospital Belfast in 1903 introduced mechanical ventilation under the plenum system of positive pressure where air driven by large fans penetrated every corner through a complex of ducts integral with the hospital structure. Windows were no longer needed for ventilation, separate pavilions were abandoned and wards were integrated as a single block so that natural light had to come from high level sealed windows (Figure 3.2).⁹ Hospital historian Jeremy Taylor notes a

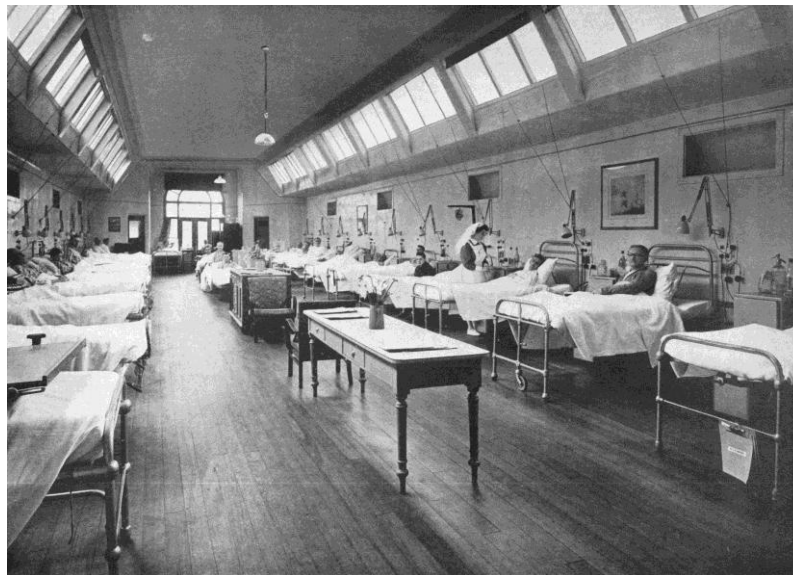


Figure 3.2

Royal Victoria Hospital, Belfast, 1953: lack of a therapeutic view

Source: Robert Marshall, *The Royal Victoria Hospital*, (Belfast: RVH, n.d.), p. 79.

⁷ Taylor, *The Architect and the Pavilion Hospital*, p. 38; Nightingale, *Notes on Hospitals*, pp. 39-40; John Bristowe and Timothy Holmes, 'Report on the Hospitals of the United Kingdom', Appendix 15 to Parliamentary Papers, 1864 [3416] *Public Health. Sixth Report of the Medical Officer of the Privy Council*, pp. 490-91.

⁸ Nightingale, *Notes on Hospitals*, pp. 19, 67.

⁹ Taylor, *The Architect and the Pavilion Hospital*, p. 195.

contemporary report eulogising this system which ‘even the patients themselves’ praised.¹⁰ Such an arrangement was convenient for hospital working but the lack of a view was considered a serious objection – the Nightingale philosophy condemned it, and Ulrich’s study supports her – and Belfast remained the only example.¹¹

This similarity between the pavilion pattern hospital ward and the interior of a passenger train occurs to ‘Tiresias’, commuter author of one of a sub-genre of regular traveller diary-type humorous observations, perpetuated, for example, in a weekly column in ‘The Sunday Telegraph’, ‘Commuter Spy’, current in 2012-13. Unwillingly trapped together by illness or enforced travel and governed by inflexible hospital routine / railway timetable, the patients / passengers ‘compare symptoms and scars ... we use trivia to keep reality at bay’.¹² Developing the analogy, ‘Tiresias’ compares the patient in an open ward with the second class passenger, each disturbed by either wandering drunk or dementia sufferer. Passengers / patients are ‘neomorts’, brain dead but functioning bodily, fed euphemisms in place of information by medical / railway staff. In contrast, the ‘private patients travel First Class’ where payment provides exclusivity.¹³ We might stretch this comparison further to include prisoners and schoolchildren as other groups of enforced co-habitants. The Victorian era not only expanded railway, hospital and school development but an extensive prison building programme was undertaken; new designs paid special attention to ventilation in order to promote

¹⁰ Taylor, *The Architect and the Pavilion Hospital*, p. 39.

¹¹ Taylor, *The Architect and the Pavilion Hospital*, pp. 187-213; Nightingale, *Notes on Hospitals*, p. 19; Roger Ulrich, ‘View Through a Window May Influence Recovery from Surgery’, *Science*, New Series, Volume 224, Issue 4647 (Apr. 27, 1984), pp. 420-21.

¹² Tiresias [Roger Green], *Notes from Overground: a Commuter’s Notebook*, (London: Paladin, 1984), p. 9.

¹³ Tiresias, *Notes from Overground*, pp. 12, 166.

prisoners' health and discourage disease. Often for the first time, the new designs provided for glazed, not merely barred, windows too but, as part of the punishment regime, they were sited too high for the prisoner to see out.¹⁴ The workhouse, which retained characteristics of both prison and hospital sometimes adopted similar high-window designs but this was in the interests of male/female segregation, not actual punishment, even if the effect was the same.¹⁵ Classroom designs adopting non-distracting window heights, sills tantalisingly above the sitting pupil's head (Figure 3.3), were not

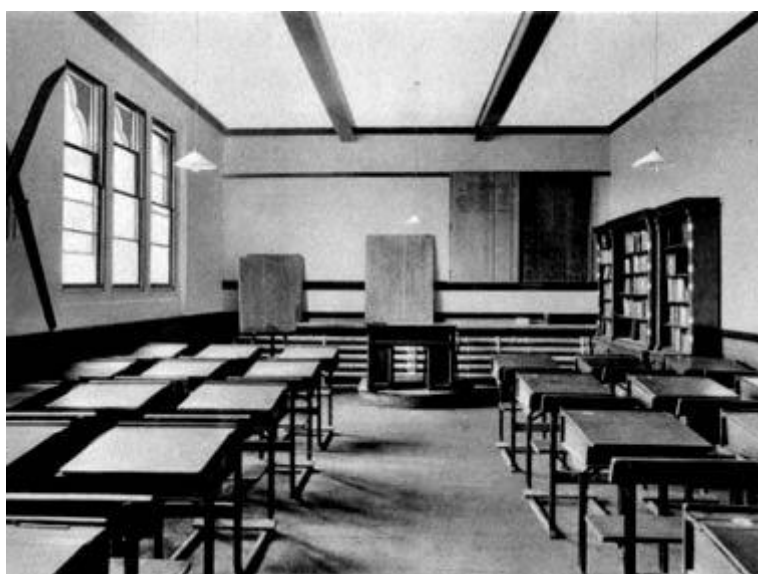


Figure 3.3

Classroom with non-distracting windows

Source: [Online] <http://architectures.danlockton.co.uk/architectures-of-control-in-the-built-environment/> [accessed 8 March 2012]

uncommon¹⁶ but progressive educational architects were maximising window area even in the nineteenth century. The pavilion principle was adapted from

¹⁴ Heather Tomlinson, 'Design and Reform: the "separate system" in the nineteenth-century English prison' in Anthony D. King (ed.), *Buildings and Society: Essays on the Social Development of the Built Environment*, (London: Routledge and Kegan Paul, 1980), pp. 94-119.

¹⁵ Brian Abel-Smith, *The Hospitals 1800-1948: a Study in Social Administration in England and Wales*, (London: Heinemann Educational, 1964), p. 51.

¹⁶ Malcolm Seaborne and Roy Lowe, *The English School: its Architecture and Organization. Volume II 1870-1970*, (London: Routledge & Kegan Paul, 1977), plate 10.

hospital practice to school building with an emphasis on fresh air¹⁷ and by the interwar period, continuing post-1945, larger windows became de rigueur in schools, sometimes with especially low sills for smaller children. There was a particular reason for providing more generous glazing in the 1930s; it was the result of research which concluded that low lighting was harming children's sight.¹⁸

If ventilation during travel was healthy, draughts were seen as bad as stale, d or 'vitiating' air itself; it was a difficult balance to strike, a dilemma compounded by the behaviour of capricious passengers. One solution was adopted in Belgium where from 1857 the law required unanimity between passengers before opening windows on the windward side.¹⁹ It is surprising that the 'fresh air fiend' is not one of those described by Hervey in 1914 but, although restricted by air-conditioning, he was still a problem in 2003.²⁰ One late nineteenth-century text-book, William Buchan's 'Ventilation', warned alarmingly, almost hysterically, that 'a draught of cold air may kill like a sword almost instantly'.²¹

Ventilation was one of the weapons harnessed to fight the 1932-33 influenza epidemic. A 'Times' medical correspondent produced statistics from his

¹⁷ Seaborne and Lowe, *The English School*, pp. 75-77.

¹⁸ Elaine Harwood, *England's Schools: History, Architecture and Adaptation*, (Swindon: English Heritage, 2010), pp. 35-37, 43, 53, 61, 73-74, 93; Andrew Saint, *Towards a Social Architecture: the Role of School-Building in Post-War England*, (New Haven and London: Yale University Press, 1987), pp. 37-38.

¹⁹ 'Guide Officiel des Voyageurs sur tous les Chemins de Fer de Belgique', quoted in Parliamentary Papers, 1867 [3844] [3844-1] [3844-11] [3844-III], *Royal Commission on Railways. Report of the Commissioners*, Appendix CT, pp. 259, 261.

²⁰ H. Hervey, 'Some Railway Passenger Fiends', *Railway and Travel Monthly*, vol. 8 (1914), pp. 53-60; Andrew Holmes and Matthew Reeves, *Pains on Trains: a Commuter's Guide to the 50 Most Irritating Travel Companions*, (Chichester: Capstone Publishing, 2003), p.26.

²¹ William Paton Buchan, *Ventilation: a text book to the practice of the art of ventilating buildings*, (London: Crosby, Lockwood, 1891), p. 29.

hospital which showed that the incidence of influenza was lower among patients, who received 24-hour ventilation, than staff who did not; he argued that better ventilation was needed in places where the public



Figure 3.4

LMSR poster exhibited at Birmingham New Street Station

Source: *LMS Magazine*, vol. 10 (1933), p. 95.

gathered as well as in homes, a call echoed by the Institution of Heating and Ventilating Engineers.²² The LMSR's poster (Figure 3.4) was displayed in Birmingham, one of the epidemic's centres. It had been considered that railway travel exacerbated the spread of disease²³ and the LMSR described its own poster as 'clever' even if its slogan was not to be read literally; 'doctors' did not recommend a train journey in order to cure a patient but their advice

²² H. B. Warner, (letter), 'The Cause of Influenza,' *The Times*, 24 February 1933, 'Ventilation and Influenza', *The Times*, 13 March 1933.

²³ C. P. Wertenbaker, 'Railway Sanitation', *International Journal of Medicine and Surgery*, vol. 24, (1911), pp. 383-88.

was that people were less likely to contract influenza in a well-ventilated train than a stuffy one.

By 1951 the railways had data to suggest ventilation had at last reached a desirable standard, even in the special circumstances of the Underground and, in an age when smoking during travel was widespread, London Transport's Director of Research published research showing that (by measuring the CO² percentage inside trains) the average air quality was at least as good as in cinemas, shops and cafes, even when the trains were crowded. He also quoted from a 1950 paper in 'The Lancet' entitled, 'Bacterial Contamination of the Air in Underground Trains' that, compared with school classrooms – perhaps the reduced emphasis on fresh air had gone too far – and public offices such contamination on London Transport was 'surprisingly low'.²⁴

Developments in British hospital planning paralleled the railway use of wider 'picture' windows and more advanced types of glass materials.²⁵ In the 1920-30s 'Vita-Glass' which allowed the UV rays of the sun to penetrate and became a voguish building accessory; in Evelyn Waugh's 'Decline and Fall' the cynically immoral and decidedly nouveau riche Margot Beste-Chetwynde has a house with Vita-glass windows.²⁶ It was taken up in hotels, hospitals and on trains, particularly the 'Flying Scotsman' and the 'Cornish Riviera'.²⁷

²⁴ A. T. Wilford, 'Measurement of Ventilation, *Transport Research Quarterly*, No 4, (London: British Transport Commission, July 1951), pp. 15-21.

²⁵ David Jenkinson, *British Railway Carriages of the 20th Century Vol. 2: the Years of Consolidation*, (Wellingborough: Patrick Stephens, 1990), pp. 58-81.

²⁶ Evelyn Waugh, *Decline and Fall*, (1928 Chapman and Hall; revised edn London: Penguin, 2001), p. 119.

²⁷ 'Vita Glass in Famous Trains', '147 Hospitals Fitted with Vita Glass', (advertisements), *The Times*, 15 September 1930, 30 January 1929; *LNER Magazine*, vol. 20 (1930), p. 437;

At about the time of the declining use of individual doors to compartments a number of the country's most important teaching hospitals were being rebuilt. In London the reconstructed Middlesex and Westminster Hospitals were opened in 1935 and 1939 respectively and the Queen Elizabeth Hospital in Birmingham in 1938. Although their styling was relatively traditional they demonstrate that the obsession with ventilation had been overtaken by a new emphasis on the clinical benefits of sun and light, built upon its their record in the treatment of pulmonary tuberculosis.²⁸ In all these major projects, windows and the maximisation of light received careful attention.²⁹ More self consciously 'Modernist' designs such as the Royal Masonic Hospital (1933) and a pair of RAF hospitals at Ely and Wroughton (1940-42), employed even more extensively glazed areas.³⁰ Simultaneously came the beginning of the decline of the long pavilion-origin 'Nightingale' wards in favour of smaller units of beds,³¹ the opposite to railway coach development which was moving away from compartments. The patient/passenger seems to favour smaller units and hospital efficiency / railway management larger ones as noted by Christian Barman, Florence Nightingale and Adrian Forty.³² A post-war part rebuilding at St Thomas's,

John Sadar, 'The healthful ambience of Vitaglass: light, glass and the curative environment', *Architectural Research Quarterly*, vol. 12 (2008), pp. 269-281.

²⁸ Harriet Richardson (ed.), *English Hospitals 1660-1948: a Survey of their Architecture and Design*, (Swindon: Royal Commission on the Historical Monuments of England, 1998), p. 36.

²⁹ Stanley Barnes, *The Birmingham Hospitals Centre*, (Birmingham; the Birmingham Hospitals Centre, 1952), p. 84; Hilary St George Saunders, *The Middlesex Hospital*, (London: Max Parrish, 1949), p. 56.

³⁰ Richardson, *English Hospitals*, pp. 38-39, 101-02, 151-53.

³¹ Richardson, *English Hospitals*, p. 40.

³² Christian Barman and M. G. Bennett 'Living with Transport: a Survey of Amenity Requirements in a Public Passenger Transport Service', *The Journal of the Institute of Transport*, vol. 22 No 17 (1948), pp. 605-12; Nightingale, *Notes on Hospitals*, pp. 49-52;

London, provided smaller units which meant that beds could be arranged for patients to admire its famous view over the Thames.³³ The replacement Queen Elizabeth Hospital in Birmingham (2010) has no unit larger than four beds and nearly half the patients are in single rooms; the NHS hospital blueprints – ‘Racetrack’, ‘Best Buy’ and ‘Nucleus’ of the 1960s-70s – generally divided wards into six-bedded areas.³⁴ Perhaps patients are winning the battle and passengers losing? Once first class on the Liverpool and Manchester meant faster trains and private patients had greater privacy, now private patients pay to receive faster treatment and first class passengers for seclusion and views unrestricted by pillars – both have better food.³⁵

Once air conditioning arrived the vexed question of ventilation was solved by sealing the windows. As might be expected, this did not please everybody; one writer, after nearly ten years of their operation, complained of ‘considerable claustrophobia’ which compelled him to spend the journey next to the vestibule’s open window, no doubt irritating others sensitive to draughts.³⁶ And if air conditioning breaks down the consequences can be severe, as on an occasion when passengers were trapped on an East Coast train and many received medical treatment.³⁷

Adrian Forty, ‘The Modern Hospital in England and France: the Social and Medical Uses of Architecture’ in King (ed.) *Buildings and Society*, pp. 78-81.

³³ Courtney Dainton, *The Story of England’s Hospitals*, (London: Museum Press, 1961), p.172.

³⁴ Geoffrey Rivett, *From Cradle to Grave: Fifty Years of the NHS*, (London: King’s Fund Publishing, 1997), pp. 244-48.

³⁵ Charles E. Lee, *Passenger Class Distinctions*, (London: The Railway Gazette, 1946), p.8.

³⁶ M. E. Parker, ‘High-speed Distress’, (letter), *The Railway Magazine*, vol. 126 (1980), p. 36.

³⁷ ‘Passengers smash windows on stranded GNER train!’ *Entrain*, no. 44, (August 2005), p. 7.

4 EXPLOITATION

Mike Esbester shows that early railway guides began the practice of describing the countryside to the traveller, some of whom undertook their first journeys to experience the sensation of railway travel rather than to travel to another place. He sees this as an attempt to overcome the detachment from the landscape imposed by Schivelbusch's 'panoramic perception' and quotes from one guide which suggested the traveller look ahead in order to ameliorate the perceptual difficulties.¹ Particular attention was drawn to the magnificence of the railway construction and if cuttings and tunnels blocked the view they could themselves be appreciated as expressions of engineering splendour.² As Susan Major points out, while he explains the stimulation to reading given by the railway travel experience, Schivelbusch ignores literature specifically focused on the explanation and analysis of the window view, a sub-genre that was continued into the motorway age with a 1968 guide to the M1.³ Peter Merriman argues that this guide could be construed as something to 'animate ...a monotonous non-place' or to enable consumption of the motorway landscape, which was certainly the function of the railway guides.⁴

Gradually the publication of such guides moved from book firms, such as R.K. Philp (not mentioned by Esbester) which produced a number in the

¹ Mike Esbester, "“Those who ride may read”": Guidebooks & Railway Travel in Britain, c.1830-c.1860", draft paper for T²M 2005 supplied by Dr Esbester to the writer, p. 19.

² Esbester, "“Those who ride may read”", pp. 13-15.

³ Susan Major, "The Million Go Forth": Early Railway Excursion Crowds, 1840-1860, unpublished PhD thesis, University of York, 2012.

⁴ Peter Merriman, *Driving Spaces: a Cultural-Historical Geography of England's M1 Motorway*, (Oxford: Blackwell, 2007), pp. 177-78.

1870s⁵ to the railways themselves. Despite the long history of such guides, an article in one company magazine wondered why its publicity featured destinations and provided little encouragement for the journey itself because passengers were ‘indifferent to the changing scenes’.⁶ The ‘Big Four’ were particularly productive between the wars and devised series illustrating their various lines such as the GWR’s ‘Through the Window’, the LNER’s ‘On Either Side’, the SR’s ‘Passing Scene’ and the LMSR’s ‘The track of ...’ The SR even produced one guide to the route of the Atlantic Coast Express which has a cut-out compartment window as part of the front cover, glass represented, to the frustration of today’s collectors, by a fragile transparent paper.⁷

While the GWR series concentrated on the scenic beauties of its region and well-known landmarks such as the white horses at Uffington and Westbury they also highlighted lineside industry, the Huntley & Palmers biscuit factory at Reading and the china clay works seen while traversing Cornwall, for example. Nor was the picture uniformly of beauty: ‘London has a habit ... of showing her worst side to the railway’.⁸ But the guide is clear that what could be seen, including scenic attractions and industry, all reflected upon the importance and dignity of the Great Western Railway. Even the GWR-served suburbs of London, despite their admitted ugliness, were fully up-to-date: ‘Few things impress the traveller more ... than the extraordinary extent to which “wireless” has captured suburban London. Practically every back

⁵ See: George Ottley, *A Bibliography of British Railway History*, (London: Allen & Unwin, 1965), nos 5843, 6102, 6573, 6657, 6743, 6952.

⁶ Hugh Mytton, ‘The Rail Way’, *Great Western Railway Magazine*, vol. 34 (1922), pp. 405-06.

⁷ Tony Hillman and Beverley Cole, *South for Sunshine: Southern Railway Publicity and Posters 1923 to 1947*, (Harrow Weald: Capital Transport, 1999), p. 32.

⁸ Great Western Railway, ‘*Through the Window*’ *Paddington to Penzance*, (London: G.W.R., 1924), p. 8.

garden has its aerial.’⁹ The London to Penzance version was even republished in 2008 including contemporary pages from ‘Bradshaw’ to provide period detail. Simon Heffer also thought such guides had a place; when he travelled to Edinburgh in 1991 he consulted a copy of the LNER’s ‘On Either Side’ and found a ‘journey much... enriched’; he concludes, ‘Perhaps BR will show some initiative and update it ...’¹⁰

A slightly different type of guide was written and published by S. N. Pike in 1947 in which he described the main lines of three of the four railway companies on the eve of nationalisation. Although some attention was given to conventional ‘sights’ greater detail was reserved for railway matters – the location of junctions, tunnels and the like. Tables were inserted for the observant traveller to note the speed of his train at specified locations; illustrations were given of types and meaning of signals. All in all these guides were mainly for the (budding) railway enthusiast.¹¹

The idea of the lineside window guide seems to be re-invented every so often and they were still being written and published into the twenty first century, for example the ‘Windowgazer’ for cross-country journeys by Virgin Trains.¹²

Although most railway posters have shown views of places worth visiting as an inducement to travel, relatively few have actively sought the view from the

⁹ ‘*Through the Window*’ *Paddington to Penzance*, p. 10.

¹⁰ Simon Heffer, ‘North by Train – and by the Book’, *The Sunday Telegraph*, 14 July 1991.

¹¹ S. N. Pike, *Mile by Mile on the L.N.E.R.: King’s Cross Edition*; (London: Atlas Publishing Co., 1947); *Mile by Mile on the L.M.S.: the Route Described in Detail Through 188 Main Line Stations on the L.M.S.*, (Worthing: Author, 1947); *Travelling on the Southern Railway; Waterloo edition: the Journey Mile by Mile*, (Worthing: Author, 1947).

¹² Paul Bigland, ‘Bridging the North-South Divide’, *Rail*, no. 452 (January 2003), pp. 48-52.

window as a tempting accessory; of those that have many have practised a deceit on the viewer by showing images either exaggerated or unashamedly false. Such posters, whether deceptive or not, were the ideal way to portray what Colin Divall and Hiroki Shin describe as: ‘the scenery of destinations accompanied by the somewhat subdued image of speed, comfort, and luxury’.¹³ The Midland Railway used one such poster to bolster its own image; not only did it claim the most comfortable trains but its lines traversed the ‘best....scenery’.¹⁴



Figure 4.1

LNER Knaresborough poster

Source:

<http://www.scienceandsociety.co.uk/results.asp?image=10174521&itemw=4&itemf=0004&itemstep=1&itemx=10>[accessed 25/05/12].

¹³ Colin Divall and Hiroki Shin, 'Cultures of Speed and Conservative Modernity: Representations of Speed in Britain's Railway Marketing', in Benjamin Fraser and Steven D. Spalding (eds), *Trains, Culture and Modernity: Riding the Rails*, (Plymouth: Lexington Books, 2012), p. 14.

¹⁴ J. T. Shackleton, *The Golden Age of the Railway Poster*, (London: New English Library, 1976), illus 71.

An example of the straightforward approach is the 1928 LNER poster of Knaresborough looking over the town as the train crosses the river (Figure 4.1). The viaduct is eighty feet above the river, making the view realistic. A more modern example is the view over Berwick from a 1980 restaurant car: ‘You Always Get a Table by the Window’.¹⁵ In contrast is the curious Frank Newbould poster of Durham (Figure 4.2) which shows a ground-level

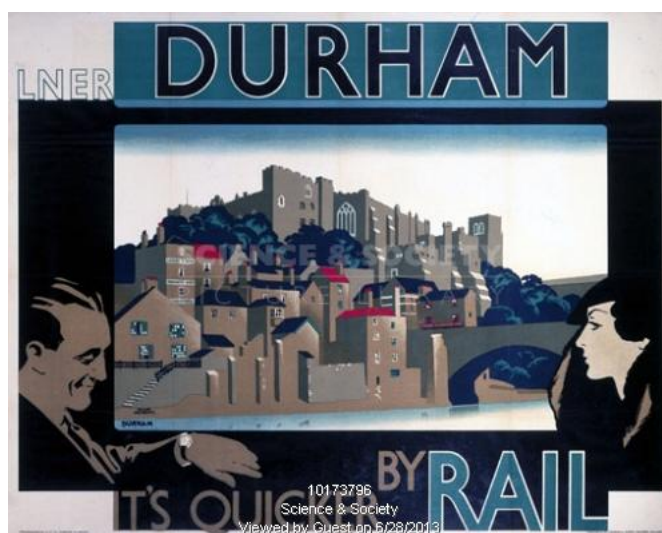


Figure 4.2

LNER Durham poster

Source:

<http://www.scienceandsociety.co.uk/results.asp?image=10173796&itemw=4&itemf=0002&itemstep=51&itemx=60>[accessed 25/05/12]

view looking *up* to the castle; the real view from the train is a marvellous panorama *over* the city towards castle and cathedral. Beaches were a favourite target for this type of poster. For example a 1910 GNR picture of a train apparently heading into the waves (Figure 4.3) and another example shows a golf links from the window but no North British Railway line bisected a seaside course quite so close to the waves.¹⁶

¹⁵ Richard Furness, *Poster to Poster, Railway Journeys in Art. Volume 2: Yorkshire and the North East*, (Gloucester: JDF & Associates, 2010), p. 232.

¹⁶ *The Jubilee of the Railway News, 1864-1914*, (London: The Railway News, 1914), p. 76 (advertisements).



Figure 4.3

1910 GNR poster

Source: *The Railway Magazine*, vol. 27 (1910), p. 349.

When I analysed the development of Felixstowe's railways, a poster caught my attention which clearly showed a view of Felixstowe pier from the train window which geography made another impossible image.¹⁷ (Figure 4.4) The LNER produced at least two series of posters of seaside resorts the style of which was specially chosen to establish the link between travel and destination and which Divall sees as a representation of domesticity as well.¹⁸

¹⁷ Steven M. P. Cochrane, 'Railways and the Development of Felixstowe 1875 – 2008', unpublished Graduate Certificate essay, University of York, 2009.

¹⁸ Cecil Dandridge, 'Advertising Notes', *London & North Eastern Railway Magazine*, vol. 24 (1934), pp. 187-88 and 313-15; D. C. H. Watts, 'Evaluating British railway poster advertising: The London & North Eastern Railway between the wars', *Journal of Transport History*, 3rd Series, vol. 25/2 (2004), pp. 23-56; Colin Divall, 'Civilising Velocity: Masculinity and Marketing of Britain's Passenger Trains, 1921-39', *Journal of Transport History*, 3rd Series, vol. 32/2 (2011), pp. 164-191.

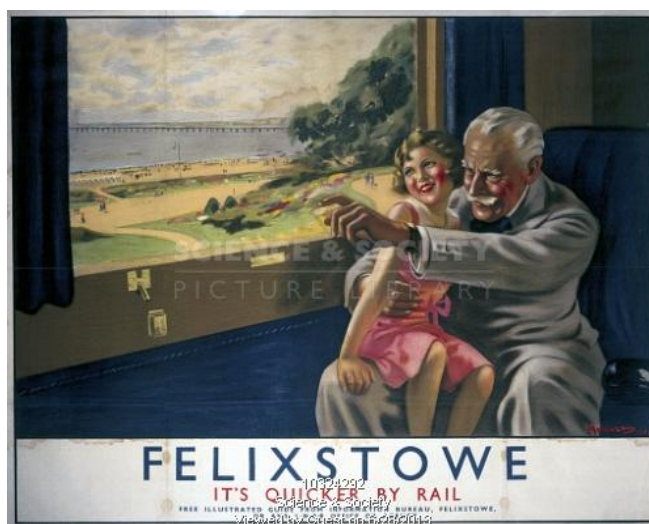


Figure 4.4

LNER Felixstowe poster 1934

Source:

<http://www.scienceandsociety.co.uk/results.asp?image=10324292&itemw=4&itemf=0005&itemstep=1&itemx=7> [accessed 25/05/12]

Of these posters virtually all are impossible combinations of view because the trains do not run as close to the beach as the LNER may have wished, with the exception, perhaps, of Cleethorpes.¹⁹ In a poster for Bridlington the compartment is empty and the three windows – one is open to the seaside atmosphere – form a triptych.²⁰ Since the triptych is often used as an altarpiece are we witnessing a subtle message here about sun-worshipping? In Ian Carter's analysis of the view from the compartment he pays special attention to 'Travelling Companions' by Egg but Julian Treuherz shows that the view pictured here – although a real scene – was actually another

¹⁹ See: Richard Furness, *Poster to Poster, Railway Journeys in Art. Volume 4: the Eastern Counties*, (Tirley: JDF & Associates, 2011), pp. 112, 207; J. Robin Lidster *Railway Posters of the Yorkshire Coast* (Scarborough: Scarborough Borough Council, 1990), illus 8, 11, 13.

²⁰ Richard Furness, *Poster to Poster, Railway Journeys in Art. Volume 2: Yorkshire and the North East*, (Gloucester: JDF & Associates, 2010), p. 134.

illusion.²¹ In presenting deceptive publicity the railways were following a fine art example.

Two nationalization-era posters illustrated the advantage of train travel by showing comfortable and relaxed railway travellers gazing at traffic on parallel roads solidly jammed.²² They look smug and self-satisfied. As one of Letherby and Reynolds' passengers comments, such a scene promotes a feeling of 'sadistic satisfaction'.²³



A fine specimen of Great Eastern Railway pictorial publicity. The interior and exterior views of the dining car, and the type of travellers depicted emphasise the announcement, "Luxurious Travel."

Figure 4.5

GER 'Luxurious' Poster

Source: *Railway & Travel Monthly*, vol. 6 (1913), p. 205.

²¹ Ian Carter, *Railways and Culture in Britain*, (Manchester: Manchester University Press, 2001), pp. 261-271; Julian Treuherz, "The Human Drama of the Railway" in Ian Kennedy & Julian Treuherz (ed.), *The Railway: Art in the Age of Steam*, Liverpool: The Nelson-Atkins Museum of Art, Kansas City, Missouri and National Museums Liverpool, 2008) p. 96.

²² [On line]

<http://www.scienceandsociety.co.uk/results.asp?image=10308292&screenwidth=1003> [accessed 160512]; Michael Palin *Happy Holidays: the Golden Age of Railway Posters* (London: Pavilion Books, 1987), p. 2.

²³ Letherby and Reynolds, *Train Tracks*, p. 71.

The train window was also exploited by looking inwards. The GER produced a poster, for example, which displayed not only the delights of the restaurant car interior, and a picture of scenic delight but also the ‘quality’ patrons who used its facility (Figure 4.5). Pullman included its trademark table lamps in posters (Figure 4.6), a ‘luxury’ feature that is still provided today in, for example, Virgin’s Pendolino – more for image than illumination.

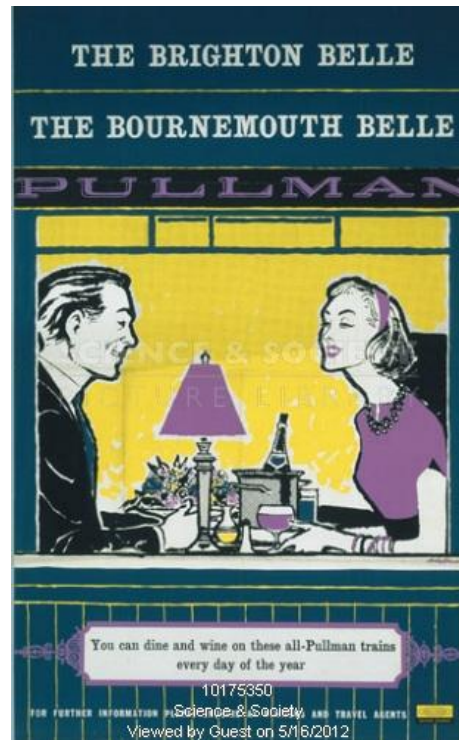


Figure 4.6

Pullman Poster

Source: <http://www.scienceandsociety.co.uk/results.asp?image=10175350&itemw=4&itemf=0001&itemstep=1&itemx=5> [accessed 160512]

The Southern Railway utilised a line of brightly-lit windows in publicity to advertise its electrified lines; here there are no people visible but the illumination contrasting with the dark outside is used to demonstrate the power of electrification (Figure 4.7).

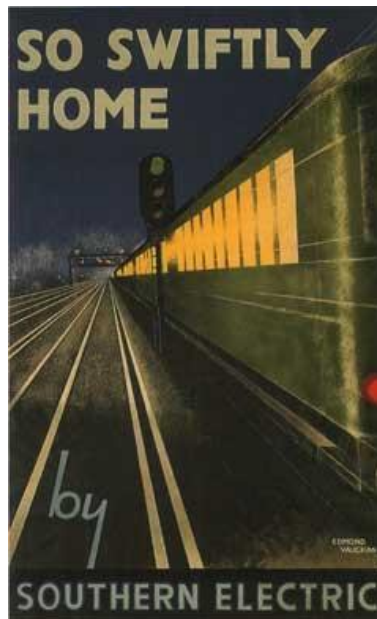


Figure 4.7

Southern Electric Poster

Source:

<http://collectionsonline.nmsi.ac.uk/detail.php?type=related&kv=228065&t=objects>
[accessed 250512]

Two quite subtle Tom Purvis posters use images of travellers inside the train with their accompanying articles – book, spade, golf clubs, flies - suggesting the pleasures to be met at their destinations: the beach, quiet reading, time with the family, golf and fishing.²⁴

Unwelcoming passengers have long used subterfuge to dissuade newcomers from selecting their particular territory, the window view becomes the first line of defence; after all, the passenger joining may prove to be ‘fiend’.²⁵

While smoking was permitted creating a cloud of smoke could put off some window searchers – but might encourage those who were smokers

²⁴ Beverley Cole, ‘Tom Purvis: the Man Who Revolutionised the Railway Poster’, *Backtrack*, vol.11 (1997), pp. 685-87.

²⁵ H. Hervey, ‘Some Railway Passenger Fiends’, *Railway and Travel Monthly*, vol. 8 (1914), pp. 53-60.

themselves – and a ‘Punch’ cartoon suggested: ‘by breathing on the glass—and holding a speaking doll by way of baby to the window—you may generally keep your compartment select,’ (Figure 4.8) advice the essence of



Figure 4.8

‘A Hint to Railway Travellers’

Source: *Punch*, 15 November 1856, p. 200.

which, that is making an undesirable travelling potential travelling companion visible at the window, would probably still hold true.²⁶

²⁶ Quoted in Ivor Smullen, *Taken for a Ride: a Distressing Account of the Misfortunes and Misbehaviour of the Early British Railway Traveller*, (London: Herbert Jenkins, 1968), p. 72 and *Punch*, *Mr Punch’s Railway Book*, (London: Punch, 1905), p. 172.

5 OBSERVATION

The most obvious exploitation by railways of the view from the train has been the observation car, sometimes known by its US name of ‘Lookout Lounge’. In most cases its use has commanded a supplementary fare and its provision was an acknowledgement that the view in itself, albeit from a different perspective, was something worth (in the railways’ eyes at least) paying extra for, especially when, as was often the case, a running commentary on the scene was provided. According to that meticulous historian, W. W. Tomlinson, a vehicle specially designed as an observation car came earlier than might be supposed; even at the very time when views were being rationed by some companies. The opening ceremony of the Great North of England Railway was attended by a vehicle from the Manchester and Leeds Company which attracted press attention, their description leading Tomlinson to dub them ‘an early form of what the Americans call the “Observation Car”’¹ At the opening of the latter railway in 1841 a contemporary report suggested that two luxury ‘gondola’ coaches had been designed with the intention of providing first class passengers with an open view, ‘... the top part above the sofa boxes is composed of plate glass ...’ The newspaper added that one of the coaches was named ‘Tourist’ and that both were ‘adapted for summer travelling’.² John Marshall suggests that they are the coaches illustrated by Tait in his 1845 engraving of Manchester Victoria station. If so, it is evident that the touristic view from the train was facilitated at least as much by the open platforms at both ends

¹ W. W. Tomlinson, *The North Eastern Railway: its Rise and Progress*, (Newcastle: Andrew Reid, 1914), p. 351.

² *The Manchester Guardian*, 3 March 1841, p. 2.

of the coaches as by the glass-enclosed central portion.³ Although it is not fully convincing that these vehicles were designed for observation, the evidence of the newspaper's description, as well as the name of one coach, suggests that the company may have been prepared to exploit not merely the sensation of travel and speed but also the surrounding vista; the reporter particularly noted that the usual first class fare would be charged with no supplement. On the other hand, these same vehicles were illustrated in a 1911 article as 'composite' carriages, that is first class (enclosed) in the centre and second class (open) on either side, with no mention of any special observation intentions.⁴ A similar-looking vehicle, running on the Eastern Counties Railway, was its exclusive smoking saloon of 1846. A description in the 'Illustrated London News' emphasized the amount of glass used in its construction – with suitable acknowledgement to the removal of the excise duty in 1845 – but, in this case, the open platforms were presumably intended more for temporary respite from smoke than pure observation of the passing scene.⁵

Little was mentioned of observation cars in Britain for the next fifty years or so; several vehicles were constructed, often for senior officials of the line to view and inspect their territory (usually 'directors', 'officers' or 'inspection' saloon), some of which survived until relatively recently. Before widespread corridor connections made the glassy exploitation of the end wall of a carriage awkward, the railways produced coaches that, while not expressly for the purpose of 'observation', gave an all-round panorama as an incidental

³ John Marshall, *The Lancashire & Yorkshire Railway Volume 3*, (Newton Abbot: David & Charles, 1972), p. 26; A. F. Tait, *Views on the Manchester & Leeds Railway, drawn from nature and on stone by A. F. Tait*, (Liverpool: Author, 1845), plate 3.

⁴ 'Locomotives and Rolling Stock, Lancashire & Yorkshire Railway Special Number', *The Railway Magazine*, vol. 28 (1911), pp.112-14.

⁵ 'Railway Smoking Saloon', *Illustrated London News*, 12 September 1846, reproduced in Anthony J. Lambert (ed), *Nineteenth Century Railway History Through the Illustrated London News*, (Newton Abbot: David & Charles, 1984), pp. 95-97.

part of their attraction even if they were not necessarily marshalled at the rear of the train. Coaches that could be occupied exclusively for a private group – ‘family’ or ‘picnic’ saloons – sometimes had this feature and historically they have also been described as observation cars. For example, the Cambrian Railways built two four-wheeled first class ‘observation saloons’ that were ‘popular with football teams’ in 1889 and followed them with other vehicles in 1895 and 1898.⁶ The North Staffordshire Railway had saloons with open ‘observation platforms’ at each end for group tourist travel and the Great Northern Railway’s ‘observation car’ of 1901 was a saloon for the use of the company’s directors.⁷ David Jenkinson describes all these categories of carriage, some with end windows, some without, but does not consider any as an ‘official’ observation car.⁸ Equally, because of their exclusivity, royal coaches with end windows, such as Queen Adelaide’s saloon of 1842 cannot be considered in this category.

The first unequivocal attempt to exploit the view was made by the London and North Western Railway in 1911. Both Jenkinson and Michael Harris date this development to 1912-13 but two cars actually began running on the scenic Conwy valley line from August 30 1911, the ‘Railway Times’ noting, competitively, that, ‘observation cars are run on many foreign railways’.⁹

⁶ Rex Christiansen and R. W. Miller, *The Cambrian Railways, Volume II; 1889 – 1968*, (Newton Abbot: David & Charles, 1968), pp. 128-30.

⁷ W. Hartley Bracewell, ‘Tourist Travel in North Staffordshire’, *Railway Magazine*, vol. 7 (1900) pp. 232-37; ‘New Rolling Stock, GNR’, *The Locomotive Magazine*, vol. 6 (1901), p. 144.

⁸ David Jenkinson, *British Railway Carriages of the 20th Century, volume 1: the End of an Era, 1901-22*, (Wellingborough: Patrick Stephens, 1988), Chapter 13, ‘Special Carriages for Special Purposes’.

⁹ David Jenkinson, *LNWR Carriages: a Concise History*, (Easingwold: Pendragon Partnership, 1995), p. 152; Michael Harris, ‘Observation Cars’ in Jack Simmons and Gordon Biddle (ed), *The Oxford Companion to British Railway History* (Oxford: Oxford

Indeed, a description of an 1870s Californian journey described how a roofless ‘observation car’ was run in the train from Sacramento on Sundays specifically for sightseeing to the extent that it halted at the most spectacular point.¹⁰ In the UK such vehicles were being built for export including for the Central South African Railways in 1904 a so-called ‘observatory saloon’ with removable glass, presumably to encourage ventilation and minimize the sun’s effects, and a car with raised observation turrets for the Canadian Pacific in 1903.¹¹ The investiture of the Prince of Wales at Caernarvon six weeks before the L&NWR’s innovation had stimulated appreciation of North Wales’s tourist possibilities with 144 special trains provided for spectators at the ceremony and it was reported that this was ‘the first carriage constructed by an English railway specially to enable tourists to see the scenery while travelling’; a running commentary was provided by guides who were still operating in 1936.¹² A photograph shows a well-filled coach and a calculation from the reported takings indicates that, on average, forty passengers per train – sixty four seats were available – were prepared to pay the sixpenny supplement in order to travel in the observation coach, which seems remarkably successful since one imagines few, if any, made the journey

University Press, 1997), p. 356; ‘L and N W Observation Cars, *The Railway Times*, vol. 100 (1911), p. 205.

¹⁰ Edmund Leathes, *An Actor Abroad or Gossip Dramatic, Narrative and Descriptive from the Recollections of an Actor in Australia, New Zealand, the Sandwich Islands, California, Nevada, Central America and New York*, (London: Hurst and Blackett, 1880), pp. 176-78.

¹¹ ‘Train de Luxe, Central South African Railways’, *The Locomotive Magazine*, vol. 10 (1904), pp. 123-25; ‘Observation Coach on the Canadian Pacific Railway’, *The Railway Magazine*, vol. 13 (1913), pp. 310-12.

¹² H. S. Lawrence, ‘The London and North-Western Railway in North Wales’, *The Railway and Travel Monthly*, vol. 3 (1911), pp. 290-94; ‘The Observation Car: London and North-Western Company’s Experiment’, *The Manchester Guardian*, 30 August, 1911; E. H. W. Gardner, ‘The Conway Valley Branch of the LMSR’, *The Railway Magazine*, vol. 79 (1936), pp. 355-62.

solely to travel in the special car but were persuaded to pay by the availability of the facility. Unexpectedly it was for third class passengers only; the seats were reversible (as was usual in tramcars) since the car was double-ended. This obviated turning but prevented passengers joining or leaving except at stations. The L&NWR's publicity chief, Mr Fieron, suggested that, if the experiment were successful, observation cars would be run on other of the company's lines. In fact, more were not built but the originals were useful enough to continue running until 1956 when the line was dieselised with the latest multiple unit stock.¹³

A better known observation car was 'Maid of Morven' introduced by the Caledonian Railway (though Pullman Car Company owned) on its West Highland line in 1914 following a decision by Davison Dalziel, Pullman's chairman, to alter the order of one of a batch of buffet cars into a 'drawing room car'. George Behrend supposes that the idea arose from the construction in 1903 by the Wagons-Lits Company, of which Dalziel was also chairman, of observation cars for Russia.¹⁴ Since there had recently been the L&NWR's Welsh project and, in the context of the 'Railway Times' remark quoted above, this link seems less likely. 'Maid of Morven' was a handsome vehicle with large rear-facing windows extending in a graceful curve upwards to the roofline; some early versions of British Railways' 1950s diesel multiple unit cabs resembled it in appearance, if not elegance. This was a first class only car, requiring payment of 2/6d on top of the regular Pullman supplement. Hamilton Ellis's opinion is that the bulky curtains and

¹³ J. M. Dunn, 'From Llandudno Junction to Blaenau Festiniog', *The Railway Magazine*, vol. 105 (1959), pp. 820-26; 'The Observation Car', *The Manchester Guardian*, 30 August, 1911; Geoffrey Oates, 'Diesel Trains Come to North Wales', *Railway World*, vol. 18 (1957), pp. 156-60.

¹⁴ George Behrend, *Pullman In Europe*, (Hampton Court: Ian Allan, 1952), pp. 60, 195.

high-backed armchairs were actually a barrier to observation.¹⁵ Also, the car's doors were uncomfortably close to the rear windows, prompting Behrend's suggestion that draughts were a problem and his conclusion that this was why the seats faced away from the windows. Brian Haresnape falls into the same trap when he remarks that, oddly, in an observation car the seats did not face outwards.¹⁶ In fact the chairs were all loose and could be placed at will. But official pictures of more than one observation car interior, not only in the UK, tend to show inwardly-facing seats while those looking from the outside in show seats facing outwards. Presumably photographers were not only trying to emphasize the convivial and luxurious potential of the saloon but were also avoiding a picture showing the uninviting backs of seats.¹⁷

'Maid of Morven's observation area occupied one end of the car only, requiring it to be turned at the end of each journey. Niall Ferguson records that, at Oban, it was a tight fit on the turntable with the result that one of the elaborately curved windows could accidentally be broken; a spare was carried in the train, together with a glazier (who must have enjoyed the duty) to replace it if an accident occurred.¹⁸ Pullman's extravagance evidently

¹⁵ C. Hamilton Ellis, *Railway Carriages in the British Isles 1830-1914*, (London: Allen & Unwin, 1965), p. 247.

¹⁶ Behrend, *Pullman In Europe*, p. 60; Brian Haresnape, *Pullman: Travelling in Style*, (Shepperton: Ian Allan, 1987), p. 88.

¹⁷ Such as, for example, British Railways West Highland service, *Railway Magazine*, vol. 105 (1950), p. 549 and US examples in Karl R. Zimmermann, *20th Century Limited*, (St Paul MN: MBI Publishing, 2002), pp. 74-75, 84-86; Donald J. Heimburger and Carl R. Bryon, *The American Streamliner: Postwar Years*, (Forest Park IL: Heimburger House, 2001), pp. 41, 55, 79, 81; Donald J. Bush, *The Streamlined Decade*, (New York NY: George Braziller, 1975), pp. 64, 77.

¹⁸ Niall Ferguson, 'Caledonian Railway Pullman Cars and their LMS Successors', *Backtrack*, vol. 19 (2005), pp. 174-80.

extended to a determination not to spoil its passengers' viewing experience. This car ran until 1936 having been out of service for the latter part of the First World War.

Another Welsh service benefited from observation cars the following year when the Cambrian Railways introduced them on their coastal line, officially and characteristically labelling them with imposing roofboards, 'Observation Car Aberystwyth and Barmouth'. Less opulent than the L&NWR bogie equivalent, these converted six-wheeled cars were for third class passengers only too and, 'Railway Magazine' noted, were introduced specifically to counter the competition for tourists from road operators. They were also self-contained with throw back seating; pictures show it was hard and wooden but presumably visual enjoyment of Wales kept passengers' minds off any discomfort. These vehicles were popular enough to survive for twenty one years; after that one enjoyed a new life as a holiday home overlooking the sea in Cornwall.¹⁹ Not that specialised observation vehicles were confined to the railways at this time; 'Commercial Motor' reports that a Newcastle-London service of luxury coaches with raised half-deck observation saloons was operating from the late 1920s.²⁰ Indeed, at one GWR debating society meeting, the speaker encouraged the construction of observation and large-windowed carriages specifically to counter road competition.²¹

¹⁹ 'Observation Cars for Service on the Cambrian Railways', *The Railway Magazine*, vol. 37 (1915), p. 476; Rex Christiansen and R. W. Miller, *The Cambrian Railways, Volume II; 1889 – 1968*, (Newton Abbot: David & Charles, 1968), p. 133; Andrew McRae, *British Railways Camping Coach Holidays: A Tour of Britain in the 1950s and 1960s*, (Stockport: Foxline Publishing, 1998), p. 109.

²⁰ 'An Ambitious Motor Coaching Project', *The Commercial Motor*, 28 October 1930, p. 334.

²¹ H. J. Peacock, 'The Evolution of Railway Passenger Train Transport', *GWR (London) Lecture and Debating Society Session 1934-35*, No 289.

By far the most famous, if also the most short-lived, observation cars to run in Britain were those in the LNER's 'Coronation' train of 1937-39. The importance of the LNER's streamliners' combined contribution to its image of speed and travel comfort - Divall's 'civilising velocity'²² - can hardly be over-emphasized and this train was the finest of them all; as Hiroki Shin shows, every attention was given to publicity for this train and even custom-made, flat, non-rattling cutlery was provided.²³ Earlier observation cars were genuinely intended to showcase the scenic beauties of the area traversed, perhaps anticipating such scenes would reflect favourably upon the company's own status; in the case of the 'Coronation' the train itself was intended as the talking point. It could be argued that this observation car reversed the contemporary design dictat 'form ever follows function'²⁴ because its function was a by-product of its appearance. The A4 locomotives designed originally for the 1935 'Silver Jubilee' and also used for the 'Coronation' were given a striking streamlined casing, often described as 'Bugatti' because its shape was inspired by a high speed Ettore Bugatti-designed French railcar of 1933.²⁵ Other refinements to reduce air resistance, such as rubber fairings between the coaches, contributed to

²² Colin Divall, 'Civilising velocity: masculinity and the marketing of Britain's passenger trains, 1921-39', *Journal of Transport History*, 3rd series vol. 32 no 2 (Dec. 2011), pp. 164-191.

²³ Hiroki Shin, 'Business Strategy and Corporate Image: Britain's Railways, 1872-1977', in Heli Mäki & Jenni Korjus (eds), *Railways as an Innovative Regional Factor*, (Helsinki: University of Helsinki, 2009), p. 70; Rex Blaker, 'Cutlery, China and Glass' in P. B. Whitehouse (ed), *Railway Relics and Regalia*, (London: Country Life, 1975), p. 116.

²⁴ Louis Sullivan, 'The Tall Office Building Artistically Considered', *Lippincott's Magazine*, no. 57 (March 1896) pp. 403-09.

²⁵ Railway Correspondence & Travel Society, *Locomotives of the LNER, Part 2A, Tender Engines - Classes A1 to A10*, (Long Stratton: RCTS, 1973), p. 92.

streamlining and with the ‘Coronation’ the concept was developed further by providing a so-called ‘beaver-tail’ at the end of the train, a term coined in 1935 by the Chicago, Milwaukee, St Paul & Pacific Railroad for its ‘Hiawatha’ train’s observation car.²⁶ This was in accordance with the ideas of Norman Bel Geddes who, in his influential 1932 book, ‘Horizons’, illustrates the idea of an observation/lounge car tapering in both horizontal and vertical planes towards a rounded end.²⁷ Although Gresley’s version and the ‘Hiawatha’ beaver-tail were similar to Geddes’ example, the Milwaukee Road’s later ‘Skytop’ cars running in their ‘Hiawatha’ trains from 1948 came much closer.²⁸ The differences between these designs highlight the reported deficiency of Gresley’s version. Geddes suggests that the observation section should be two steps lower than the rest to provide an ‘increased line of vision’ and the ‘Skytop’ car did this by extending its windows upwards.²⁹ Gresley’s observation car windows failed to extend either lower or higher so that its function for pure vision was, it has generally been agreed, strictly limited although the appearance was both novel and striking. Special attention was drawn to the delicately curved windows in the ‘LNER Magazine’ and in a ‘Railway Magazine’ article by Cecil J. Allen writing under one of his pseudonyms.³⁰ To overcome the difficulty of manufacturing suitably curved glass these were made of Perspex, as used in aircraft construction, which in itself reflected upon the train’s advanced technology; Perspex, the ‘LNER Magazine’ claimed, has better impact-resistance, is

²⁶ Jim Scribbins, *The Hiawatha Story*, (Waukesha WI: Kalmbach Books, 1990), p. 22.

²⁷ Norman Bel Geddes, *Horizons*, (Boston MA: Little Brown, 1932), p. 72.

²⁸ John Gruber and Brian Soloman, *The Milwaukee Road’s Hiawathas*, (St Paul MN: MBI Publishing, 2006).

²⁹ Geddes, *Horizons*, p.76.

³⁰ “The Coronation” Streamlined Trains – London and Edinburgh’, *LNER Magazine*, vol. 27 (1937), pp. 441-46; ‘Voyageur’ [Cecil J. Allen], ‘The LNER Coronation Express’, *The Railway Magazine*, vol. 81 (1937), pp. 79-81.

significantly lighter and is more transparent than glass, clear advantages for such a vehicle. Similarly Rexine (an artificial leather used in the motor industry), another up-to-date material, was employed in interior decoration of the trains and stainless steel on the exterior.³¹ Progressive material technology had disadvantages too: Perspex was vulnerable to scratching, difficult to avoid in railway service rigour, and Rexine was highly flammable, exacerbating the Huntingdon fire of 1951 which involved two of the ex-LNER streamliner coaches.³² Despite such careful design, Jenkinson summarises the vehicle as: ‘pretty useless ... since its roof came down so low at the back as to preclude much observation save that of receding sleepers, but no matter, it was different; that was the important point’³³ and Harris concludes the same. Stephen Potter, in a brief history of fast trains from 1930, does not recognise it as a functional observation car, simply a continuation of the streamlining principle.³⁴ Mullay too plays down their usefulness for pure observation.³⁵ A surviving photograph taken from the train (Figure 5.1) shows that, for the rearmost seats at least, there *was* a useful view so perhaps the slope of the roof was less restrictive than claimed; nevertheless the cars’ subsequent history suggests the view for other passengers was unsatisfactory.

³¹ “The Coronation”, *LNER Magazine*, vol. 27, pp. 441-42; Alan Self, ‘Streamlined Expresses of the LNER’ in Terry Bishop (ed.), *Design History: Fad or Function?* (London: Design Council, 1978), p. 22. Perspex has a lower refractive index than glass; therefore it reflects less allowing greater transmission of light.

³² Ministry of Transport, *Report on the Fire which Occurred in an Express Passenger Train on 14th July 1951 near Huntingdon in the Eastern Region British Railways*, (London: HMSO, 1952), paras. 17, 28-29.

³³ David Jenkinson, *British Railway Carriages of the 20th Century Vol. 2: the Years of Consolidation*, (Wellingborough: Patrick Stephens, 1990), p. 125.

³⁴ Stephen Potter, *On the Right Lines: the Limits of Technological Innovation*, (London: Francis Pinter, 1987), p. 12.

³⁵ A. J. Mullay, *Streamlined Steam: Britain’s 1930s Luxury Expresses* (Newton Abbot: David Charles, 1994), pp. 70-71.



Figure 5.1

View from the ‘Coronation’ observation car

Source: W. B. Yeadon, *Named Trains on LNER Lines*, (Nottingham: Book Law, 2004), p. 164

When Nigel Gresley’s daughter, Marjorie, of some minor celebrity herself as an actress, wrote to ‘The Times’ and ‘The Daily Telegraph’ in 1962 with her recipe for luxury trains to attract more passengers, she prescribed: ‘... an observation car at the rear of the train - with armchairs - and the whole train to be roofed by Perspex - to give passengers a clear view of the scenery ...’³⁶ She was perhaps unconsciously remedying the literal shortcoming of her father’s design by suggesting something like Geddes’ vision and the ‘Skytop’, but since she also demanded seats facing the same way, in this part at least, her wishes have been fulfilled. Views upwards may seem to have limited attraction but the competition provides them - touring coaches with clear or tinted roofs have long had them and ‘sunshine’ car roofs have proved popular from the 1950s. The importance of the ‘Coronation’ observation cars was not the view they enabled from the inside out but the visual excitement they created looking from the outside in.

³⁶ Marjorie Gresley, ‘Super Trains’ (letter), *The Times*, September 29 1962; ‘Telegraph’ letter quoted in Geoffrey Hughes, *Sir Nigel Gresley: the Engineer and his Family*, (Usk: Oakwood, 2001), p. 39.

Another subordination of the strictly observational function was that, since the train departed London at 4pm and Edinburgh at 4.30 pm and arrived six hours later, even in the summer part of the journey was undertaken in darkness. Harris notes that the car's lights were dimmed to improve the view and, saving energy since their seats duplicated others in the train, the cars did not run at all during winter months. Mullay calculates that, although the observation cars were such an iconic feature of the train which was a Monday-Friday only service anyway, they only ran for about 40% of its short history. Seats were sold according to a complex timetable in one shilling per one-hour sessions, limiting takings to a maximum of £4 per journey and since Mullay quotes a contemporary source that few passengers were willing to leave their original places to visit the observation car and since an attendant had to be employed as well, the economics of the operation were questionable; in a later article Mullay analyses the loadings of the whole 'Coronation' service, concluding that it was a 'commercial flop' compared with other LNER streamlined trains.³⁷ Answering an enquirer, the 'Railway Magazine' hinted in 1938 that the saloons might not return for the coming summer, suggesting that their value was soon questioned.³⁸ But what really mattered according to Michael Bonavia was undoubtedly the 'immense prestige and publicity value', an opinion echoed by Alan Self who points out its 'cash value' in attracting passengers compared with operational economies streamlining might offer.³⁹ Posters of the train emphasized both its

³⁷ Michael Harris, *Gresley's Coaches, Coaches Built for GNR, ECJS and LNER 1905-53*, (Newton Abbot: David & Charles, 1973), pp. 100-02; Mullay, *Streamlined Steam: Britain's 1930s Luxury Expresses*, pp. 70-71; Mullay, 'The LNER "Coronation" Service', *Backtrack*, vol. 6 (1992), pp. 32-36.

³⁸ 'The LNER Coronation', *The Railway Magazine*, vol. 82 (1938), p. 217.

³⁹ Michael R. Bonavia, *A History of the LNER, II: The Age of the Streamliners, 1934-39*. (London: Allen and Unwin, 1982), p. 33; Self, 'Streamlined Expresses of the LNER', p. 22.

aerodynamic qualities (Figure 5.2) and the scenic nature of parts of the journey, although Mulla y concedes that south of Newcastle much of the journey is ‘fairly unspectacular’. This poster is also used by Divall and Shin as an example of the blending of the image of speed with the traditional British landscape: their ‘conservative modernity’.⁴⁰ Detail supporting this interpretation is the depiction of Holy Island, an ancient pilgrimage place,



Figure 5.2

LNER ‘Coronation’ poster, 1938 by Frank H. Mason

Source: Source: <http://collectionsonline.nmsi.ac.uk/> [Accessed 16/12/12]

Bamburgh and Dunstanburgh Castles – all helpfully labelled on the poster – in the right background; once again (see ‘Exploitation’) the view is somewhat fanciful because Bamburgh lies approximately twenty miles and Dunstanburgh ten miles farther south from the Scottish border. Another poster specifically of the observation car provoked Cecil Dandridge (LNER Advertising Manager 1928-45) to refer to the novelty of illustrating the *rear*

⁴⁰ Colin Divall & Hiroki Shin, ‘Cultures of Speed and Conservative Modernity: Representations of Speed in Britain's Railway Marketing’ in Benjamin Fraser and Steven Spalding (ed), *Trains, Culture and Modernity: Riding the Rails*, (Plymouth: Lexington Books, 2012), p. 18.

of a train in advertising.⁴¹ Here the ancient building juxtaposed with the technological wonder is either York Minster or, perhaps, Durham Cathedral although the depiction is vaguer than the Mason example (Figure 5.3). For passengers at the termini the sight of the streamlined tail



Figure 5.3

‘Coronation’ Observation Car poster, 1938

Source: *LNER Magazine*, vol. 28 (1938), p. 314.

of the train from the platform barrier showed that this was no ordinary service; a photograph in Mulla’s article illustrates the striking efficacy of the train’s strict cleaning regime which contributed to its prestigious image and equally the extent to which the cars were beautiful examples of the coach

⁴¹ Mulla, ‘The LNER “Coronation” Service’ p. 34; C. Dandridge, ‘Advertising Notes’, *LNER Magazine*, vol 28 (1938), p. 314.

builder's art.⁴² Evidence that such impressions were considered important by LNER management is that, at King's Cross, the engine used to bring the empty streamlined trains into the terminus was kept especially clean.⁴³ A 'Times' editorial praised the 'Coronation' generally for demonstrating that the railways were not '... bankrupted of ideas or robbed ... of the will to execute the ideas... The conception of a luxury limited is... as profitable an innovation for British railways as could be desired...' but, significantly, it was lukewarm about the observation car's appeal, wondering 'if receding rails gladden [passengers'] eyes.'⁴⁴

It may be supposed that the aerodynamic advantages were proven even if the observational advantages were marginal but the evidence is conflicting.

Harris claims that 'it was always noted that eddy currents were absent from the rear of the train and that the windows were clear of traffic film thrown up from the rails'⁴⁵ and Allen that the windows were 'spotless' at the end of the journey⁴⁶ but Mullaney quotes from an observation car traveller who commented on the thick smoke which obscured his vision and an LNER engineer who noted that the Perspex windows seemed unduly to attract dust and grit.⁴⁷ Allen reported that Gresley claimed the streamlined tail saved 35hp at 100mph; since this represented only about two percent of the locomotive power necessary its advantage was hardly decisive.⁴⁸ Mullaney concludes that, overall, the observation car was 'a good

⁴² Mullaney, 'The LNER "Coronation" Service', p. 36; Self, 'Streamlined Expresses of the LNER', pp. 20-21.

⁴³ Geoffrey Hughes, *Sir Nigel Gresley: the Engineer and his Family*, (Usk: Oakwood Press, 2001), p. 149.

⁴⁴ 'Streamlined Service', *The Times*, July 7 1937.

⁴⁵ Harris, *Gresley's Coaches*, pp. 100-02.

⁴⁶ 'Voyageur', 'The LNER Coronation Express', p. 81.

⁴⁷ Mullaney, *Streamlined Steam*, pp. 64, 70.

⁴⁸ 'Voyageur', 'The LNER Coronation Express', p. 81.

idea which never quite found its time.’⁴⁹ Harris notes that the other end of the car was devoted to a mail compartment; perhaps a self-contained bar would have been more commercially useful?⁵⁰ It could be argued that a more practical, if less showy, aid to observation on the same route was the LNER’s practice of ensuring the stock of the ‘Flying Scotsman’ was marshalled to keep compartment windows, not corridors, on the eastern side to display the coastal scenery north of Newcastle to best advantage.⁵¹ But the unique stylishness of these two saloons ensured that, of all the ‘Coronation’ luxuriously-appointed stock, they were the only ones to have survived.⁵²

Entering the new era of looming nationalisation at the same time as recovering from wartime conditions, the Southern Railway’s progressiveness was demonstrated by the use of observation cars in its 1947 ‘Devon Belle’ Pullman. This was sufficient of an event to provoke a Rowland Emmett cartoon in ‘Punch’ (Figure 5.4), Emmett’s work having previously wryly commented on wartime railway privations including overcrowding and the lack of restaurant cars. His spindly railway used a requisitioned greenhouse as a ludicrous parody of the real train’s striking (for the Pullman Car Co) glass-sided design, which both Keith Hill and Behrend see as a precursor to more modern post-war coaches but which Jenkinson considers dated quickly.⁵³ Analysing Emmett’s place in railway culture Carter notes the similarity between the ramshackle lines of Colonel Stephens and his cartoon creations and perhaps it is a nod to the re-use of old coaches to produce the modern ‘Devon Belle’ that Emmett’s railway has requisitioned a staff-

⁴⁹ Mullan, *Streamlined Steam*, p. 98.

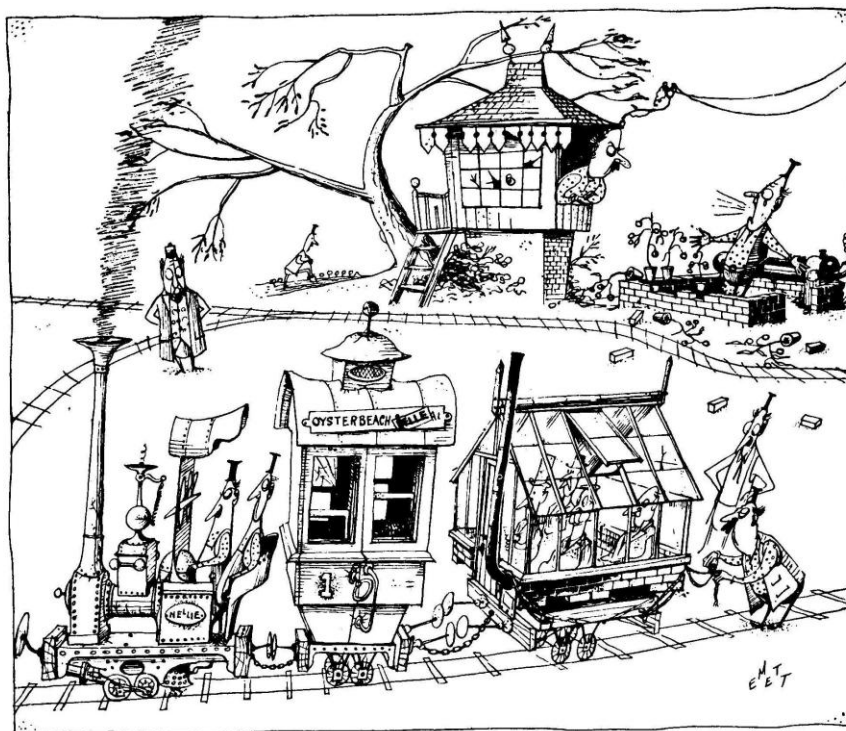
⁵⁰ Harris, *Gresley’s Coaches*, pp. 100-02.

⁵¹ Cecil J. Allen, *The Coronation’ and other Famous LNER Trains*, (London: Nicholson & Watson, 2nd edn 1938), p. 105.

⁵² Self, ‘Streamlined Expresses of the LNER’, p. 22.

⁵³ Keith Hill, ‘A Stylish Folly: the Story of the “Devon Belle”’, *Backtrack*, vol. 18 (2004) pp. 646-53; George Behrend, *Pullman In Europe*, (Hampton Court: Ian Allan, 1952), pp. 117-18; Jenkinson, *British Railway Carriages of the 20th Century Vol. 2*, p. 247.

member's greenhouse. Ironically, Colonel Stephens was an enthusiastic user of railcars of extensive panoramic vision; the Fords used on, for example the



“A plague on the ‘Devon Belle’ and its new glass observation coach.”

Figure 5.4

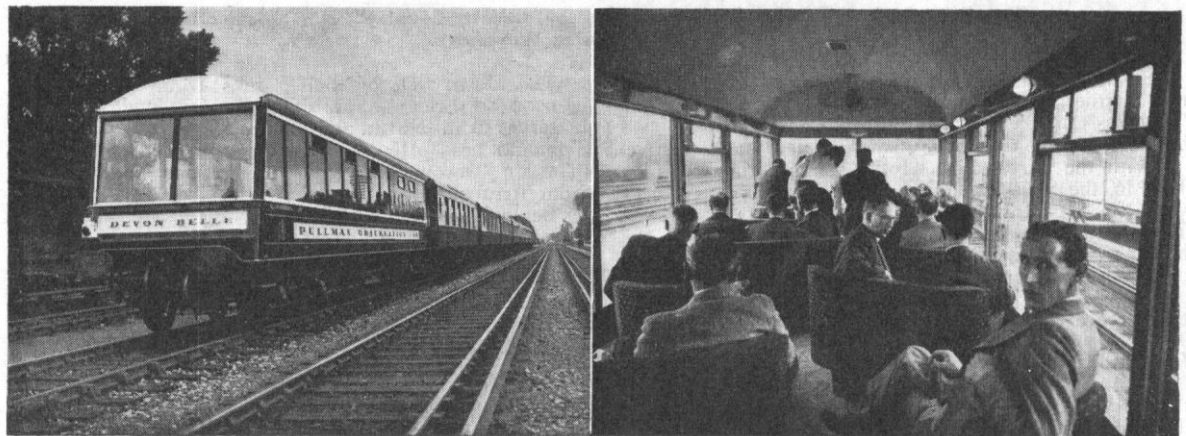
Emett's Observation Coach

Source: Rowland Emett, *The Early Morning Milk Train*, (London: John Murray, 1976), p. [68].

Shropshire and Montgomeryshire, would certainly not look out of place in an Emett drawing.⁵⁴ ‘Railway Gazette’ noted, probably remembering the ‘Coronation’, that the Belle’s windows were set to give passengers ‘the greatest possible unobstructed view’ by making no concession to streamlining and keeping

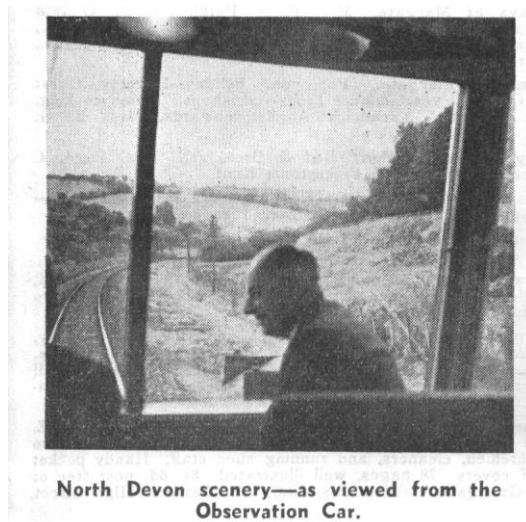
⁵⁴ Stephen Garrett and John Scott-Morgan, *Colonel Stephens’ Railmotors*, (Caernarfon: Irwell Press, 1995).

wooden framing to a minimum (Figure 5.5).⁵⁵ Armour-plated glass was used – no on-board glazier in post-war austerity and no Perspex – double glazed to avoid



Last sees all! The Observation Car at the rear.

Inside the Observation Car.



North Devon scenery—as viewed from the Observation Car.

Figure 5.5
The ‘Devon Belle’ Observation Car
Source: *Southern Railway Magazine*, vol. 25, (1947), pp.129-31

condensation and ensure quietness and, towards the rear in a bar area, a map by Eleanor Esmond-White, well-known mural artist, to ensure that those viewing were properly informed. In case the large windows had become dirty during the run from London, cleaning was arranged at the Wilton water

⁵⁵ ‘Reconstructed Pullman Cars for the “Devon Belle”’, *Railway Gazette*, vol. 87 (1947), pp. 16-17.

stop, travelling west, before the more scenic part of the journey began.⁵⁶ The cars were somewhat notorious for the seating provided which appeared comfortable but encouraged passengers to move on after twenty minutes at most; since there was no supplementary charge for observation, above the usual Pullman fee, additional revenue relied upon bar takings.⁵⁷ The ‘Southern Railway Magazine’ particularly approved of the rearward view which provided passengers with an insight into practical railway working not normally seen, something which became more common with the diesel multiple units (DMUs) of the 1950s.⁵⁸ The ‘Devon Belle’ was disappointing commercially, however, and was withdrawn after the 1954 season; at least in Emmett’s train all the passengers have forsaken the ordinary coach to occupy the greenhouse.⁵⁹

British Railways’ Scottish Region next took an interest in the observation car, initially taking those from the ‘Coronation’ despite their inferior viewing qualities; these vehicles had had occasional use in excursion traffic since 1945.⁶⁰ ‘Trains Illustrated’ was keen to resurrect them; in a 1956 editorial it wondered why Scotland was not taking the opportunity to use the ‘Devon Belle’ cars which it calculated would earn their keep in extra fares, pointing to the success of DMUs operating similar scenic cruises. Later it was surprised to learn that the region had been offered but refused these cars and, inexplicably to ‘Trains Illustrated’, had accepted the ‘Coronation’ cars

⁵⁶ Hill, ‘A Stylish Folly’, pp. 646-53.

⁵⁷ Chris de Winter Hebron, *Dining at Speed: a Celebration of 125 Years of Railway Catering*, (Kettering: Silver Link Publishing, 2004), p. 8.

⁵⁸ ‘The Devon Belle Enters Service’, *Southern Railway Magazine*, vol. 25, (1947), pp.129-31.

⁵⁹ de Winter Hebron, *Dining at Speed*, p. 95.

⁶⁰ Harris, *Gresley’s Coaches*, pp.100-02; *Trains Illustrated*, vol. 6 (1953), p. 248.

with their poor visibility.⁶¹ One was allocated to the Mallaig line in 1956, followed by services to Oban and Fort William. The 'BR Magazine' reported a letter in the 'Sunday Express' from an American visitor: 'To sit in armchair comfort in the streamlined observation coach, listening to a soft Highland voice explain and pinpoint the landmarks of the beautiful and historic road to the isles was an experience he will never forget'⁶² and in 1958 the BR Scottish Area Board noted that the operation of observation cars on the three routes was 'highly successful'.⁶³ Success encouraged expansion and at last the deficiencies of Gresley's design were acknowledged for in 1959 the cars were remodelled, removing the sloping roof and replacing it – streamlining was becoming old hat in any case - with a more angular and much better viewing compartment; the 'Belle' cars were then incorporated into the Inverness-Kyle of Lochalsh service from 1961, having been running in North Wales as 'The Land Cruise Lounge' since 1958.⁶⁴ All was short-lived because these observation cars made their final runs in the 1967 summer.⁶⁵ The official explanation was that the cars were by now life-expired but a 'Railway Magazine' reader suspected a conspiracy, believing that BR was intent on removing expensive turntables, necessary at termini for single-ended observation cars, but no longer needed for locomotives when steam had gone. William Stokes – the persistent advocate of ways to exploit railway scenic delights – also wrote to suggest more observation cars

⁶¹ 'Why Waste these Pullmans?' and 'Beaver-tail on W. Highland', *Trains Illustrated*, vol. 9 (1956), pp. 250 and 413.

⁶² *British Railways Magazine (Scottish Region)*, vol. 8 (1957), p. 331.

⁶³ *British Railways Scottish Area Board Minutes 1958*, no. 58/190 (c) 17/9/58.

⁶⁴ 'Observation Cars in Scotland', *The Railway Magazine*, vol. 107 (1961), p. 585; 'Observation Car on the LMR', *The Railway Magazine*, vol. 104 (1958), p. 801.

⁶⁵ 'End of BR's Observation Cars', *Railway World*, vol. 29 (1968), pp. 180-81.

to stimulate traffic, using ex-DMU trailers, on routes such as the Cambrian coast.⁶⁶

A further refinement of the observation area was the ‘dome’ vehicle once popular in the USA and enabled by that country’s generous loading gauge and sometimes used in Europe too. Introduced as the ‘VistaDome’ on the Burlington Lines in 1945 ‘Astra-Dome’ vehicles formed a prominent feature of the General Motors ‘Train of Tomorrow’ in 1947.⁶⁷ Even within the US gauge, headroom was restricted and heat a problem; ‘Thermopane’ double glazing with a heat-resisting outer pane was used to reduce temperature and glare but dome coaches required air-conditioning too. Despite the inherent gauging difficulties of a UK version, Brian Haresnape posts an intriguing picture in later versions of his railway design books of a projected diesel multiple unit ‘observation train’ specifically to encourage tourism in the Scottish highlands. This train, which must have stretched the loading gauge to its maximum, possessed not only the forward panorama of the conventional DMU (see ‘Augmentation’) but also a somewhat half-hearted attempt at a ‘dome’ car; it most closely resembled, but lacked the brio of, the 1950s Italian ETR300, which had the driver in an elevated cockpit and the front of the train arranged for observation. A reviewer of this train was so excited by its observation lounge that he thought seats might be dispensed with and replaced by merely a rail to lean on. When Simmons pleaded for something similar in Britain, did he perhaps know of this project?⁶⁸ Despite

⁶⁶ John A. McGregor, ‘Scottish Observation Coaches’, William B. Stokes, ‘A Tourist Conception’, *The Railway Magazine*, vol. 114 (1968), pp. 234, 111-12.

⁶⁷ ‘The “Train of Tomorrow”’, *The Railway Gazette*, vol. 87 (1947), pp. 128-130, 134.

⁶⁸ Brian Haresnape, *British Rail 1948-83: a Journey by Design*, (1979; 2nd edn, Shepperton: Ian Allan, 1983), p. 111; Italian De-Luxe Electric Trains’, *The Railway Gazette*, vol.98 (1953), pp. 675-79; Brian O’Rourke, ‘ETR 300’, *British Transport Review*, vol. 3 no. 5, (August

its attraction, a specialist train such as the BR design, with limited geographical possibilities, would have been an expensive proposition and Haresnape records that the project was abandoned on cost grounds.

The Scottish Region was to resurrect observation cars in 1979 using vintage vehicles borrowed from the preservation movement, extending the scheme the following year following initial receipts of, reportedly, £17000 (which seems high) in supplementary fares.⁶⁹ Later, a converted DMU driving car – and pictures suggest the driving position was left in situ – provided something of a budget version of the observation saloon for highland scenic lines. Converted with loose seating, public address and other comforts, it ran between Inverness and Kyle of Lochalsh from 1987; the supplement had now risen to £3 single.⁷⁰ A similar suggestion was made by ‘Railway Magazine’ correspondents for the Settle-Carlisle line where Sprinter stock’s higher sill level impaired the view downwards which they considered vital for a line traversing dales and valleys; they proposed larger windows overall and the use (again) of ex-DMU trailers.⁷¹ The observation car today is confined to luxurious special trains such as the ‘Royal Scotsman’ to mark their status and trains running on preserved railways which are often, of course, notably scenic routes.

1955), pp. 460-69; Jack Simmons, *The Railways of Britain: an Historical Introduction*, (1961; 2nd edn, RKP, London: Macmillan, 1968), p. 154.

⁶⁹ ‘Observation Coach Again on Kyle Line’ and ‘Kyle Observation Saloon Switch’, *The Railway Magazine*, vol.125 (1979), pp. 352, 405; ‘Saloon on West Highland this Summer’, *The Railway Magazine*, vol.126 (1980), p. 346.

⁷⁰ ‘Kyle Saloon’, *The Railway Magazine*, vol. 133 (1987), pp. 485, 621.

⁷¹ R. I. Hall and Hector Cole, ‘Sprinters Cannot be Right for the Settle & Carlisle’ (letters), *The Railway Magazine*, vol. 136 (1990), p. 548.

6 INFORMATION AND BEAUTIFICATION

The commemoration of tragic events provided the first occasions to inform passengers about the views they saw through the windows. A memorial tablet to William Huskisson, killed on the opening of the Liverpool and Manchester Railway in 1830, was erected at the site of the accident a year later.¹ Although looking in poor condition in 1958 a wooden lineside memorial to the 33 victims of the 1868 Abergele disaster existed at the site.² More recently, Michael Robbins recalls that a garden exists at the lineside near Clapham Junction as a memorial to those killed there in 1988.³

In 1937 the LNER began a programme of providing information with its ‘Across the Border’ signs to be seen as the train entered England/Scotland followed by a series of others giving distances, county boundaries and the like.⁴ Many of these remain today and have been added to, particularly in BR days when they were erected announcing distances to important stations such as nearing Liverpool Street, ‘London 3 Miles’. Perhaps the most frustrating versions – if the train were making a ‘pause’ – gave the distance to the station which had not *quite* been reached in yards rather than miles as, for example, at Stafford.⁵

¹ Gordon Biddle, *Britain's Historic Railway Buildings*, (Oxford: Oxford University Press, 2003), pp. 529-30; *The Railway Magazine*, vol. 126 (1980), pp. 146-47]

² A. W. V. Mace, ‘North Wales and the “Irish Mail”’, *The Railway Magazine*, vol. 104 (1958), p. 307.

³ Simmons and Biddle (ed), *The Oxford Companion to British Railway History*, p. 319.

⁴ ‘Across the Border’ and ‘Lineside signs’, *LNER Magazine*, vol. 27 (1937), pp. 370, 618.

⁵ John Hunt, ‘For Volume and Variety Go to Stafford,’ *Rail*, no 424 (December 2001), pp. 34-39.

The arrival at the station is a vital part of the stopped view – as despised by Tony Weller - and railways have had varying success in such information provision. As a result of complaints, in 1895 the BoT issued a circular to companies reminding them of the need to display station names so that they could be easily read.⁶ It had been one of the BoT's 'Requirements' since at least 1892 that boards and platform lamps should bear the name of the station.⁷ The legibility of station names has continued to be a problem, particularly at night; Ian Marchant claims the North London Line is a particular offender.⁸ Personal experience on an unfamiliar London route in the dark has shown the writer that the provision of names is inconsistent and often hard to spot. Simmons devotes space to the consideration of station names and accompanying lighting; he concludes that the best method – painted on a fluorescent-tubed box is the best; it is unfortunate that virtually all have disappeared.⁹ A modern architectural view is that clear 'wayfinding' reduces stress and frustration – another health impact – and giving directions verbally impacts upon staffing resources.¹⁰

A correspondent asked the rhetorical question, 'Why, as trains go faster, do BR station name boards get smaller?'¹¹ complaining that it is becoming harder to track one's progress by the passage of stations. The same question

⁶ Parliamentary Papers: 1895 [C.7775] *Station name-boards. Circular from the Board of Trade to the railway companies of the United Kingdom, and correspondence relative thereto.*

⁷ Board of Trade, *Requirements of the Board of Trade in Regard to the Opening of Railways*, (London: HMSO, 1892), para. 12.

⁸ Ian Marchant, *Parallel Lines or Journeys on the Railway of Dreams or Every Girl's Big Book of Trains*, (London: Bloomsbury, 2003), pp. 297-98.

⁹ Simmons, *Railways of Britain*, pp. 203-04.

¹⁰ C. Zimring, *The Cost of Confusion: Non-monetary and monetary cost of the Emory University Hospital wayfinding system*. (Atlanta: Georgia Institute of Technology, 1990).

¹¹ N. F. W. Dyckhoff, 'Name Board Diminution', (letter), *The Railway Magazine*, vol. 129 (1983), p. 246.

was raised years later when an informed reader was able to demonstrate with measurements that such a claim was true for his local station and others that names at forty five degrees stood the best chance of recognition from a moving train.¹²

Another element of information provided during the stop has been advertising. This proved controversial, in part leading to the formation of the Scapa Society in 1890 against advertising ‘disfigurement.’¹³ Dickens wrote:

‘...whereas the station walls, starting forward under the gas, like a hippopotamus’s eyes dazzled the human locomotives with the sauce-bottles, the cheap music, the bedstead, the distorted range of buildings where the patent safes are made, the gentleman in the rain with their registered umbrella, the lady returning from the ball with the registered respirator, and all their other embellishments.’¹⁴

And the ‘Punch’ cartoon was hardly an exaggeration judging from contemporary photographs of even quiet, rural stations (Figure 1).

¹² B. Neill, ‘Running-in Boards’; J. Carley and W. G. Benton, ‘As Trains Get Faster, Station Names Get Smaller’, (letters), *The Railway Magazine*, vol. 42 nos 1142 & 1144 (June & August 1996), p. 24 & p. 51.

¹³ Terry Nevett, ‘The Scapa Society: the First Organized Reaction against Advertising’, *Media, Culture and Society*, vol. 3 (1981), pp. 179-87; Richardson Evans, *The Age of Disfigurement*, (London: Remington, 1893).

¹⁴ Charles Dickens, *The Uncommercial Traveller; the Lamplighter; To Be Read at Dusk; Sunday Under Three Heads and The Lazy Tour of Two Idle Apprentices*, (1860, London: Chapman & Hall, *The Universal Edition of the Works of Charles Dickens*, 1914) p. 299.

(slight) possibility of extra traffic attracted by the displays and, apparently, the encouragement of pride in the enterprise by the staff.¹⁸

A special message was conveyed to passengers arriving at St Erth (junction for St Ives) by the growing of ‘palm’ trees on the station platforms to emphasize the mild climate of the Cornish Riviera at which the traveller had arrived, year-round mildness forming an important part of the GWR’s publicity which attracted passengers to ‘winter resorts’, reinforced by images of such trees.¹⁹

Bonavia also considers that the LNER’s ‘Brightening’ policy to create tidy lineside areas using grass, shrubs and flowers edged with concrete, especially at junctions which could easily become wasteland, provided an important boost to staff morale as well as creating the impression for the passenger that this was a well run, efficient company; this is very much the line taken in ‘Railway Magazine’ which thought ‘the atmosphere of orderliness they create is conducive to careful work.’²⁰ The ‘Magazine’ also noted that its benefits would particularly be felt by regular, local travellers and those who lived by the lineside.

¹⁸ Bernard Clark, ‘Railway Gardens’, *Backtrack*, vol.5 (1991) pp. 133-37.

¹⁹ Alan Bennett, *Great Western Lines and Landscapes: Business and Pleasure, Heritage and History*, (Cheltenham: Runpast, 2003), pp. 22-23, 29-30.

²⁰ Michael R. Bonavia, *The Four Great Railways*, (Newton Abbot: David & Charles, 1980), p. 137; ‘Concrete Work in the North-Eastern Area of the L.N.E.R.’, *The Railway Magazine*, vol. 76 (1935), pp. 346-50.

7 LIMITATION

As part of the study of the train window view it is necessary to examine occasions when railway companies have decided to restrict or completely obscure that view and why, either by circumstance or design.

What can actually be seen from the train depends to a greater or lesser extent on the country traversed. While a raised line on embankment or viaduct – as discussed in ‘Elevation’ – provides an opportunity to see farther, a line in tunnel or cutting – Tony Weller’s ‘brick walls or heaps o’ mud’¹ does not. The current controversy swirling around the proposed construction of HS2, a new line from London into the Midlands and North, is supposed to be partly neutralised by building more than half in tunnel or cutting, adding enormously to the cost.² This has not pleased one ‘Daily Telegraph’ reader who believes it would destroy his ability to appreciate the countryside; another contrasts the ‘intense’ scenes he perceived travelling by train with motorway views which were frequently blighted, he says, by the sides of cuttings.³ Ironically, the power of modern traction makes the levelling of a route today less important than in the nineteenth century; even so a line crossing upland territory such as that between Derby and Manchester had only twelve percent of its length in tunnel, although more was in cuttings of varying depth.⁴ One passenger, expecting continuous glorious views on the

¹ Jack Simmons (ed), *Railways: an Anthology*, (London: Collins, 1991), pp. 92-93.

² *Hansard*: HC Deb. 10 January 2012, column 25.

³ Neil Kershaw, ‘Pleasure of Seeing the Countryside from the Train, (letter), *The Daily Telegraph*, 11 September 2012; Rupert Nicholson, ‘Fleeting Delight of a Scene Framed by a Train Window, (letter) 15 January 2010, reproduced in Gavin Fuller (ed), *Leaves on the Line: Letters on Trains to ‘The Daily Telegraph’*, (London: Aurum Press, 2012), p. 236.

⁴ Calculation derived from S. N. Pike, *Mile by Mile on Britain’s Railways: the LNER, LMS, GWR and Southern Railway as they were in 1947*, (1947-48, Author; 2nd edn, London: Aurum Press, 2011). 7.3 miles in tunnel in a journey of 61.25 miles.

famously scenic Settle and Carlisle line, was disappointed that not only did it run in long cuttings but also lineside growth obstructed his outlook.⁵

Schivelbusch mentions the supposed Bavarian medical report of 1835 which predicted ‘delirium furiosum’⁶ as the consequence of the eye failing to process rapidly passing images, and which concluded that railways should be surrounded by high fences to avoid such disturbing results. Bernward Joerges shows that, although this passage was relied upon for generations, including by Adolf Hitler who used it to deride the opinions of ‘experts’, it did not actually exist.⁷ No such large-scale ‘protection’ was ever undertaken although the provision did exist in an Act of 1845 for the erection of screens alongside the railway in a case where the highway provider feared trains might frighten horses on the road.⁸

Tunnels were ever controversial, as well as expensive to construct and early passengers were suspicious of them. The idea that tunnel mouths were constructed with, for example, castellated or otherwise fortress-like entrances in order to reassure apprehensive approaching passengers by their visually implied strength has been suggested by, for example, Matthew Gloag and Hamilton Ellis, hesitatingly supported by Tim Warner.⁹ Although attractive, the argument is not always convincing. For one thing, relatively few tunnels had more than plain entrances, as Alan Blower’s book shows.¹⁰ One of the

⁵ ‘Travellers Tales’, *Modern Railways*, vol. 41 (1984), p. 610.

⁶ Schivelbusch, *The Railway Journey*, p. 202, fn 1.

⁷ Bernward Joerges, ‘Expertise Lost: an Early Case of Technology Assessment’, *Social Studies of Science*, vol. 24 no. 1 (1994), pp. 96-104.

⁸ 8 & 9 *Vict c. 20*, Sections 63-64.

⁹ John Gloag, *Victorian Taste: Some Social Aspects of Architecture and Industrial Design, from 1820-1900*, (London: A. & C. Black, 1962) pp. 111-16; C. Hamilton Ellis, *British Railway History; an Outline from the Accession of William IV to the Nationalisation of Railways, Volume 1 1830-1876*, (London, Allen & Unwin, 1954), Plate 21 & p. 421; Tim Warner, ‘Monstrous Cavities: Victorian Fear and the Railway Tunnel’, *Backtrack*, vol. 3 (1989), pp. 226-29.

¹⁰ Alan Blower, *British Railway Tunnels*, (Shepperton: Ian Allan, 1964).

earliest, Tyler Hill on the 1830 Canterbury and Whitstable Railway, was a great novelty and might be expected to have deserved something to bolster nervous passengers' confidence. But both entrances were quite plain.¹¹ This tunnel quickly earned a reputation for unpleasantness, leading the company to provide closed first class coaches from 1832-1836; the editor of Herapath's *Railway Magazine* reporting that '...few will venture into it...the railway consequently carries scarcely any passengers'.¹² A later editorial reveals a degree of prejudice against them when Herapath summarised a series of medical reports which concluded that tunnels represented no danger to travellers as 'twaddle'.¹³ An 1846 traveller reported that to avoid 'a feeling of suffocation' the company advised him – to its advantage, of course – to travel first class so that he could shut the windows.¹⁴ In evidence for the Brighton Railway Bill in 1836 a doctor stated that, when travelling through Tyler Hill, the carriage's material blinds were inadequate to prevent '...the strongest wind that I witnessed in my life; it produced a catarrh .. [which] ... lasted about two hours.'¹⁵ The doctor, too, wished for windows of glass which, while passing through a tunnel, ceased to be an opening into the world, but were transformed into a protective barrier against the unknown. It does seem that, in some cases, traversing a tunnel induced feelings akin to panic and, no doubt, the traveller sometimes longed for the view to reappear.

But how many passengers must have been disappointed having anticipated an exciting view as their train traversed the Britannia Bridge over the Menai

¹¹ Brian Hart, *The Canterbury and Whitstable Railway*, (Didcot: Wild Swan, 1991), pp. 96, 98.

¹² John Herapath, 'On the Laying Out of a Railway', *The Railway Magazine and Annals of Science*, vol. 1, New Series, (1836), p. 54.

¹³ John Herapath, 'Reports on Tunnels', *The Railway Magazine and Annals of Science*, vol. 2, New Series, (1837), pp. 257-63.

¹⁴ Hart, *The Canterbury and Whitstable Railway*, pp. 21-22, 34.

¹⁵ 'Brighton Railway Bill: the Evidence Against Tunnels', *The Mechanics Magazine, Museum, Register, Journal and Gazette*, vol. 25 (1836), pp. 326-35.

Straits? They would be those unaware that Robert Stephenson had chosen a wrought iron tubular structure to meet the design challenges of height and span, thus turning the passenger's experience into an aerial tunnel with no view; a fact somewhat avoided in the LMS route guide to scenes from the train.¹⁶ As some measure of compensation and no doubt to impress him with the magnificence of the enterprise, the passenger was rewarded with the sight of a pair of massive stone lions at each end of the tubular passage. Ironically, following the fire of 1970 the bridge was rebuilt with steel arches, thus providing the railway passenger with the view over the Menai Straits which had been long denied. But a road deck was later constructed over the railway line, recreating a tunnel in part and at the same time obscuring the guardian lions completely from the view of the road and partly for the rail traveller.¹⁷

Of necessity the smaller train lavatory window, sometimes of a contrasting shape, has been developed to provide light without vision, the glass obscured. That this is not an inviolable rule worldwide is demonstrated by Eric Newby who, in the course of his 1977 Trans-Siberian journey, looked from his compartment directly into the toilet of a train on the adjacent track carrying Red Army soldiers who, as a continuous stream of occupants, demonstrated that they all dressed commando-style.¹⁸ Pullman was different, often displaying leaded, stained glass in its lavatory (surely not toilet) windows. That curious might-have-been of the 1930s, the George Bennie 'Railplane', had a similar visual definer of pedigree. Since its Milngavie test track only extended a few hundred feet the Railplane had no need of a toilet

¹⁶ *The Track of the Irish Mail: Euston to Holyhead*, (London: LMSR, 2nd edn 1947), p. 62.

¹⁷ John Rapley, *The Britannia & Other Tubular Bridges and the Men who Built Them*, (Stroud: Tempus Publishing, 2003), p. 60.

¹⁸ Eric Newby, *The Big Red Train Ride: A Ride on the Trans-Siberian Railway*, (1978; 2nd edn, Harmondsworth: Penguin, 1980), pp. 221-22.

but the entrance/exit doors were fitted with leaded lights which would have been a singularly inconvenient arrangement for any passengers awaiting to alight at their station.¹⁹ William Black quotes from a contemporary article:

The door, with its tasteful stained-glass oval window, slides noiselessly back and we enter a wonderfully appointed long coach ... table lamps are ... on semi-circular ledges between the chairs.²⁰

The leaded lights with their Pullman associations emphasized the ‘club’ atmosphere of the Railplane, along with its armchairs and table lamps but, as Malcolm Thwaite comments, the dated impression they conveyed, although luxurious, was far from the futuristic image the vehicle’s engineering – including its smoothly sliding doors, often used as a trope for the ultra-modern – was intending to establish.²¹ Heavy furnishing was also in contrast to the use of lightweight Duralumin, borrowed from airship technology, as construction material. It seems from published descriptions, and surviving Railplane publicity, that there was little or no attempt to exploit the vehicle’s raised position which could provide an enhanced, or at least different view. However, at the 1930 test track opening, largely ignored by the national press, a local reporter immediately saw the potential of its elevation: ‘Sitting high above the surrounding country one got a magnificent view ... and at once realised the tremendous possibilities this system of transport will have for sightseers in a country like Scotland.’²² The LNER poster strikes a curious visual note, the prominent, bright colours of the stained glass

¹⁹ *The George Bennie Railplane System of Transport*, publicity brochure issued on the opening of the test track, 8 July 1930 and available online <http://www.nas.gov.uk/about/091210.asp> [accessed 19 February 2012].

²⁰ William B. Black, *The Bennie Railplane*, (Kirkintilloch: East Dunbartonshire Information & Archives, 2004), p. 19.

²¹ Malcolm Thwaite, ‘The George Bennie Railplane and Hugh Fraser Airrail Systems of Transport’, *Transactions of the Newcomen Society*, vol. 75 (2005), pp. 37-84.

²² *Milngavie and Bearsden Herald*, 11 July 1930.

suggesting the Railplane conveyed neither lavatory, nor even a miniature buffet as operated by BR in the 1960s-70s but a miniature chapel.²³

By definition Underground railways should provide few opportunities for window views, a position well illustrated by ‘Punch’ in 1909 (Figure 7.1). The first underground lines were constructed on the cut-and-cover principle and, close to the surface, had opportunities for stretches of open-air, if restricted-view, running. A ‘Railway Magazine’ article – with suitably paradoxical title – describes what can be seen even on such a journey: ‘a surprising number of well-known buildings ...thanks to the frequent openings provided to let smoke and steam escape in the days before electrification...’²⁴ The lack of view on the sections actually in tunnel, turning them into ‘non-places’ is underlined by the spacing of stations on the diagrammatic map

²³ Beverley Cole, *It's Quicker by Rail: LNER Publicity and Posters, 1923 to 1947*, (Harrow: Capital Transport, 2006), p. 47.

²⁴ J. G. Gibbons, ‘Sightseeing on the Inner Circle’, *The Railway Magazine*, vol. 96 (1950), pp. 483-85.



Figure 7.1

A Bright Outlook

Mother (in the Tube), “Stop fidgeting, ‘Orace, - or you shan’t look out of the window!”

Source: *Punch or the London Charivari*, vol. 137 (11 August 1909), p. 91.

without reference to distance. In other words, the spaces in between stations are ‘non-places’, the journey is simply time, and lack of outlook makes distance irrelevant.²⁵ This is one of the fundamentals of Harry Beck’s underground map and of those that have followed it. This ‘deception’ appears quite logical in the central area, that part most frequented by the unfamiliar visitor and where stations are closest together. In its more far-flung parts the system is mostly used by those more familiar with the journey

²⁵ Janin Hadlaw, ‘The London Underground Map: Imagining Modern Time and Space’, *Design Issues*, vol. 19 (Winter 2003), pp. 25-35.

and the deception, where the map becomes simply short-hand, is thereby of less consequence.

Following the early cut-and cover lines the London underground expanded with the 'tubes', beginning with the City and South London Railway. Most accounts²⁶ comment on the restricted view afforded by the original so-called 'padded cell' coaches. This was, of course, another allusion to hospital, specifically asylum architecture; such rooms were introduced during the mid nineteenth century to prevent psychotic or violent patients harming themselves and as a humane alternative to more physical restraints. Apart from its leather/horsehair padding the room's essential feature was seclusion, including the lack of any view out through its high windows.²⁷ It is supposed that these vehicles were designed on the basis that there was nothing for passengers to look at and such an arrangement allowed higher-backed, and thereby more comfortable, seating. Bownes, Green and Mullins, in their new Underground history, add to the general impression given by the nickname that the coaches were unpopular, evidence being first that they were not perpetuated and second that the windows apart from being small and high up were also opaque.²⁸ Andrew Martin quotes from a London Transport Museum source that the windows were originally clear and were changed to opaque glass because 'passengers had found the view of the passing tunnel rings disturbing'.²⁹ Supporting this idea, the Museum's exhibit shows that

²⁶ For example: Alan A. Jackson, *Rails Through the Clay: a History of London's Tube Railways*, (London: Allen & Unwin, 1962), pp.50-51; Andrew Martin, *Underground Overground: a Passenger's History of the Tube*, (London: Profile Books, 2012), pp. 102-03.

²⁷ F. Oppert, *Hospitals, Infirmaries and Dispensaries: their construction, Interior Arrangement and Management*, (London: Churchill, 1883), p. 75.

²⁸ David Bownes, Oliver Green and Sam Mullins, *Underground: How the Tube Shaped London*, (London: Allen Lane, 2012), p.68.

²⁹ Andrew Martin, *Underground Overground: a Passenger's History of the Tube*, (London: Profile Books, 2012), p. 103.

the windows were almost at eye-level for a sitting passenger. Barker also comments that – an operational handicap – it was necessary to announce the intermediate stations because names could not be seen.³⁰ But, in designing for a new situation where there really was nothing to see other than the tunnel walls, the C&SLR was merely emulating the earlier Tower Subway, a cable-hauled single car operating beneath the Thames briefly from 1870 which, from contemporary illustrations, had no windows at all.³¹ Its mistake was to ignore that crucial time - Revill's stop - when passengers had to re-engage with the outside world at the station but were frustrated by the lack of a view.

Dr Ian Allen writes about the Southwold Railway from personal experience. Despite the opportunities for glorious views on what must have been a particularly attractive journey Allen complains that, since the seating was longitudinal and the line narrow-gauged, he was 'bitterly disappointed' both that the outlook was obscured by the passengers opposite and by the poor legroom.³² The 'Halesworth Times', took a different position, praising the 'airy and capacious' carriages and remarking that open stock could 'revolutionise our present stupid and, to unprotected females and sometimes males, dangerous system of railway travel'.³³ Longitudinal seating in underground trains is also criticised by J. C. Gillham: 'on long journeys out to Ruislip or Epping it is a major nuisance for passengers not being able to look

³⁰ Theo Barker, *Moving Millions: a Pictorial History of London Transport* ,(London: London Transport Museum, 1990), pp. 58-59.

³¹ Reproduced in: Charles E. Lee, 'The first Tube Railway', *The Railway Magazine*, vol. 89, (1943), pp. 334.

³² Ian C. Allen, *55 Years of East Anglia Steam*, (Oxford: Oxford Publishing Co, 1982), plate 33.

³³ A. Barrett Jenkins, *Reminiscences of the Southwold Railway*, (4th edn, Southwold: F. Jenkins, 1970), p. 11.

out of the windows.’³⁴ The contrasting positions are shown by two of Cyril Edward Power’s linocuts, ‘The Tube Train’ (1934) which has no view at all and ‘Sunshine Roof’ (1934) of a motor coach with all-round views (Figure 7.2).

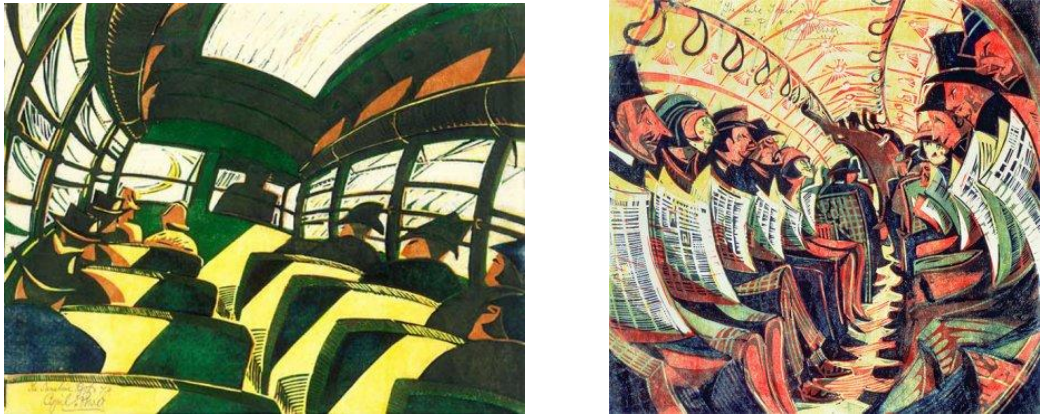


Figure 7.2

‘Sunshine Roof’ and ‘The Tube Train’

Source: <http://www.bookroomartpress.co.uk/store> [accessed 17 December 2012]

Newer underground stock has been more generous with its provision for view. This trend began soon after World War Two when Graff-Baker, the Chief Mechanical Engineer for London Transport, experimented with a design which would enable standing passengers to see the station names without having to stoop, the antithesis of the 1890 C&SLR philosophy. This The windows extended upwards and the experimental train was ironically dubbed the ‘sunshine’ or ‘vista’ stock; unfortunately the extra cost was thought prohibitive.³⁵ But from the Victoria Line stock design of 1968 all

³⁴ J. C. Gillham, *The Waterloo & City Railway*, (Usk: Oakwood Press, 2001), p. 389.

³⁵ ‘Rolling Stock for London Transport’, *The Railway Magazine*, vol. 96 (1950), pp. 88-91; Paul Moss, *Underground Movement*, (Harrow Weald: Capital Transport Publishing, 2000), pp. 98-104.

London underground trains have had their doors' glazing extended upwards to the obvious convenience of passengers.³⁶

Wartime restricted the view from the train for reasons of operational safety rather than geography. With the First World War came the prospect of air attack. Reduced lighting in shops, streets and vehicles was already in force by October 1914 when F. G. Kellaway MP proposed in a letter to 'The Times' that trains should follow suit; his strategic point was that lighted trains at night indicated the layout of railway lines making them vulnerable to bombing; of course the individual train was in danger too.³⁷ Gradually, measures were introduced to limit the visibility of trains from the air which also had the effect of restricting the passengers' views.³⁸ In the Second World War efforts were taken to enforce the 'black-out' immediately, since the threat of aerial bombardment was much greater in 1939. Dim lighting and drawn blinds were ordered in passenger trains and the problem of finding the right station, particularly when station names had to be less than prominent, was significant according to Bernard Darwin's wartime history of the Southern Railway.³⁹ Dark conditions led to a surprising outbreak of vandalism and many train windows were damaged by this – 25000 in 1943⁴⁰ – as well as bomb blast which by then affected a third of the total stock and

³⁶ 'London Transport's new Victoria Line Tube Stock', *Modern Railways*, vol.24 (1968), pp. 184-88.

³⁷ F. Kellaway, 'Attack By Air', *The Times*, 19 October 1914.

³⁸ Edwin A. Pratt, *British Railways and the Great War, Volume 1*, (London: Selwyn and Blount, 1921), pp. 387-9.

³⁹ Bernard Darwin, *War on the Line: the Story of the Southern Railway in War-Time*, (London: Southern Railway Co, 1946), pp. 150-53.

⁴⁰ *House of Commons Hansard*, 18 January 1944 c. 52.

must have included many windows.⁴¹ But it was worse in post -1945 Germany when many trains ran windowless, using ‘ersatz glass ... which maddeningly distorts the view’, or else windows simply boarded up.’⁴²

In 1949 limited views produced one of the greatest controversies in railway coach design, the ‘Tavern’ cars designed by O. V. S. Bulleid. The aesthetic question centered around the fake half-timbered design leading to a protest letters in ‘The Times’ from both the artistic great and good and a group of MPs.⁴³ Others drew attention to the very limited outlook from the new stock, particularly the first class restaurant which arranged diners facing each other longitudinally with no view out at all. An article in ‘Railways’ highlighted the press campaign against them from passengers on the ‘Master Cutler’ route. On his journeys, however, Paul Jennings found the Tavern cars more popular than he expected.⁴⁴ The matter reached Parliament, taken up by the colourful MP, Tom Driberg, who led the debate with the press controversy and his correspondence with Lord Inman of the Hotels Executive who, as former secretary of Charing Cross Hospital, knew a thing or two about health, windows, ventilation and views, but who blamed others for this design. James Callaghan, Transport Minister, agreed with Jennings that, whatever the aesthetes thought, Taverns had proved popular.⁴⁵ John

⁴¹ R. Bell, *History of the British Railways During the War 1939 – 45*, (London: The Railway Gazette, 1946), p. 57; D. L. Munby, *Inland Transport Statistics Great Britain 1900-1970, Volume 1*, (Oxford: Oxford University Press, 1978), p. 124.

⁴² ‘Travel Conditions in Germany’, *Railway Magazine*, vol. 92 (1946), p. 252.

⁴³ Leigh Ashton et. al.; Ashley Bramall MP et al., ‘Taverns on Wheels’, (letters), *The Times*, 30 May 1949; 4 June 1949.

⁴⁴ J. S. Plaut, L. A. Hart and R. A. C. Radcliffe, ‘Taverns on Wheels’, (letters), *The Times*, 8 June, 9 June, 14 June 1949; P. M. Hobley, ‘Tavern Cars’, *Railways*, vol. 10 (1949), p. 191; ‘Taverns on Wheels’, *Trains Illustrated*, vol. 2 (1949) pp. 86-87; Paul Jennings, ‘Oddly Enough’, *The Observer*, 22 January 1950.

⁴⁵ *Hansard*: HC Deb 27 June 1949 cc935-46; Philip Inman, *Oil and Wine*, (London: Chapman and Hall, 1934).

Elliot reveals that they were produced solely on Bulleid's authority and that, once Missenden (Railway Executive Chairman) had ridden in one, he ordered their rebuilding with proper windows.⁴⁶ It may be that Bulleid – always unconventional – thought that he could harness the novelty, perhaps even appeal, of producing something normally static (a pub) that moved (the train), a similar idea to that explored in the use of camping coaches where something normally mobile remained static. This could explain the reasoning behind the limitation of the view out in that it reinforced the illusion that the 'pub' was static.

A previous Bulleid design, the 'Bognor Buffet' of 1938 had already attracted criticism for the same reason, that there were no windows, and it may be that this was an attempt to emulate the success of the US 1935 'Hiawatha' trains' 'Tip Top Tap' room which was equally windowless but which contributed significantly to the train's takings.⁴⁷ One possible explanation for the use of all these limited-view catering vehicles, which must have provided dull working conditions too, is given by Neil Wooler, who became Public Relations officer for BR's Travellers-Fare. He describes the high level openings as 'discretionary windows' similar to the one-time customary use of obscured glass in pubs, to conceal both who might be drinking inside and an interior which could appear too inviting.⁴⁸

Many think conventional window views began to deteriorate with the introduction of the BR Mark 2D coach in 1971. They were the first air-conditioned stock to appear in numbers and the depth of windows, which were bronze-tinted, was reduced 'to mitigate visual discomfort or hypnotic

⁴⁶ Sir John Elliot, *On and Off the Rails*, (London: Allen & Unwin, 1982), pp. 38-40.

⁴⁷ Jim Scribbins, *The Hiawatha Story*, (Waukesha WI: Kalmbach Books, 1990), pp. 28, 36.

⁴⁸ Neil Wooler, 'Tavern Cars', (letter), *Backtrack*, vol. 7 (1993), p. 160.

effect ...of near-lineside objects'.⁴⁹ A persistent critic of BR rolling stock was Henry Law. He wrote that, the 'minute' windows and high sills 'cut the passenger off from the countryside'.⁵⁰ In fact BR's 1963 Design Centre mock-ups presaged wider windows (good) but face-to-back seating (bad).⁵¹ Correspondents were predictably sceptical; L. A. Mack was the first of many to dislike the face-to-back experiment, pointing to the formality of such an arrangement – 'all look at teacher!' His prescient words are worth quoting at length not least for indicating exactly how face-to-back seating interferes with the view compared to face-to-face arrangements:

The external view ... is seriously restricted by the presence of the seat unit in front. It was also evident that the lack of consideration of the essential relationship between seat and window had resulted in further destruction of the view by that part of the bodyside between the windows, for at least one of these seats ... coach or aircraft-type seating ... is relevant only to circumstances where the vehicle is always travelling in the same direction, where the view is nondescript or non-existent (or in other words, not worth viewing) ...⁵²

This became a continuing issue with the introduction of the Mark 3 coach. In Terry Miller's paper, delivered long before the coach entered service, he is quite clear that the priority was the reduction of weight per passenger, to be achieved by increasing passenger capacity. Necessarily, therefore, comfort would be compromised and the design was apparently adopted in order to break the link between seating and window spacing so that – as has happened – further seating could be squeezed into the coaches. He

⁴⁹ 'Air-conditioned Coaches Enter service on BR, *Modern Railways*, vol. 28 (1971), pp. 118-21.

⁵⁰ Henry Law, (letter), 'Mark IID Coaches Disappoint, *Modern Railways*, vol. 28 (1971), pp. 219-20.

⁵¹ Brian Haresnape, 'New BR Carriage to compete for the long-distance passenger', *Modern Railways*, vol. 17 (1963), pp. 163-72.

⁵² L. A .Mack, 'The Carriage of the Future', (letter), *Modern Railways*, vol. 17 (1963), p. 358.

envisaged that increasing capacity to 80 was feasible, and, by implication, ultimately desirable – for the train operator, that is. Since Miller was BR's Chief Engineer (Traction and Rolling Stock) at the time, his words are significant as well as prophetic:

... one body structure being applied for the alternative vehicle layouts for first-class and second-class seating. The window spacings which will give maximum window width will be suitable for 1st class compartment or saloon seating layout and when this vehicle body is applied to second-class coaches, seat positions will be arranged irrespective of window position and hence the advantages or otherwise of uni-directional seating will be explored. Uni-directional seating does, in fact, permit an increase in seats from 72 to 76 uni-directional or even to 80 seats with complete uni-directional arrangements. Prototype vehicles authorised for construction will permit adjustment of seating to evaluate the alternatives mentioned.⁵³

'Modern Railways', which later criticised uni-directional seating and the consequent loss of view, took a more passenger-unfriendly stance early in the Mark 3's evolution. In 1970 it airily dismissed what has become a persistent complaint: '... there is probably a regular percentage of passengers that prefers to be away from a window position.'⁵⁴ By 1975, a year before the coach entered regular service, its opinion had mellowed: '... in practice no second-class passenger is without a reasonably good view of the passing scene'⁵⁵ and Ossie Nock was equally emollient: '...as the windows are ... large picture type [it]... is not displeasing.'⁵⁶ The railway press regularly rumbled with readers' complaints: high sills too allegedly prevented children having

⁵³ T. C. B. Miller, 'Towards Higher Speed', *The Institution of Mechanical Engineers Railway Division Journal Volume 1 (part 2) 1970*, pp. 628-63.

⁵⁴ 'BR Orders Mk III Coach Prototypes', *Modern Railways*, vol. 26 (1970), pp. 434-35.

⁵⁵ 'British Rail Mk III Coaches in Production at Derby', *Modern Railways*, vol. 32 (1975), p. 108.

⁵⁶ O. S. Nock, *Two Miles a Minute: the Story Behind the Conception and Operation of Britain's High Speed and Advanced Passenger Trains*, (1980; 2nd edn, Cambridge, Patrick Stephens, 1983), p. 75.

any view out at all and Henry Law complained again on the misalignment of seats, sill height and general claustrophobia.⁵⁷ He was still writing such complaints in 1996, when railway historian Robert Forsythe also wondered why engineers did not listen to the railways' customers.⁵⁸

In 1985 the Mark 3's standard class seating was increased from 72 to 76 (as forecast by Miller) although it was tried to minimise the placing of seats opposite pillars.⁵⁹ But in increasing the number of seats the proportion at tables dropped significantly and it is the combination of face-to-back together with unsynchronised windows that significantly reduces the view. In 1989 Roger Ford acknowledged that unsynchronised window/seat spacing was a feature of the Mark 3 that 'really irritates travellers' and praised the new Mark 4's ingenuity which gave each row of seats 'a reasonable window view'.⁶⁰ More recent trains have not improved. Peter Fox draws attention to the 'Meridian' trains where, even in first class, although seat and window spacing matches, they are not necessarily aligned.⁶¹ Virgin's 'Pendolino' seems to aspire to aircraft design, perhaps betraying its transport parent company's airline roots. The shallow windows and wide pillars contribute to a cramped feeling inside the train and, combined with the usual mostly unidirectional seating, mean that even more passengers have a

⁵⁷ J. M. Bearpark, 'HST Windows', *The Railway Magazine*, vol. 125 (1979), p. 602; B. I. Nathan, 'Window Views', (letter), *The Railway Magazine*, vol. 126 (1980), p. 147; Henry Law, 'Mk 3 design', *Modern Railways*, vol. 37 (1980), p. 277; Jonathan Buisson (letter) 'Class 220s need more luggage space', *Rail*, No 424 (December 2001), p. 40; M. P. Wadman (letter), 'Forced to Use First Class!' *Rail*, no. 208 (1993), p. 37.

⁵⁸ Henry Law, 'Multiple unit of the future: styling gimmickry of the worst sort'; Robert Forsythe, 'Train styling and design is no gimmick: it's more important than ever', (letters), *The Railway Magazine*, vol. 142 no. 1139 (March 1996), p. 62; no. 1140 (April 1996), p. 67.

⁵⁹ 'Mk III "Face-lift"', *Railway Magazine*, vol. 131 (1985), p. 92.

⁶⁰ Roger Ford, 'InterCity 225 – Making the Mk 4', *Modern Railways*, vol. 46 (1989), pp. 512-20, 543-44.

⁶¹ Peter Fox, 'Success for World's First Railway Interiors Exhibition', *Entrain*, No. 38 (February 2005), p. 23.

restricted view than in older designs. On the train's introduction 'Entrain' pointed out that some seats have no view out at all but praised the sill level.⁶² John Balmforth's book is largely a public relations exercise on behalf of Virgin Trains but even he has to admit the train's interior leaves something to be desired: 'many passengers missed the table-plus-four seating layout of the older trains, which they felt had better seat spacing and window views.' His somewhat lame justification is that, 'it cannot be denied...that the Pendolinos have been a huge success.'⁶³ At the 2004 Railway Interiors Expo 'comfortable seats that line up with windows' was listed as customers' top priority in an address that called for customer-led design⁶⁴; this was echoing what David Bertram had said in 'Entrain' in 2002⁶⁵ and what prompts Letherby and Reynolds to say that, 'despite their concern to sell the scenery ...train operating companies make it almost impossible to indulge in the tourist "gaze".'⁶⁶

Cleanliness of windows crops up regularly as a source of complaint although whether dirt is as thick as passengers protest is debatable.⁶⁷ Peter Parker, BR Chairman, declared 1977 to be the 'year of the clean window' but some would argue that initiative needs repeating every year.⁶⁸ A prescient 1963 letter said the window was 'the means by which the railways show their

⁶² Andy Flowers, 'Virgin Launches the Pendolino', *Entrain*, No. 1 (January 2002), pp. 10-12.

⁶³ John Balmforth, *Virgin Trains: from HST to Pendolino*, (Hersham: Ian Allan, 2012), p. 10.

⁶⁴ Fox, 'Success for World's First Railway Interiors Exhibition', p.23.

⁶⁵ David Bertram, 'Speaking for the Passenger', *Entrain*, no.7 (July 2002), pp. 42-44.

⁶⁶ Letherby and Reynolds, *Train Tracks*, p. 122.

⁶⁷ E. K. P. Back, 'Cleanliness of Rolling Stock' (letter), *Modern Railways*, vol. 17 (1963), p. 431.

⁶⁸ Christopher Thomas, 'Warning by rail chief on investment restraint', *The Times*, 14 July 1977.

superiority... over private cars and aeroplanes' and 'criticism and hostility' would result if they were neglected.

8 ELEVATION

Only a few railways have been constructed specifically for people to enjoy a view and even those had some hopes of goods traffic. For example, the Snowdon Mountain Railway, opened in 1896, sought to capitalise on the growing tourist interest in Snowdonia generally by attracting passengers who would not otherwise visit the mountain but it also carried a tiny amount of goods. A destination devoted to the mountaintop view as well as a scenic journey provide its railway *raison d'être*. For that reason, should the weather at the summit be unsuitable for sightseeing, trains do not run because there would then be little point in making the journey. The coaches were generously provided with windows, originally without glass to reduce wind resistance but later glazed.¹ A line built for similar reasons is the Snaefell Mountain Railway on the Isle of Man.

One other specialised railway deliberately sought to attract traffic by cultivating the view from its trains as spectacle. But this was in no rural idyll blessed with scenic glories for the 1893 Liverpool Overhead Railway (LOR) was a strictly urban industrial line. It occupies an important place in railway history because it pioneered the principles of multiple unit operation and automatic electric signalling vital for future urban railways.² This was the only true 'overhead' railway operated in Britain; part of the London, Brighton and South Coast's South London line was at one time marketed as the 'Elevated Electric' since it was mostly built on viaduct, as the London

¹ John Partington, 'The Snowdon Mountain Railway', *The Railway Magazine*, vol. 1 (1897), pp. 556-59; Keith Turner, *The Snowdon Mountain Railway*, (Stroud: Tempus, 2001), pp. 139-43.

² Gordon Woodward, 'The Liverpool Overhead Railway: Innovation in Engineering', in Paul Rees (ed), *The Liverpool Overhead Railway. Papers Presented at a Research Day School Organised Jointly by the National Museums and Galleries on Merseyside and the University of Liverpool*, (Liverpool: Merseyside Maritime Museum, 1993), p. 80.

and Greenwich had been, but its view was not considered a visitor attraction and the name was a simple alliterative ‘branding’ more to draw attention more to its modern motive power.³ In contrast, the LOR early – from at least 1896 – appreciated the attraction, and developed it as a unique selling point, of the view it provided of the Liverpool dock scene and the ships in port revealed by its eponymous situation.⁴ For reasons of security against pilferage and smuggling the docks were largely cut off from public view by walls (which had at one stage been considered for their suitability as the railway’s support) and warehouses; the line’s high viewpoint thus revealed what lay beyond these barriers.⁵ This attraction was equally facilitated by the port geography which comprised a series of enclosed docks at right angles to the east bank of the River Mersey, the heads of which were closely paralleled by the LOR, a layout best appreciated by studying a map.⁶ The magnificence of this industrial scene was keenly appreciated by the LOR which capitalized upon Liverpool’s importance and the spectacle of the (largely) British mercantile marine in trading action. A contemporary non-technical work on electric railways remarked that, ‘...a splendid view is obtained of the busiest locality perhaps in the Empire’⁷ and a ‘Railway Magazine’ article, ostensibly

³ R. H. G. Thomas, *London's First Railway: the London & Greenwich*, (London: Batsford, 1972); Geoff Goslin, *London's Elevated Electric Railway: the LBSCR Suburban Overhead Electrification 1909-1929*, (Colchester: Connor & Butler, 2002); G. T. Moody, *Southern Electric: the History of the World's Largest Suburban Electrified System*, (London: Ian Allan, 1957), p. 7.

⁴ Les Roberts, ‘Dis/embedded Geographies of Film: Virtual Panoramas and the Touristic Consumption of Liverpool Waterfront’, *Space and Culture*, vol. 13 (1), (2010), Figure 1, p. 60.

⁵ Nancy Ritchie-Noakes, *Liverpool's Historic Waterfront: the World's first Mercantile Dock System*, (London: Royal Commission on Historical Monuments, HMSO, 1984), p. 12; Adrian Jarvis, *Portrait of the Liverpool Overhead Railway*, (Shepperton: Ian Allan, 1996), p. 15.

⁶ For example: C. E. Box, *The Liverpool Overhead Railway 1893-1956*, (1959; 2nd edn London: Railway World, 1962), opp. p.20; W. Hadfield Craven, ‘The Liverpool Overhead Railway’, *The Railway Magazine*, vol. 70 (1932), pp. 402-10.

⁷ Arthur H. Beavan, *Tube Train, Tram and Car or Up-to-date Locomotion*, (London: Routledge, 1903), p. 28.

devoted to the line's history and engineering, allocated significant space to a detailed description of the shipping and dock working to be seen.⁸ Paul Bolger includes a taste of the scenes visible from the trains in a series of photographs in his book on the line.⁹ It is surely no coincidence that one of the earliest films shot on a British railway – actually a series of four spliced together – by Alexandre Promio, roving cameraman employed by cinema's pioneering Lumière brothers, features several minutes' view from an 1897 LOR window as the train parades through and above the dock estate.¹⁰ This film is equally renowned as one of the first examples of cinematography's 'tracking shot' because Promio took advantage of the train's motion to give movement to a scene which is mostly static, although it is more strictly accurate to describe a tracking shot as something that cinematographically imitates what Promio was actually filming.¹¹ Curiously, this important example of a railway as film subject/medium is not referred to by Lynne Kirby but is given its place by Patrick Keiller and Les Roberts.¹² Keiller incidentally argues that the film implicitly contrasts the technological progress demonstrated by the combination of electric overhead railway (the world's first) and cinema with the shipping which is plainly stuck at least as much in the sailing era as the steam age. The view from the LOR was

⁸ W. Hadfield Craven, 'The Liverpool Overhead Railway', *The Railway Magazine*, vol 70 (1932), pp. 403-10.

⁹ Paul Bolger, *Liverpool Overhead Railway*, (Liverpool: Bluecoat Press, 1997), pp. 30-53.

¹⁰ *Panoramas Pris Du Chemin De Fer Électrique I-IV*, [On line] http://www.youtube.com/watch?v=_i5ApsjD46o [accessed 11 March 2012]; John Huntley, *Railways on the Screen*, (Shepperton: Ian Allan, 1993), p.103.

¹¹ Leslie J. Wheeler, *Principles of Cinematography: a Handbook of Motion Picture Technology*, (1953; 4th edn, London: Fountain Press, 1969), p. 73.

¹² Lynne Kirby, *Parallel Tracks: the Railroad and Silent Cinema*, (Exeter: University of Exeter Press, 1997); Roberts, 'Dis/embedded Geographies of Film', pp. 58-62; Patrick Keiller, 'Phantom Rides: the Railway and Early Film', in Matthew Beaumont and Michael Freeman (ed), *The Railway and Modernity: Time, Space and the Machine Ensemble*, (Bern: Peter Lang, 2007), pp. 73-75.

enhanced not only by the line's elevated location but also by an unusual and early example of the forward view (see 'Augmentation') provided by the first trains' design, as pictured Figure 8.1 (left); this feature was not perpetuated beyond the initial batch. A surviving colour film shows the course of the railway from this different perspective.¹³ Roberts points out



Figure 8.1

Liverpool Overhead Railway Posters, c. 1900-1910

Source: <http://www.scienceandsociety.co.uk/> [accessed 7 January 2013]

that the sight-seer's experience also involved participation in the 'vibrant social space' created by the mix of travellers including dock and ship workers.¹⁴ The railway attracted passengers specifically for its view by a series of posters (Figure 8.1), as well as by advertisements on the line's structure, principally at Pier Head station and the bridge crossing James

¹³ Jarvis, *Portrait of the Liverpool Overhead Railway*, p. 60; James Henry Greathead and Francis Fox, 'The Liverpool Overhead Railway', *Minutes of the Proceedings of the Institution of Civil Engineers*, Part 3 vol. 117, no. 1894, (January 1894), pp. 51 – 70, Plate 6, Figs 11-12; [On line] <https://www.youtube.com/watch?v=M9niD7rvx4Y>, accessed on 7 December 2012.

¹⁴ Roberts, 'Dis/embedded Geographies of Film', p. 58.

Street.¹⁵ Some of the posters exhibit the usual exaggerated 'low-flying' perspective, in Figure 8.1(left)'s case implying an elevation many times greater than the LOR's standard sixteen feet.¹⁶ Nitka considers that the view from the train distorts proportions and quotes from Thackeray who described people and cows appearing the size of pigmies and mice as he travelled along. She explains this phenomenon in the same way as panoramic perception: it is a function of velocity.¹⁷ The LOR trains, however, including their frequent stops averaged only 12½ mph; this would hardly be enough visually to shrink ships to whose size the publicity drew explicit attention.¹⁸ In the example in Figure 8.1 (left) even pedestrians are seen apparently far below the railway and yet themselves hundreds of feet above the shipping. Another equally over-romantic element in publicity was the depiction of a score of mammoth passenger liners when the docks were mostly inhabited by possibly less glamorous and certainly more grimy cargo vessels.¹⁹

1914 advertising featured 'A Splendid View of New Gladstone Dock' as a special attraction; this was the world's largest graving dock, opened by the King in 1913.²⁰ From 1926 reduced fare, 'round trip' tickets were issued from the central station at Pier Head especially for viewing the docks and shipping, perhaps combined with time on board a visiting liner; according to

¹⁵ 'The Liverpool Overhead Railway', *The Railway Magazine*, vol. 96 (1950), p. 468; Peter Grant, *The Liverpool Overhead Railway*, (Liverpool: Trinity Mirror/Liverpool Daily Post, 2011), pp. 34, 40-41.

¹⁶ See also: Box, *Liverpool Overhead Railway*, frontispiece and p. 42.

¹⁷ Nitka, *Railway Defamiliarisation*, p. 69.

¹⁸ Jarvis, *Portrait of the Liverpool Overhead Railway*, p. 63.

¹⁹ Jarvis, *Portrait of the Liverpool Overhead Railway*, pp. 84-86.

²⁰ *The Jubilee of the Railway News, 1864-1914*, (London: The Railway News, 1914), p. 81 (advertisements).

the standard history, they attracted ‘tens of thousands of visitors’²¹ and were highly recommended for ‘Meccano Magazine’ readers on pilgrimages to the product’s birthplace.²² School parties, accompanied by guides from the port authority, were also catered for, such educational groups alone amounting to 1.5% of the line’s traffic in 1954.²³ Mike Fell, later to become a British Transport dock manager, recalls a special journey to Liverpool with his father in order to see the docks and shipping from the LOR in its last years; he dates his interest in port working to that day trip.²⁴ For a railway which so carefully cultivated the appeal of the view from its trains rolling stock design was important. Having struggled along with outdated trains a new prototype was introduced in 1947.²⁵ Surprisingly, the windows in these vehicles did not give the best outlook. Allowing for some exaggeration in what is described as a book of memories, there is evidently some truth in John Gahan’s claim that the restricted view ‘struck dismay into [pasengers’] hearts’²⁶ because it was reported that the second of the new trains had windows six inches deeper to improve the view ‘as a result of operating experience.’²⁷ Ironically, travellers on the LOR were automatically spared the view of the railway carrying them which even its first chairman admitted was an ‘unsightly structure....destroying one of the most beautiful sites and vistas in

²¹ Box, *Liverpool Overhead Railway*, p. 140.

²² R. D. Gauld, ‘The Three Electric Railways of Liverpool: 1 – the Overhead Railway’, *The Meccano Magazine*, vol. 15 no. 4 (1930), pp. 290-91, 294.

²³ Box, *Liverpool Overhead Railway*, pp. 137 & 140.

²⁴ Mike Fell, *An Illustrated History of the Port of King’s Lynn and its Railways*, (Clophill: Irwell Press, 2012), p. 5.

²⁵ ‘Modernised Trains for Liverpool Overhead Railway’, *The Railway Magazine*, vol. 93 (1947), pp. 164-65.

²⁶ John W. Gahan, *Seventeen Stations to Dingle: the Liverpool Overhead Remembered*, (Birkenhead: Countywise, 1982), pp. 31-32.

²⁷ ‘The Liverpool Overhead Railway’, *The Railway Magazine*, vol. 96 (1950), pp. 486-89.

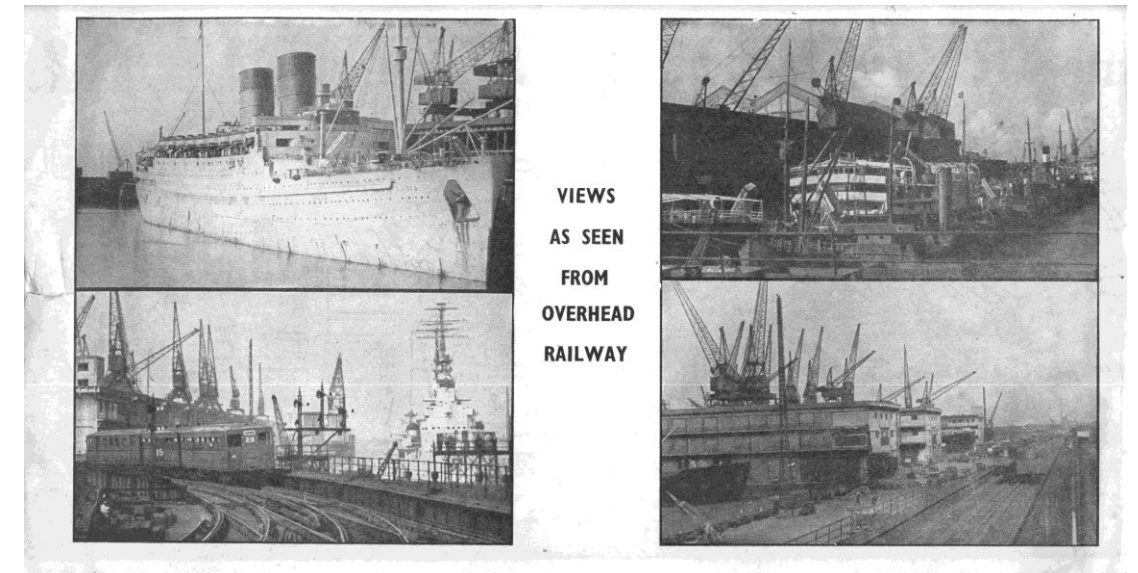
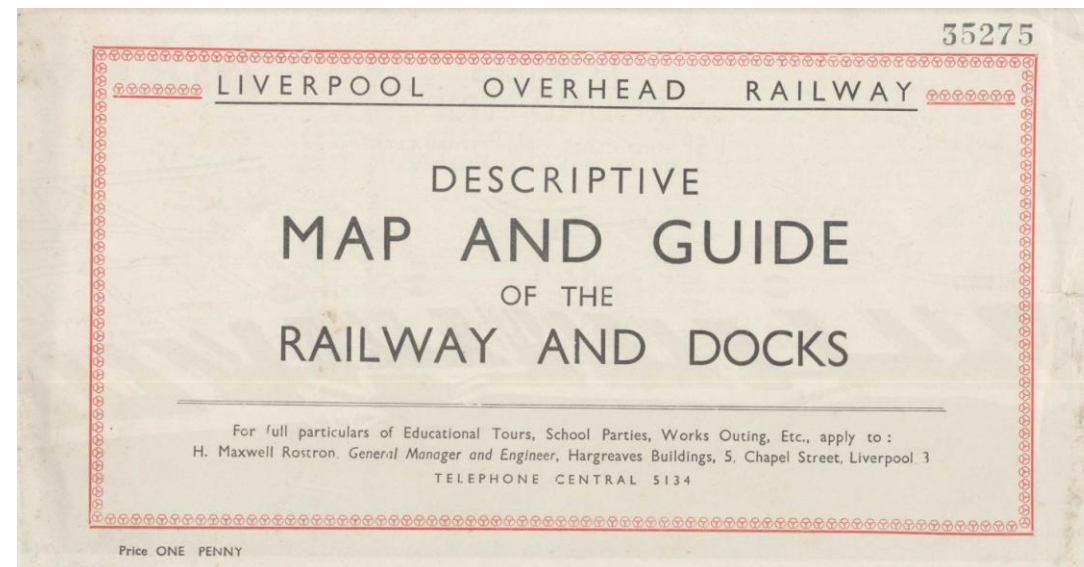
Liverpool'.²⁸ The LOR published its own version of the main line railways' window view guides from 1934 which ran to several editions (Figure 8.2) but its accompanying text veers dangerously close to bathos; who could fail to be drawn to a trip on the LOR by the prospect of 'the largest Cold Storage in Europe ... together with the largest Warehouse in the world?'²⁹

The view over the strategically-important docks was so good that in World War Two security considerations supported the idea of its demolition. Obscuring the windows on the trains' western sides was also considered but neither precaution taken.³⁰ If not built *for* its view, the LOR thrived on it and must be the only railway proposed for closure *because* of its view.

²⁸ Sir William B. Forwood, *Recollections of a Busy Life being the Reminiscences of a Liverpool Merchant, 1840-1910*, (Liverpool: Henry Young, 1910), p. 173.

²⁹ *The Railway Magazine*, vol. 75 (1934), p. 76; *Liverpool Overhead Railway Descriptive Map and Guide* (ephemera in writer's collection).

³⁰ T. B. Maund, 'The Liverpool Overhead Railway's Secret War: the Battle with the Bureaucrats', in Paul Rees (ed), *The Liverpool Overhead Railway*, pp. 84-90.



VIEWS
AS SEEN
FROM
OVERHEAD
RAILWAY

Figure 8.2

Liverpool Overhead Railway Sightseeing Guide (c. 1950)

Source: Writer's collection

9 DESPERATION, DEFENESTRATION AND DECAPITATION

What hazards may the window present for our travellers, real and fictional? How many English speakers learned their first and perhaps only Italian phrase while travelling by train? ‘É Pericoloso Sporgersi’ – it is dangerous to lean out – is a worldwide warning to train travellers. Surely such obviously sensible advice is never ignored and, if it is, why?

Reports of those disobeying the instruction periodically make the newspapers in circumstances that seem unremarkable, such as a 1919 soldier, still suffering from seasickness after the crossing to Holyhead, who sought fresh air near Bangor or a schoolboy, displaying teenage recklessness, struck by a passing train in 1966.¹ But what about a 23 year old signalman killed near Bolton in 1911? Surely, as a railwayman, he should have known better? Perhaps he did and perhaps the fact that his ‘head was split’ when he was looking out in the dark was a significant clue?²

John Hughes describes the case of a fireman, travelling as passenger, who was killed having clambered out of his compartment to spy on the euphemistic ‘courting couple’ through the window of the next. An isolated compartment gave sufficient privacy to encourage sexual activity which could then be observed clandestinely from the next through the window, but at the expense of leaning out, in this particular case sufficient for the victim’s head to strike a lineside obstruction.³ The idea that the secluded compartment, ‘a

¹ ‘Killed on His Way to be Married. Fatal Train-Window Accident’, *The Manchester Guardian*, 13 October 1919; ‘Killed at Train Window’, *The Times*, 29 August 1966.

² ‘The Danger of Looking out of a Train Window’, *The Manchester Guardian*, 2 February 1911.

³ John C. Hughes, ‘A Railway Mystery’, *Backtrack*, vol. 5 (1991), pp. 295-96.

luxurious rhythmically moving environment', could also be a place sexually-provocative to both sexes is fertilised by Ralph Harrington, recalling Sigmund Freud's theory which Laura Marcus reminds us considered the vibration and motion of the train as a sexually stimulating force acting upon immature males.⁴ This arousing, vibratory influence is also commented on, among others, by Schivelbusch, Kirby, Nicholas Daly and Matthews.⁵ Evidently more versed in railway lore than unusual sexual practices, Hughes describes the 1954 case as 'dogging' which is a more recent and altogether more participatory activity, usually linked to cars and secluded locations; this was a case of simple voyeurism. He concludes, extrapolating from other reports and reading between the lines, that wide-opening windows were more frequently used for such purposes, especially by railway staff, than may have been supposed. Ivor Smullen too describes a Birmingham railway clerk who had the same habits and met a similarly sad end and the 'Guardian' reported, heavily laced with suggestion, how in 1928 a man died from a fractured skull, apparently attempting to observe 'Miss A' and 'Mr B', who bravely came forward to give evidence, in the next compartment.⁶

The French journalist Benjamin Gastineau, writing in 1861, noticed temptation outside as well as inside the train; he considered that travelling by

⁴ Ralph Harrington, 'The Railway Journey and the Neuroses of Modernity', in Richard Wrigley and George Revill (ed) *Pathologies of Travel*, (Amsterdam: Editions Rodopi, 2000), p. 238; Laura Marcus, 'Psychoanalytic Training: Freud and the Railways', in Matthew Beaumont and Michael Freeman (ed), *The Railway and Modernity; Time, Space, and the Machine Ensemble*, (Bern: Peter Lang, 2007), pp. 155, 166-67.

⁵ Schivelbusch, *The Railway Journey*, p. 83; Kirby, *Parallel Tracks*, p. 99; Nicholas Daly, 'Railway Novels: Sensation Fiction and the Modernization of the Senses', *ELH*, vol. 66 no. 2 (1999), p. 470; Matthews, *Love at First Sight*, pp. 445-46.

⁶ Ivor Smullen, *Taken for a Ride: a Distressing Account of the Misfortunes and Misbehaviour of the Early British Railway Traveller*, (London: Herbert Jenkins, 1968), p. 153; 'Witnesses' Names Kept Secret. Preventing Gossip. Man Killed at Train Window', *The Manchester Guardian*, 26 September 1928.

night simultaneously transformed the passenger into voyeur as well as voyageur:

Si rapidement que le convoi du chemin de fer traverse villages et villes, le voyageur saisit cependant les scènes des intérieurs; il entend les sanglots de la famille qui ferme les yeux de la mère; les chansons d'épicuriens en goguette, les joyeuses rumeurs du bal. Il voit derrière les rideaux transparents des croisées éclairées les ombres chinoises des habitants se livrer à tous les ébats du ménage. Ces deux ombres qui s'embrassent, ce sont de nouveaux époux assurément. A une autre croisée, trois ombres se livrent un combat acharné: c'est un vieux barbon qui vient de surprendre sa Vénus et joue du poignard contre elle et Roméo; plus loin, une cannefrappe d'importance de blanches épaules... douceurs du mariage ! Dans cette chambre faiblement éclairée par une veilleuse, une ombre s'avance à pas comptés vers un lit...; c'est celle d'un assassin !⁷

R. Austin Freeman's creation, Dr John Thorndyke who 'set standards later emulated by law enforcement agencies'⁸ employs the train window as a critical part in the first of his cases. Thorndyke analyses the injuries of a dead woman to determine that the man accused of her murder is innocent by proving that the victim, while leaning from the window of the train to observe a hay rick on fire, was struck by the horn of a bullock whose head protruded from a cattle truck on an adjacent line.⁹ Although the

⁷ However rapidly the railway convoy passes through villages and towns, the traveller nevertheless witnesses interior scenes; he hears the family's sobs as they close their mother's eyes; the bon vivants enjoying themselves, the happy chatter from the ball. He sees beyond the curtains of the lighted windows the shadow plays of the inhabitants revealing to all their married lovemaking. These two shadows who kiss, surely they are newly-weds. At another pane three shadows reveal a fierce battle: it is an old greybeard who has just surprised his Venus and holds a knife against her and Romeo; further, a cane sharply strikes white shoulders ... O the sweetness of marriage! In this bedroom dimly illuminated by a nightlight, a shadow advances step by step towards a bed ... it is that of a murderer! Benjamin Gastineau, *La Vie en Chemin de Fer*, (Paris: Libraire de la Société des Gens de lettres, 1861), p. 63. [Writer's translation].

⁸ John McAleer in Rosemary Herbert (ed), *The Oxford Companion to Crime and Mystery Writing*, (Oxford: Oxford University Press, 1999), pp. 168-69.

⁹ R. Austin Freeman, 'The Blue Sequin', in *John Thorndyke's Cases Related by Christopher Jervis, M.D.*, (London: Chatto & Windus, 1909).

circumstances are bizarre I suppose it *could* have happened. Thorndyke's place in detective fiction is analysed by T. J. Binyon¹⁰ who concludes that that he was, compared to Sherlock Holmes, '... by far the more convincing of the two.'¹¹ A similar scientific detective and plot device, though even more far-fetched, occur in Cecil Street's (writing as John Rhode) short story 'The Elusive Bullet' of 1931, referred to by both Jack Simmons and P. L. Scowcroft and categorized by Ian Carter, together with 'The Blue Sequin' as examples of detective story non-existent crime.¹² A man is found dead in a train and the mathematical sleuth Professor Priestley deduces that it was an accident because he was killed by a stray bullet from a firing range (the compartment window conveniently being open), thus saving another innocent accused.¹³

An enthusiastic user of the train window for stories of crime was Victor Whitechurch whose ascetic detective, Thorpe Hazell, features in a number of short stories.¹⁴ Of his nine tales the train window played a significant role in five. In 'The Tragedy on the London and Mid-Northern' Hazell investigates the case of a man killed, apparently when his head struck an over-line bridge while he leaned from the train. The police – unimaginative as so often in fiction – fail to notice that such injuries would require the man to be leaning a considerable way out of the window. Hazell proves that this was, as usual,

¹⁰ T. J. Binyon, *'Murder will out': the Detective in Fiction*, (Oxford: Oxford University Press, 1989), pp. 15-21.

¹¹ *'Murder will out'*, p. 17.

¹² Jack Simmons, *The Railways of Britain: an Historical Introduction*, (1961; 3rd edn, RKP, London: Macmillan, 1986), p. 67; P. L. Scowcroft, 'Railways and Detective Fiction', *Journal of the Railway & Canal Historical Society*, vol. 23, no. 3 (November 1977), pp. 87-93; Ian Carter, *Railways and Culture in Britain: the Epitome of Modernity*, Manchester: Manchester University Press, 2001), p. 222.

¹³ John Rhode, 'The Elusive Bullet' reproduced in Dorothy L. Sayers (ed), *The Second Omnibus of Crime*, (New York: Blue Ribbon Books, 1932), pp. 238-52.

¹⁴ V. L. Whitechurch, *Thrilling Stories of the Railway*, (London, 1912); republished as *Stories of the Railway*, (London: Routledge & Kegan Paul, 1977).

a murder masquerading as accident by discovering the remains of a rope secured between brickwork and sleeper at an appropriate distance from the rail just before the bridge so as to strike the head of a person leaning only a moderate way out. All that remained was to set up circumstances to induce the victim to lean out at the appropriate time; fortunately for the story no other traveller did the same.

Hazell investigates smuggling of tobacco products on a continental boat train in 'Peter Crane's Cigars'. In this case, through the corruption of the guard, a package of cigars in baggage in the van is thrown from the train window to a co-conspirator to avoid detection at the Customs examination of passengers in London. In 'How the Bank Was Saved' a window is smashed to create a diversion and in 'The Affair of the German Dispatch Box', sensitive documents are substituted through the window to the compartment next door and a duplicate dispatch box dropped to the lineside to mislead the searchers. A final non-Hazell story has a passenger shot from an adjacent compartment; as he leans out to signal to a house the assassin does the same to shoot him.¹⁵

The situation of two trains running side by side on a stretch of four track line has been used more than once in a murder mystery. Famous is Agatha Christie's '4.50 from Paddington', an example of the great crime writer's ingenuity, attention to detail, and, not least, her appreciation of railway operation. She chose a location – a few miles out of London on the Great Western main line – where trains do run in the same direction alongside each other allowing Mrs McGillicuddy to see a strangling taking place in the adjacent train over several seconds. To add to the drama, the blinds in the compartment are drawn down and one flies up to reveal the scene. Less celebrated and certainly less operationally plausible is 'Mystery of the Slip

¹⁵ 'The Mystery of the Boat Express' in Whitechurch, *Thrilling Stories of the Railway*.

Coach' a short story featuring detective Ronald Standish by 'Sapper' (Herman Cyril McNeile).¹⁶ A man is murdered in a slip coach compartment, thereby sealed off (in effect the 'locked room' device of detective fiction, the potential of which is sadly neglected by other railway crime writers according to Ian Carter¹⁷) from the rest of the train.¹⁸ Suspicion naturally falls upon the other occupants of the coach but Standish shows that the murderer was in the train that ran on the parallel track and, in a succession of mountingly unconvincing coincidences, sees a lucky opportunity to settle old scores with his victim whom he recognises - and being of murderous intent - and happening to carry a basket of eggs - and a revolver - and the window of the murdered man's compartment being open - pitches an egg through that window. Annoyed, the victim moves to close it to prevent further missiles. As he does so he is shot and, conveniently to avoid the give-away of shattered glass, his dying movement releases the window which snaps shut. One feels this *would* work well in film!

Freeman Wills Crofts is known for the technically accurate use of railways within his tales.¹⁹ In the 1921 short story, 'The Mystery of the Sleeping-Car Express'²⁰ the previously undetected criminal reveals himself in a death-bed confession. Once again, although it is not listed in Adey's bibliography this is a 'locked room' mystery because the murderer, having shot his two

¹⁶ 'Sapper', 'Mystery of the Slip Coach' in *Ronald Standish*, (London: Hodder & Stoughton, 1933), pp. 163-89.

¹⁷ Ian Carter, *Railways and Culture in Britain*, p. 236, note 133.

¹⁸ Robert Adey, *Locked Room Murders*, (London: Ferret Fantasy, 1979).

¹⁹ P. L. Scowcroft, 'Railways and Detective Fiction', *Journal of the Railway & Canal Historical Society*, vol.23, no.3 (November 1977), pp.87-93.

²⁰ Reproduced in Bryan Morgan (ed), *Crime on the Lines: an Anthology of Mystery short Stories with a Railway Setting*, (London: Routledge & Kegan Paul, 1975), pp. 109-29.

victims, disappears from the coach despite all lines of sight being covered.²¹ The solution is technically complex but involves a rope, placed to effect the murderer's escape to a hiding place on the coach buffers, which is established through the corridor window.

Sometimes the train window was used in real crime to conceal the crime or at least to confuse the evidence. In the 1864 murder of Thomas Briggs he was pitched from the train while still alive and found dying by the track. Franz Müller was convicted and hanged for his murder but the evidence was largely circumstantial and the conviction is still debated.²² Public concern aroused by this crime led to attempts by the railways to lessen the isolation of one compartment from another. A window consequence was the well-known installation of what were known as 'Müller's lights' - windows in the walls between compartments. Whether or not these were as common as has been assumed is uncertain; the North London and London & South Western Railways both fitted them but, since soon after the murder the 1868 Act required a communication system for passengers in danger, the incentive was then perhaps limited, although strictly the regulation only applied to trains travelling more than twenty miles between stops.²³ The killer of William Pearson in 1901, George Parker, threw the revolver he used as a murder weapon from the compartment window but, since the train was in London it was soon recovered.²⁴ Having murdered Emily Kaye in 1924, Patrick Mahon attempted to dispose of the body by flinging parts from an open train

²¹ Robert Adey, *Locked Room Murders and Other Impossible Crimes: a Comprehensive Bibliography Revised and Expanded*, (Minneapolis: Crossover Press, 1991).

²² Kate Colquhoun, *Mr Briggs' Hat: a Sensational Account of Britain's First Railway Murder*, (London: Little Brown, 2011).

²³ Dennis Lovett, *London's Own Railway: the North London Railway 1846-2001*, (Clophill: Irwell Press, 2001), p. 13; R. A. Williams, *The London & South Western Railway, Volume 2: Growth and Consolidation*, (Newton Abbot: David & Charles, 1973), p. 324; *Regulation of Railways Act, 1868*, Section 22.

²⁴ 'Murder on the London And South-Western Railway', *The Times*, 18 January 1901.

window; again, unaccountably, he did not choose rural locations but between Waterloo and Richmond.²⁵

Surprisingly, considering the few murders actually committed on a train (some deaths have been attributed to suicide),²⁶ there have been several occasions where the crime has been witnessed through the window, one well known the others less notorious. Frederick Gold, a prosperous businessman was killed on a London to Brighton train in 1881. The suspect, Percy Lefroy, claimed a third man travelling in the same carriage as Gold and himself had attacked them both. The evidence of Ann Brown who lived by the line and who ‘... saw in one of the carriages two gentlemen standing up... [who] ...appeared to be fighting or “larking”... ’ was inconclusive because whether or not there were more than two men in the compartment she could not say. Her cottage was about 100 yards from the line but, when questioned, she positively stated that, ‘There was nothing to impede the view ... I can see people sitting down in the carriages even in the fast trains...’²⁷ In another, the body of Mary Money was found in Merstham tunnel, also on the Brighton line. It was uncertain whether she had fallen or been pushed from the train but the signalman at Purley gave evidence that he had seen through the window ‘... a young man and young woman standing up, apparently struggling.’²⁸ Nobody was ever charged. In the third, another signalman, witnessed what may have been the strangulation of a five year old boy and gave evidence that he saw ‘... a man ...leaning over the form of either a boy or girl ... on the opposite seat... and that the head... was moving backwards and

²⁵ Jonathan Goodman (ed), *The Railway Murders*, (London: Allison & Busby, 1984), pp. 113-14.

²⁶ Jack Simmons, ‘Crime’, in Jack Simmons and Gordon Biddle (ed), *The Oxford Companion to British Railway History from 1603 to the 1990s*, (Oxford: Oxford University Press, 1997), pp. 119-20; ‘What is Happening on Our Railways’, *The Railway and Travel Monthly*, vol. 18 (1919), p. 61.

²⁷ ‘The Murder on the Brighton Railway’, *The Times*, 30 June, 1881.

²⁸ ‘The Death In Merstham Tunnel: Inquest and Verdict’, *The Times*, 17 October 1905.

forwards.’ This evidence and his description of the man was insufficient to convict the boy’s father who had been charged.²⁹

More banal episodes are almost gleefully recorded in staff magazines suggesting the thought that railways would run much better if we (the staff) did not have to deal with passengers. On the GWR a ‘lady dropped her teeth out of the carriage window at Westbourne Park’ and a Norfolk false teeth incident was reported in 1956. Unfortunately neither account detailed whether the loser was holding the teeth (and why) or whether they were in the mouth, but in both cases teeth and owners were reunited.³⁰

In truth it would generally be wise to stay away from the window and certainly one should *never* lean out. Those of murderous intent should ensure that, without arousing the victim’s suspicion, the blind is firmly secured before beginning the fatal assault.

²⁹ ‘The Railway Crime’, *The Times*, 4 February 1914.

³⁰ ‘An Unusual Loss’, *Great Western Railway Magazine*, vol. 37 (1925), p. 24; ‘Teething Trouble’, *British Railways (Eastern Region) Magazine*, vol. 7 (1956), p. 146.

10 INCLINATION

The use of tilting trains in Britain is another example of health concerns impinging upon the view from the window. British Rail's Advanced Passenger Train (APT) was a technologically innovative attempt to design a train suitable for higher speeds without the construction of new main lines, the more expensive principle used, for example, in Japan for the 'Shinkansen' and in France for the 'Trains à Grande Vitesse'. Consequently the APT had to take curves faster than conventional trains and, in order to achieve this without disturbing passengers, it was designed to tilt, reducing 'cant deficiency' and thereby perceived centrifugal force. Tilting trains had been around since 1938 but the technology was imperfect and they remained largely experimental.¹ For the APT it was agreed that although safety does not demand tilt, comfort would require it.² It is ironic, therefore, that, in manipulating the view from the window, in an attempt to *improve* the passenger experience, this tilting train is perhaps best-known because the manipulation induced a feeling of nausea in some passengers. Whether the effect was as bad as has been portrayed is arguable; the fact remains that influential people, especially those in the media, were among those affected. One of the earliest reported rides was in October 1980 when both Roger Ford and Charles Long, experienced railway journalists, felt nauseous; although others did not. Of the same journey, Ossie Nock, evidently of a more robust generation, reported no untoward sensations and dismissed such loose talk.³ A few days after, Sir Peter Parker, BR Chairman, remained

¹ 'A short guide to tilting trains', *Modern Railways*, vol. 39 (1982), p. 541.

² John Johnson & Robert A. Long, *British Railways Engineering 1948-80*, (London: Mechanical Engineering Publications, 1981), p. 456.

³ Roger Ford and Charles Long, 'APT-P: First impressions', *Modern Railways*, vol. 37 (1980), p. 486; O. S. Nock, *Two Miles a Minute: the Story Behind the Conception and Operation of*

loyal to the train, wittily describing tilt nausea as a ‘sick rumour’ which was ‘belittling British achievement’ but he had not been a passenger on that test run.⁴ He was supported by BR’s Chief Medical Officer who wrote to ‘Modern Railways’ refuting the idea that liability to nausea – if it even existed – was anywhere near as great as had been made out and which, in any case, ‘disappears quickly’ as the passenger became acclimatised to the motion. It was more a matter of preconditioning, he wrote, indirectly supporting Parker’s attempt to ignore it.⁵ Of course it is true that, just as with sea- and car-sickness, only some people are naturally susceptible to motion-induced nausea anyway, a factor which has frustrated researchers.

Two books describing the (mis)fortunes of the APT programme by Stephen Potter and Hugh Williams mention that both authors personally felt the tilt’s disconcerting effect; Williams was a BR engineer and supervisor of the experimental version so unlikely to exaggerate failings.⁶ Both also remark that the overall uneven ride of the train may have had a contributing effect. More evidence that it was the unusual motion of the horizon as seen through the window that caused the nausea is given by Murray Hughes and Roger Ford who noticed that during the part of their 1981 journeys achieved in darkness, when the movement was less visible, they were not so affected.⁷ Ford, in fact, reported this ride as a big improvement on the previous year’s

Britain’s High Speed and Advanced Passenger Trains, (1980; 2nd edn, Cambridge, Patrick Stephens, 1983), p. 173.

⁴ ‘Tilt nausea – “sick rumour” – says Sir Peter’, *Modern Railways*, vol. 37 (1980), pp. 531-32.

⁵ J. D. Galletly, ‘Passenger Reaction to Tilting Trains’, *Modern Railways*, vol. 37 (1980), p. 561.

⁶ Stephen Potter, *On the Right Lines: the Limits of Technological Innovation*, (London: Francis Pinter, 1987), p. 157; Hugh Williams, *APT: a Promise Unfulfilled*, (Shepperton: Ian Allan, 1985), p. 83.

⁷ Murray Hughes, *Rail 300: the World High Speed Train Race*, (Newton Abbot: David & Charles, 1988), p. 57; Roger Ford, ‘APT Inaugural Run - 7 December 1981’, *Modern Railways*, vol. 39 (1982), pp. 62-63.

trip although he described in detail the tilt's shortcomings which led to some passengers actually vomiting and, as the dawn broke, his personal nausea returned. A correspondent on the same train who was very satisfied with the tilt had spoken to others who were not and, fatally, a 'Sun' reporter felt very ill and the BBC correspondent had felt sick even when it was dark outside.⁸ On that occasion BR's defensive line was that 'people ... susceptible to travel-sickness' should perhaps avoid the APT; it was not a strong selling-point but some acknowledgement that the phenomenon was not imagined.⁹

It was not until 1983, at a time when the APT project's prospects were becoming increasingly doubtful – it was ultimately scrapped in 1986 – that BR publicly admitted that a 'small but significant' proportion of passengers suffered from nausea as a result of the tilting outlook.¹⁰ History's verdict on the APT, provided by Terry Gourvish, is more damning: '... passengers *generally* found that the ride induced queasiness ...' [my italics].¹¹

Over time BR's attitude had shifted from outright denial to acceptance. The complex psycho-physiological problem of resolving motion apparent in the view with a lack of sensation felt in the body was not confined to the APT; its emergence therefore should not have been entirely unexpected. Japanese tilting trains in 1973 had been forced to provide medication to suffering passengers and an early Italian 'Pendolino' in 1975 – the Fiat ETR 401 – affected travellers not facing the direction of travel. A later version – the

⁸ E. S. Russell, 'APT', (letter), *Modern Railways*, vol. 39 (1982), p. 131.

⁹ Ford, 'APT Inaugural', *Modern Railways*, vol. 39 (1982), pp. 62-63.

¹⁰ Roger Ford, 'APT Motion Sickness to be Investigated', *Modern Railways*, vol. 40 (1983), p. 231.

¹¹ Terry Gourvish, *British Rail 1974-97: from Integration to Privatisation*, (Oxford: Oxford University Press, 2002), p. 218.

ETR 450 – was experienced by Geoffrey Freeman Allen and he found the tilt of this train much more acceptable than that of the APT.¹² A 1986 study of passengers and conductors on Japanese trains found that up to 31% reported nausea and 2% actual vomiting.¹³ Ford praised a lesser degree of tilt in the prototype 1984 Swedish version for reducing the nauseous effect in passengers but a passenger survey a year later reported that 11% still experienced some sort of (in Allen’s words) ‘mal-de-tilt’.¹⁴ A 1995 study by Forstberg, Andersson and Ledin on the resulting Swedish X2000 train still found that about 10% of passengers were affected. This study concluded that lessening the compensatory tilt so that some element of lateral acceleration was felt by the body reduced, but did not eliminate, the incidence of nausea by about a third.¹⁵ Nevertheless, even this figure is far in excess of the very low proportion of passengers suffering motion sickness in conventional trains, reported by I. Kaplan in an analysis of 370,000 person-journeys on the Baltimore & Ohio RR at 0.13%.¹⁶ The APT operated with 100% tilt compensation, explaining its higher occurrence of nausea. Scientific investigations have suggested other solutions. One reported a close correlation between nausea and tilting which was significantly greater in subjects who had a landscape view (i.e. were not

¹² ‘A short guide to tilting trains’, *Modern Railways*, vol. 39 (1982), p. 541; G. Freeman Allen, ‘Italians Order Tilting Trains’, *Modern Railways*, vol. 43 (1986), p. 45.

¹³ Mituso Ueno, Takanori Ogawa, Shingo Nakagiri, Toyotake Arisawa, Yoshio Mind, Kouichi Oyama, Ryosei Koderu, Takashi Taniguchi, Susumu Kanazawa, Takeo Ohta and Hideyasu Aoyam, ‘Studies on Motion Sickness Caused by High Curve Speed Railway Vehicles: Evaluation of the Swing and Its Effects on Passengers and Conductors’, *Japanese Journal of Industrial Health*, vol. 28 (1986), pp. 266-274.

¹⁴ Roger Ford, ‘Sweden: First with Practical Tilting Trains’, *Modern Railways*, vol. 41 (1984), pp. 23-25; G. Freeman Allen, ‘Tilt Takes off in Europe’, *Modern Railways*, vol. 47 (1990), p. 244.

¹⁵ J. Forstberg, E. Andersson and T. Ledin, ‘Influence of different conditions for tilt compensation on symptoms of motion sickness in tilting trains’, *Brain Research Bulletin*, vol. 47, no. 5 (1998), pp. 525–35.

¹⁶ I. Kaplan, ‘Motion Sickness on Railroads’, *Industrial Medicine and Surgery*, vol. 33 (1964), pp. 648-51.

blindfolded); the conclusion was that: ‘Susceptible passengers ... should be advised that sickness might be avoided by pulling the blinds and sitting quietly.’¹⁷ On the other hand, and supporting the recorded APT experiences, Forstberg et al report that being able to see the horizon through the windows provided a reference point which reduced the incidence of nausea.¹⁸ K. E. Money suggests that: ‘visual information that is not in agreement with information from the vestibular [inner ear] and other sensory receptors promotes motion sickness in most cases’.¹⁹ An excellent summary of current knowledge – although it is not exhaustive, the study by Neimer et al referred to above is ignored, for example – is given in another Swedish paper by Rickard Persson which suggests that the condition is still not fully understood; one area for further evaluation he suggests is the test subjects themselves.²⁰ Overall Persson concludes that ‘translations in all directions can cause motion sickness; it is only a question of magnitude’ and that the preponderance of studies suggest sensory conflict as the most common cause of ‘mal-de-tilt’.²¹ Roger Goodall argues that it is a physiologically complex problem best tackled empirically; experience has shown that 60 – 70% tilt compensation produces the best results although the problem is not eliminated.²²

¹⁷ J. Neimer, S. Eskiizmirli, J. Ventre-Dominey, C. Darlot, M. Luyat, M.A. Gresty, and T. Ohlmann, ‘Trains with a View to Sickness’, *Current Biology*, vol. 1, no 14 (2001), pp. R549–R550.

¹⁸ Forstberg et al, ‘Influence of different conditions for tilt compensation’.

¹⁹ K. E. Money, ‘Motion Sickness’, *Physiological Reviews*, vol. 50, no. 1, (1970), p. 16.

²⁰ Rickard Persson, *Grönatåget. Motion sickness in tilting trains: Description and Analysis of the Present Knowledge*, (Stockholm: Royal Institute of Technology, 2008).

²¹ Persson, *Grönatåget. Motion sickness*, pp. 35-36.

²² Roger Goodall, ‘Tilting trains and beyond - the future for active railway suspensions, Part 1: Improving passenger comfort’, *Computing & Control Engineering Journal*, vol. 10, no 4 (1999), pp. 153-60.

Virgin Trains' Pendolinos, introduced from 2002, were thus designed to limit compensation to 75%; 'Railway Magazine' assured readers that 'as long as there is a sensation of tilting, the passengers do not feel any discomfort'²³ and 'The Times', reminding readers that the APT 'never recovered from the complaints of nausea', pronounced Pendolino 'smooth on the stomach.'²⁴ In case of complacency, however, the 'Mail on Sunday' was reporting motion sickness on Pendolinos in 2003.²⁵ Perhaps the unsympathetic 1981 BR warning that those susceptible might consider avoiding tilting trains was in fact the only honest answer?

The saga of British tilting trains is another warning to operators that tampering with the passenger's view from the train, even when driven by benevolence, is fraught with the danger of unintended consequences.

²³ John Balmforth, *Virgin Trains: a Decade of Progress*, (Hersham: Ian Allan, 2007) p. 26; 'Full Tilt: the Pendolino Story', Supplement to *Railway Magazine* vol. 150, no 1242 (October 2004), pp. i-xv.

²⁴ Ben Webster, 'Tilt Trains Smooth on the Stomach', *The Times*, 13 December 2003.

²⁵ 'Tilting trains "make us feel sick"', *Mail on Sunday*, 16 November, 2003.

11 INSPIRATION

J. M. W. Turner's painting 'Rain, Steam and Speed' is usually reputed to have received its inspiration from a GWR journey towards London on a stormy night when the artist witnessed another train approaching his from the window as both crossed Maidenhead Bridge. He called to a fellow passenger to observe the image and it made such a powerful impression that when she saw the painting exhibited she recognized the scene and her fellow-traveller as the artist. John Gage in his analysis of the painting's origins is sceptical of this idea.¹ Had Turner adopted the technique of his namesake Francia Turner the painting's inspiration would have been in no doubt. This artist used the train not only to stimulate her imagination but as studio as well so that each piece of work, accompanied by verses, could take several journeys to bring to fruition. Fortunately she was sponsored by British Rail and the national tourist boards.²

Alfred C. Gilbert, the originator of the American rival to 'Meccano' which was superior in many ways to its British precursor, claimed in his autobiography that he had the idea for his toy when he observed from the train window the masts being erected as the New York New Haven and Hartford Railroad was electrified in 1911 and allowed his mind to process the view. Another version has him gazing from the train upon a building site with cranes and girders.³ The 'Erector' was marketed from 1913 to 1966 and

¹ John Gage, *Turner: Rain, Steam and Speed*, (London: Allen Lane, 1972), pp. 15-19.

² Francia Turner, *Journeys: Train Journeys through British Landscapes*, (Newton Abbot: David & Charles, 1989).

³ A.C. Gilbert with Marshall McClintock, *The Man Who Lives in Paradise*, (New York NY: Rhinehart, 1954), p. 119; Bruce Watson, *The Man Who Changed How Boys and Toys Were Made: The Life and Times of A. C. Gilbert*, (New York, NY: Penguin, 2003), p. 14.

became known as ‘the world’s greatest toy’, its flanged components making it closer to real engineering than other versions of construction toy of which many more than Meccano and Erector were devised around that time.⁴ Was it a coincidence that Frank Hornby also claimed to have had the idea of his ‘world’s greatest toy’ while looking from a train window at a crane in a goods yard during a journey from London to Birmingham?⁵ Since Ian Harrison reveals a second version of Meccano’s beginning which does not involve a train journey at all, and Hornby’s own writing in ‘Meccano Magazine’ merely refers to the journey and not the vision, one may surmise there was much cross-fertilisation of ideas in this miniature world.⁶

A similar story exists about Clarence Saunders, founder of perhaps the first self-service supermarket, ‘Piggly Wiggly’, who is imagined to have devised the name as he watched pigs wriggling under a fence while looking out during a 1916 journey. He sought a name which would intrigue the potential customer and neither confirmed nor denied this story of its origin.⁷ It is tempting to conclude that these creators used the train window view as merely shorthand for giving solid and romantic reason to an abstract idea that has simply occurred to the inventor.

⁴ Anthony McReavy, *The Toy Story: the Life and Times of Inventor Frank Hornby*, (London: Ebury Press, 2002), pp. 68-84.

⁵ ‘Mr Frank Hornby: Inventor of Meccano’, (obituary), *The Times*, 22 September 1936.

⁶ Ian Harrison, *Hornby: the Official Illustrated History*, (London: Harper Collins, 2002), pp. 16-17; Frank Hornby, ‘The Life Story of Meccano: romance of the World’s Greatest Toy’, *Meccano Magazine*, vol. 17, no. 1 (January 1932), pp. 6-7.

⁷ Sara Rath, ‘Piggly Wiggly’, in Andrew F. Smith (ed), *The Oxford Companion to American Food and Drink*, (New York, NY: Oxford University Press, 2007), pp. 456-57.

Naomi Royde-Smith, referred to above in ‘Explanation’, took the inspiration for her book ‘Pilgrim from Paddington’ from a series of journeys undertaken on the GWR. Her doctor, to whom the book is dedicated – ‘who prescribed this book’ – suggested relaxation by train as therapy for a nervous condition. Royde-Smith took the medicine and spent her time travelling the GWR, looking at the scenery, eating in restaurant cars and visiting the sites.⁸ This seems to be the sole example where the window view has provided both inspiration and medication.

⁸ Naomi Royde-Smith, *Pilgrim from Paddington: the Record of an Experiment in Travel Between August 22 1932 and July 20 1933*, (London: Arthur Barker, n.d.).

12 AUGMENTATION

Following my previous research on the success or otherwise of the 1950s diesel multiple unit (DMU) I drew attention to the almost universal provision in these trains of a view through the driver's cab and the train's front windows which I characterised as the 'extended or forward panorama'.¹ By allowing the passenger to see through the front (or rear) windows, these trains provided an extension to the perspective allowed by conventional design, a dramatic expansion of Schivelbusch's side-on 'panoramic perception'; to travellers it was these trains' most distinctive and most exciting feature something that, even nearly thirty years after its introduction, was still appreciated by Paul Theroux during his 1982 journey around the coasts of Britain and Ireland.² Film historian John Huntley described an unusual 1979 DMU journey in adverse weather as a 'fantastic panoramic run', slower than the usual locomotive-hauled train but visually much more interesting.³ W. M. Acworth's book 'The Railways of England' is a long-respected classic of railway literature and in it he describes the view from the footplate, something which few of his readers would then have experienced but is unimpressed by this forward panorama. Looking from the compartment, he says, 'one seems to be travelling through green fields and pleasant parks and pastures.' But from the footplate, 'one is forced by an irresistible fascination to strain one's eyes gazing forward through the windows of the "cab"; and through them nothing is visible but the great

¹ Steven M. P. Cochrane, 'Train of the Future' to 'Bog Unit': why did the appeal of British Railways' Diesel Multiple Units change 1954-1974?' unpublished M.A. essay, University of York, 2011.

² Paul Theroux, *The Kingdom by the Sea: a Journey Around the Coast of Great Britain*, (London: Hamish Hamilton, 1983; 2nd edn, Harmondsworth: Penguin, 1984), p. 153.

³ John Huntley, 'BR to the Rescue', (letter), *The Railway Magazine*, vol. 125 (1979), p. 143.

broad gravel highway' and the only items of interest, an oncoming train, a station or a group of platelayers 'are only rare oases along our track'.⁴ When considering the differences between coach and railway travelling, the writer of a Royal Mail history thought the *lack* of any forward view, which an outside coach traveller would have, an advantage because, 'we are unable...in a railway carriage, to see what is before us, or about to happen' whereas coach passengers could see their fate approaching!⁵ Such blissful ignorance was not always enjoyed by those railway passengers who adopted the tactic of looking for trouble:

'... every one knows how, if by chance a train stop at some unusual place, or if the pace be slackened, or the whistle sound its shrill alarm, a head is projected from nearly every window, and anxious eyes are on the look-out for signs of danger.'⁶

Since the burst of construction of DMUs in the 1950s and early 1960s the forward panorama has seldom been repeated. Not that such views were absolutely novel for railway travellers, simply exceptional. An early forward panorama was provided in 1905 by a petrol railcar trialled on the GNR⁷ and by the 1930s three of the 'Big Four' companies had experimented with diesel railcars in some of which the forward and/or rearward view had been noteworthy. In 1934 passengers on one LMSR Leyland railcar's trial run commented 'above all' on the 'clear look-out all round, especially at the ends'

⁴ W. M. Acworth, *The Railways of England*, (1890; 5th edn, London: John Murray, 1900), p. 80.

⁵ J. Wilson Hyde, *The Royal Mail: its Curiosities and Romance*, (2nd edn, Edinburgh: Blackwood, 1885), pp. 59-60.

⁶ *The Influence of Railway Travelling on Public Health from "The Lancet"*, (London: Robert Hardwicke, 1862) p. 43.

⁷ 'Trial of a Petrol Railcar on the Great Northern Railway', *The Railway Magazine*, vol. 16 (1905), pp. 156-58.

and it featured in an English Electric design for the same company too.⁸ In 1931 one of the advantages of the short-lived LMSR ‘Ro-Railer’, a bus-outline vehicle which could run on rail or road wheels, was touted as ‘improved visibility’ and the view had been an attraction for GWR travellers in their well-known series of streamlined railcars put into service from 1933 onwards, and the essence of the ‘railway charabanc’ idea to attract new traffic which was put forward in a 1925 GWR debate.⁹ Four Armstrong-Whitworth diesel-electric railcars were introduced by the LNER from 1932. The panoramic view in these trains was considered a special attraction and exploited for six summer seasons running half-day scenic tours from Scarborough and Whitby (Figure 12.1).¹⁰ In the 1950s BR programme, to maximise visibility in the earliest so-called ‘Derby Lightweight’ designs the cab windows were deliberately elongated towards the roofline in order to present a greater area of glass (and to give some style to a relatively ‘flat end’), but the later DMUs had smaller front windows, possibly for safety reasons.¹¹ Such small differences were apparently

⁸ ‘Light Diesel Railcars for the LMSR’, *Diesel Railway Traction*, 23 February 1934, p. 326. ‘Another British Railcar: Diesel electric passenger vehicle constructed throughout by one firm’, *Diesel Railway Traction*, 29 December 1933, pp. 996-97.

⁹ ‘The New “Ro-Railer”, L.M.S.R.’, *The Railway Magazine*, vol. 68 (1931), pp. 203-06; C. W. Judge, *The History of the Great Western A. E. C. Diesel Railcars*, (Poole: Oxford Publishing, 1986), pp. 56, 104-05; J. F. Anstey et al., ‘The Best Way of Obtaining and Retaining Traffic on the Railways’, *GWR (London) Lecture and Debating Society*, Session 1925-26, no 192, p. 19.

¹⁰ Railway Correspondence and Travel Society, *Locomotives of the LNER, Part 10B: Railcars and Electric Stock*, (Lincoln: RC&TS, 1990), p. 83.

¹¹ Brian Haresnape, *British Rail Fleet Survey, 8 Diesel Multiple-Units: The First Generation*, (Shepperton: Ian Allan, 1985), pp. 22-25.



Figure 12.1

LNER 1932 Armstrong-Whitworth railcar's forward panorama

Source: 'Viewing the scenery from the Observation Car', *LNER Magazine*, vol. 28, (1938), p. 58.

significant for Edinburgh suburban travellers according to A. A. McLean who relates that passengers preferred one DMU type to another because of its greater glazed area.¹² And, of course, the very words 'forward looking' suggest technical progress and prowess – just what BR wanted the DMU to present. That a double-ended design equally presents a 'backward looking' end was understandably not mentioned. Glass and metal in combination was emphasized too in contemporary railway architecture, especially noteworthy in the design of stations appropriate for the 'Modernisation Plan' era as, for example, Banbury (1959) and Coventry (1962), which BR held up with pride to the 1960 Parliamentary Select Committee.¹³ The 1957 'Times'

¹² A. A. Maclean, *The Edinburgh Suburban and South Side Junction Railway*, (Usk: Oakwood Press, 2006), p. 115.

¹³ 'Reconstruction of Banbury Station' and 'Rebuilding of Coventry Station', *The Railway Magazine*, vol. 105 (1959), pp. 97-99; vol. 108 (1962), pp. 456-57; Parliamentary Papers: 1959-60 [254-I] *Report from the Select Committee on Nationalised Industries together with the proceedings of the committee, minutes of evidence and appendices – British Railways*, Appendix 17,

writer reserved his choicest phrases for the DMU's 'lightness and brightness' and extolled the uniqueness of 'the front seat that looks along the lines'¹⁴ and the feature most welcomed by the 1960 Select Committee was 'the new standards of observation' provided by the DMU.¹⁵ In an ecstatic review of the contemporary 'Midland Pullman', which lacked a forward panorama, a traveller noted that its quiet smoothness meant passengers occupied themselves more with the view 'like watching a silent film'; tranquillity removed them from the world outside and the window drew their attention as a TV screen might.¹⁶ Inside the DMU workhorse, in contrast, the forward panorama engaged travellers with the real world.

Lacking Pullman luxury, the Edinburgh-Glasgow and Glasgow-Ayr 'Inter-City' DMUs, castigated for their plain frontal design, were also condemned by *Trains Illustrated* for robbing passengers of their newly-acquired vista because guards' compartments were inserted between driver and passenger accommodation. Its loss in these trains provoked some anxiety within the British Transport Commission which was relieved to note that it was not essential for the overall design.¹⁷

para. 27, pp. 375-76; Gordon Buck, *A Pictorial Survey of Railway Stations*, (Yeovil: Oxford Publishing Co., 1992), pp. 203-22.

¹⁴ 'Our New Diesel Train: Compliments and hardly any Complaints from a Branch Line', *The Times*, January 19, 1957.

¹⁵ Parliamentary Papers: 1959-60 [254-I] *Report from the Select Committee on Nationalised Industries together with the proceedings of the committee, minutes of evidence and appendices – British Railways*, para. 190, p. xlvi.

¹⁶ 'Midland Pullman', Miles Wyvern, *British Railways Magazine (London Midland Region)*, vol. 11, (1960), pp. 342-43.

¹⁷ 'New Inter-City Sets', *Trains Illustrated*, vol. 12 (1959), p. 290; BTC Minute 10/67 2 December 1957.

Lynne Kirby's contribution to an extensive literature that brings together cinema, television and travelling vistas, adopts Schivelbusch's panorama as the 'perceptual paradigm' which expresses her theme of the shared identity of cinema screen image and the framed view from the train, both compressing time and space as specimens of contemporary modernity. She does not discuss the forward view specifically but Patrick Keiller defines the 'phantom ride' as 'a film which looks forward from the front of a moving railway engine, a view then seldom encountered....even by an engine driver.'¹⁸ A 1955 traveller noticed the similarity when he described DMU travel as 'similar to...those quaint films of yester-year when the ... landscape rushed towards you.'¹⁹ Phantom ride style sequences are used as a device in feature films too, such as Mike Hodges' 'Get Carter' of 1971 and, as part of a montage of shots, including along the engine's boiler from the driver's position in the opening of Jean Renoir's 'La Bête Humaine' of 1938 and Fritz Lang's dieselised remake of 1954, 'Human Desire'. Keiller gives a more complete list, particularly illustrating its use in films noirs.²⁰ The technique also found a practical application as a visual aid to footplate staff 'learning the road', played at a slow speed in order to facilitate the appreciation of complex signal and junction arrangements.²¹ This visual phenomenon was most fully exploited by 'Hale's Tours' in the period 1905-10 which used something similar to Sir Horace Winslip's 'Avengers' contraption in that the audience was seated in a railway carriage-shaped theatre which moved

¹⁸ Schivelbusch, *The Railway Journey*, pp. 57-72; Lynne Kirby, *Parallel Tracks: the Railroad and Silent Cinema*, (Exeter: University of Exeter Press, 1997), pp. 44-47; Patrick Keiller, 'Phantom Rides: the Railway and Early Film', in Matthew Beaumont and Michael Freeman (ed), *The Railway and Modernity: Time, Space and the Machine Ensemble*, (Bern: Peter Lang, 2007), p.75.

¹⁹ *British Railways Magazine (London Midland Region)*, vol. 6, (1955), p. 174 (letter).

²⁰ Keiller, 'Phantom Rides', pp. 81-82.

²¹ *The Railway Magazine*, vol. 75 (1934), pp. 147-48.

accompanied by ‘wind’ and sound. A uniformed ‘guard’ collected tickets. A number operated in Britain, four in London, showing short films. Projected on a screen was a phantom ride of a railway journey such as ‘Trip to the Italian Lakes.’ But, as Christian Hayes points out, the paradox of the artificially shaped theatre was that a *real* railway carriage did not generally provide this view and had side windows which the movie theatre did not.²² Just as railways, then cinema, had proclaimed modernity, so did television in the 1950s and as people adjusted to television’s view of the world in their homes the DMU appropriately offered a different travel perspective during their journeys. Since it often adopted a cinema style of seating, unlike the compartment which was more like the living room, another analogy might exist between the forward panorama and the 1953 introduction of anamorphic (so-called wide-screen) format film technology, such as ‘CinemaScope’, which capitalised on cinema’s strengths of colour and size, unmatched by 1950s television screens.²³ John Urry argues that the view through the tourist bus/train/hotel window frame has lost its distinctiveness because this ‘tourist gaze’ is more frequently seen through the ‘frame’ of the TV/cinema screen; this blend of real and vicarious experience provides a further reason (familiarity) for the popularity of the forward panorama.²⁴ In the British Transport film ‘John Betjeman Goes by Train’, the poet, as tourist guide, exploits the DMU’s forward panorama; he adopts both Urry’s ‘romantic gaze’ (the sequences of solitary scenic appreciation) and ‘collective gaze’ (the seaside with other visitors who have come by train). Roger Green says our powerlessness to interfere with events seen either on screen or from

²² Christian Hayes, ‘Phantom carriages: Reconstructing Hale’s Tours and the virtual travel experience’, *Early Popular Visual Culture*, vol. 7, No. 2, July 2009, pp. 185–98.

²³ Leslie J. Wheeler, *Principles of Cinematography: a Handbook of Motion Picture Technology*, (1953; 4th edn, London: Fountain Press, 1969), pp. 74-77.

²⁴ John Urry, *The Tourist Gaze: Leisure and Travel in Contemporary Societies*, (London: Sage Publications, 1990), pp. 100-01.

the train is the essence of the similarity between the views. The forward panorama added a proxy driving experience too, something that had attracted GWR railcar passengers: ‘in absolute safety, all the thrills of driving a car’.²⁵ The opportunity for enthusiasts to observe and critique driving styles was not missed either, as a ‘Railway World’ reader demonstrated.²⁶

Robert Forsythe describes the use of DMUs on Scottish scenic routes as extempore observation cars. He laments the loss of forward view in the DMU’s successors but relates that – in unconscious acknowledgement of the cinema/TV screen analogy – sometimes a front-mounted CCTV camera transmitted its view to provide passengers with a similar if vicarious experience. In contrast, the LNER’s cinema coach of 1935 and BR’s ‘Television Train’ of the late 1950s had been used as an *alternative* to panoramic perception; the former, by necessity, had no windows at all. Vadillo and Plunkett regard such screens as sealing the divorce of image from experience.²⁷ For the go-ahead early-1960s Glasgow ‘Blue Trains’ local management considered a forward panorama to display the Clydeside scenery essential; in eulogistic publicity the 270-degree vista becomes: ‘... a

²⁵ John Betjeman *Goes by Train* (1962) directed by Malcolm Freegard, in *The British Transport Films Collection: Volume 1, On and Off The Rails, DVD*, (London: British Film Institute, 2005); Urry, *The Tourist Gaze*, pp. 44-47; Roger Green (ed), *The Train*, (Oxford: Oxford University Press, 1982), pp. 56-58; L. M. Crump writing in the *A.E.C. Gazette*, quoted by C. W. Judge, *The History of the Great Western A. E. C. Diesel Railcars*, (Poole: Oxford Publishing, 1986), pp. 104-05.

²⁶ ‘Jaydee’, ‘On Diesels’ (letter) *Railway World*, vol. 18 (1957), p. 335.

²⁷ R. N. Forsythe, *To Western Scottish Waters: by Rail and Steamer to the Isles*, (2000; 2nd edn, Stroud: Amberley, 2010), pp. 102, 104-05; *Rail Enthusiast*, no 71 (Aug 1987), p. 9; *LNER Magazine*, vol. 25 (1935), p. 216; *The Railway Magazine*, vol. 103 (1957), p. 510; Ana Parejo Vadillo and John Plunkett, ‘The Railway Passenger; or, the Training of the Eye’, in Matthew Beaumont and Michael Freeman (ed), *The Railway and Modernity: Time, Space and the Machine Ensemble*, (Bern: Peter Lang, 2007), p. 67.

blessed relief from the clausturation of the old-fashioned “compartment”.²⁸ Since the 1950s DMUs’ withdrawal, allegedly (according to Thomas and Whitehouse) through trade union pressure the forward panorama has mostly disappeared; Letherby and Reynolds suggest that modern trains have made good views ‘almost impossible’, an opinion supported by a former chairman of the Central Rail Consultative Committee. Latterly, even the ‘Blue Trains’ lost their forward panorama.²⁹ Peter Semmens, although no enthusiast for travel at speed in the classic DMU, found the lack of a forward view, together with the side-window spacing, was a backward step on the introduction of ‘Sprinters’ and remarked that Swiss Railways had specially publicised those trains where it was possible to see through the front window and, ten years later, a correspondent hoped that post-Sprinter designs would re-introduce the view forward.³⁰

One might conceivably interpret the move away from the forward panorama as symbolising a withdrawal from the 1950s newly-nationalized railway’s democratic openness with a return to the more narrowly commercial attitude of later BR and ultimately the privatised railway. The DMUs were also distinctive by the abandonment (largely) of the traditional compartment which Schivelbusch sees as expressing ‘European traditions’ of quiet and isolation, in contrast to democratic American open designs; the increasing

²⁸ Brian Haresnape, ‘Design on the Railway Part Two’, *Trains Illustrated*, vol. 14 (1961), p. 227; Brian Haresnape, *Railway Design Since 1830, Volume 2 1914-1969*, (Shepperton: Ian Allan, 1969), pp. 101-02; George Blake, *Glasgow Electric: the Story of Scotland’s New Electric Railway*, (Glasgow: British Railways, 1960), pp. 7, 34.

²⁹ David St John Thomas & Patrick Whitehouse, *The Great Days of the Country Railway*, (Newton Abbot: David & Charles, 1986), p. 36; Gayle Letherby and Gillian Reynolds, *Train Tracks: Work, Play and Politics on the Railways*, (Oxford: Berg, 2005), pp. 36, 122, David Bertram, ‘What Next for Passengers’, *Entrain*, no. 34 (August 2004), pp. 30-32; “‘Blue Train’ Re-enacts Cuneo’s Scene from 1960”, *The Railway Magazine*, vol. 137 (1991), p. 386.

³⁰ P. W. B. Semmens, Railcar Revolution Part Two: ‘Sprinters’, *The Railway Magazine*, vol. 132, (1986), p. 423; Tim Mickleburgh, ‘Let’s Hear it for the Old DMUs’, (letter), *The Railway Magazine*, vol. 142, no. 1137 (January, 1996), p. 35.

adoption of open coaches by BR in the 1950s could equally be seen as progressive in that it was either American-influenced or road-modelled, just when US style was a design trend in the motor industry.³¹ Many passengers preferred the compartment which delivered (sometimes) privacy and relative quietness (at speed, 10dB quieter); nevertheless Christian Barman, analysing passenger amenity, concludes that open coaches are better, although compartments suit the individual.³² A senior BR officer announced, patronisingly, that ‘first class passengers prefer the greater privacy of compartments, the second class like the more gregarious, even matey atmosphere that they get in a bus’ and Lord Wise in a House of Lords debate claimed, ‘there is a friendly atmosphere about travelling by diesel train’.³³ The DMU’s open layout could be described as a further example of Urry’s ‘collective gaze’, all those travelling being included with the vision through the windows, a situation perfectly illustrated in the British Transport film ‘Diesel Train Ride’. On the other hand a compartment’s ‘romantic gaze’ relies on individual contemplation of the outside. Bearing in mind Judith Adler’s American explanation of the car’s early popularity as based on its similarity to the horse-drawn coach and its difference from the train, we could also see the DMU open coach as a negative factor in passenger appeal, the car providing a more congenial ‘compartment’ atmosphere.³⁴

³¹ Wolfgang Schivelbusch, *The Railway Journey: Trains and Travel in the 19th Century*, translated by Anselm Hollo, (Oxford: Basil Blackwell, 1980), pp. 88-117.

³² L. Lynes, *Railway Carriages and Wagons, Theories and Practices*, (London: Locomotive Publishing, 1959), p. 32; Christian Barman and M. G. Bennett ‘Living with Transport: a Survey of Amenity Requirements in a Public Passenger Transport Service’, *The Journal of the Institute of Transport*, vol. 22 No 17 (1948), pp. 605-12.

³³ *British Railways North Eastern Region Magazine*, vol. 10 (1959), p. 333; *Hansard*, HL Deb 27 November 1956 vol. 200 c604.

³⁴ Urry, *The Tourist Gaze*, pp. 100-01; Judith Adler, ‘Travel as Performed Art’, *American Journal of Sociology*, vol. 94, no. 6 (May, 1989), pp. 1366-91.

The wrap-around windscreen as used in the 'Trans Pennine' DMU's, (and which also appeared in the 'Blue Trains' and the 1962 'Clacton electrics') is used to exemplify the beneficial influence of the BR Design Panel which was convened too late to influence the majority of 1950s DMU design by, for example, T. H. Summerson (its chairman) and Brian Haresnape, principal railway design historian.³⁵ Not only did drivers find the close supervision by their passengers uncomfortable, the expanse of windscreen made them vulnerable to stone-throwing vandals too, particularly the wrap-around versions. G. Grubb, in discussion following A. E. Robson's paper on 'Railcar Development', contributed that wrap-around windscreens were influenced by contemporary motor car design; by implication he suggested they were modish and would date quickly. At another presentation of Robson's paper R. W. Taylor described his experiences of such screens. He said they were difficult to fit sufficiently tightly, leading to water leaks into control equipment causing unreliability and could even 'become detached ... during stormy weather', understating such experiences as 'somewhat disconcerting.' Later research showed that a low-reaching window, far from improving the driver's vision, caused discomfort.³⁶ However, on their introduction in 1961 BR's North Eastern Regional magazine was quick to point out that, if the wrap-around screen gave the driver a better view, it also

³⁵ T H. Summerson, 'The Role of Design in Public Transport', *British Transport Review*. Vol. 6, no. 3 (April 1961), pp. 185-95; Brian Haresnape, *British Rail Fleet Survey, 8 Diesel Multiple-Units: The First Generation*, (Shepperton: Ian Allan, 1985), pp. 67-68.

³⁶ C. David Wilson, *Forward! The Revolution in the Lives of the Footplatemen 1962-1996*, (Stroud: Alan Sutton, 1996), pp. 48-69, 105-07; Philip S. Bagwell, *The Railwaymen, a History of the National Union of Railwaymen, Volume 2: the Beeching Era and After*, (London: Allen & Unwin, 1982), pp. 53, 82; 'The Driver's Cab', *Diesel Railway Traction*, 1963, pp. 274-80; Roger Ford 'Engineers Look at Drivers' Cabs', *Modern Railways*, vol. 35 (1978), pp 22-23; A. E. Robson, 'Railcar Development on British Railways', *Journal Of The Institution Of Locomotive Engineers*, vol. 52 (1961), Paper No 632, Mr G. Grubb and Mr R. W. Taylor in discussion following, pp. 113, 123.

improved that for the passengers.³⁷ Brian Haresnape attributes the difference between EMU cab design on the Eastern Region compared with the Southern Region in the late 1950s/early 1960s was a result of the Eastern requesting the wrap-around and the Southern ‘adamant’ about retaining small flat windows. As he remarks, ‘...in the battle against vandalism – the SR men were right...’³⁸ Not always was the DMU’s forward panorama appreciated, even on the scenic Settle-Carlisle line where Andrew Wilson contrasts the DMU (unfavourably) with the more traditional comfort of a Mk1 coach.³⁹

If the open DMU coach was the antithesis of the motor car’s closed compartment the DMU provided a link to another familiar feature of the car. The forward panorama is also the view through the car windscreen, a view which Mauch and Zeller claim has redefined our perception of the world through its ubiquity; the DMU therefore had the dual appeal of novelty (for the train) and familiarity (with the car).⁴⁰ Neither Mauch and Zeller nor Urry identify that the windscreen view is quite different from Schivelbusch’s lateral panorama; Urry repeats that insulation from the world outside, a process which had begun with rail travel and which he thinks of in terms of spatial ‘privatisation’, has increased in today’s cars, something that is also detailed by Kurt Möser.⁴¹ Peter Merriman, who quotes Banham’s idea that the

³⁷ For example: A. E. Robson, ‘Railcar Development on British Railways’, *Journal of the Institution of Locomotive Engineers*, Vol. 52 (1961), Paper 632, pp. 60-145; ‘Enter the Trans-Pennine’, *British Railways North Eastern Region Magazine*, vol. 12 (1961), pp. 38-39.

³⁸ Brian Haresnape, ‘Losing Face’, *Modern Railways*, vol. 40 (1983), pp. 34-35.

³⁹ Andrew Wilson, “‘Seeing is Believing’”: BR’s Marketing of the Settle & Carlisle’, *The Railway World*, vol. 46 (1985), pp. 581-85.

⁴⁰ Christof Mauch & Thomas Zeller, *The World Beyond the Windshield*, (Athens, Ohio: Ohio University Press, 2008), p. 1.

⁴¹ Kurt Möser, ‘The Driver in the Machine: Changing Interiors of the Car’, in Helmuth Trischler and Stefan Zeilinger, (eds), *Tackling Transport*, (London: NMSI Trading, 2003), pp. 72-74.

windscreen view is more attention-grabbing and accordingly less relaxing, comprehensively summarises commentators' analyses of the two aspects.⁴² Möser also reminds us that in early cars, by their separation of the driving and travelling areas, the passengers enjoyed a view similar to the conventional, lateral one from the road coach or train and that in the days before toughened windscreens any glass represented a significant danger in an accident.⁴³

⁴² John Urry, *Sociology Beyond Societies: Mobilities for the Twenty-first Century*, (London: Routledge, 2000), p.63; Schivelbusch, *The Railway Journey*, pp. 59-60; Peter Merriman, *Driving Spaces: a Cultural-Historical Geography of England's M1 Motorway*, (Oxford: Blackwell, 2007), pp. 12-16.

⁴³ Möser, 'The Driver in the Machine', pp. 64, 69.

13 TERMINATION

This study shows that the view from the train is an important part of the traveller's experience, enjoyed by most and ignored by few.

Schivelbusch recognized that the coming of the railway and its attendant technologies, the 'machine ensemble', also brought a new way of seeing the world which was not only a more rapid progression of images, those in the foreground becoming invisible, but also encouraged the viewer to focus on the middle and far distances – the 'panoramic perception' – and encouraged reading as an alternative occupation. Revill has looked again at the received wisdom of Schivelbusch's study and brought new light by showing that the links between train, passenger and the outside are brought into a different focus when the train pauses.

I have expanded the conventional, lateral view from the train to include the augmentation which accompanied the introduction of diesel and petrol technology and came into large-scale appreciation with the large fleet of DMUs introduced in the 1950s, and which has – lamented by many – now almost disappeared. The similarity between such views and those through the car windscreen mean they also became less special. The view has been exploited by railway companies keen to demonstrate the fineness of their territory and the smoothness of their technology by the introduction of observation cars on selected routes. Again, these vehicles have largely been abandoned but some survive in special circumstances such as preserved railways. Always keen to show off their territory in posters, companies have deployed the view from the train to that end, sometimes with deceptive images and they have produced guides to the lands they cross to inform and entertain their customers. A few railways have, through need, adopted an

elevated position; the LOR in particular made much capital out of this to boost passenger numbers and improve its always difficult financial situation.

Some more or less unlikely stories about the inspiration for invention have also been discussed. It seems that the idea of an idea is conveniently explained by placing the inventor in a familiar, comfortable setting, gazing out and letting new schemes germinate in his mind. The train's window has also proved to be the inspiration and method of perpetrating crime, both real and imagined. Often the imagined crimes have strained credulity. To those not the victims of assault, violence has sometimes come accidentally through the agency of attempts to observe the passing scene – outside or inside the train - more closely than is wise.

The denial or provision of a convenient way of looking out was one way in which the early railway companies imposed class distinctions upon their customers. The role of the Board of Trade in attempting to improve, through regulation of standards of accommodation, the lookout for the third class passenger in the nineteenth century has not previously been given the attention it deserves.

Circumstances have arisen when companies have chosen or been forced to limit the outlook for their passengers. This has sometimes been a cause of concern and, on occasion, over-reaction. Even underground railways have their views and the passenger will not be denied them; after all he has to know when to get off at least. Information of this sort is essential for the main-line traveller too; he likes and needs to know where he is but has objected to being force-fed gratuitous advertising as he looks out.

Hand-in-hand with the provision of a view, the train window allowed ventilation which was essential for health and the source of disagreement between passengers who could not decide just how much was necessary. There are links between the provision of views and ventilation not only to

passengers but also to other enforced 'residents' – schoolchildren, prisoners and hospital patients. Air-conditioning has taken the choice away from the passenger, which does not suit everybody. Tilting train technology brought new health problems, APTly summed up in the phrase 'mal-de-tilt', which were at first denied, then accepted and finally overcome for most travellers. Health considerations are a recurring and surprising theme in this examination.

Today's traveller is faced with more than a book to read as an alternative to gazing from the window, attractive though this may be. Many can be seen amusing themselves listening to music and playing films on their computers. For those who can no longer use the journey as an excuse not to work they can take some comfort in that their spreadsheets or word processing are at least the product of Windows TM.

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