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**Article:**

Tennent, Kevin Daniel orcid.org/0000-0003-1952-5969 (2017) Profit or Utility Maximizing?: Strategy, tactics and the Municipal Tramways of York, c. 1918-1935. *Journal of Management History*. pp. 1-40. ISSN: 1751-1348

<https://doi.org/10.1108/JMH-05-2017-0026>

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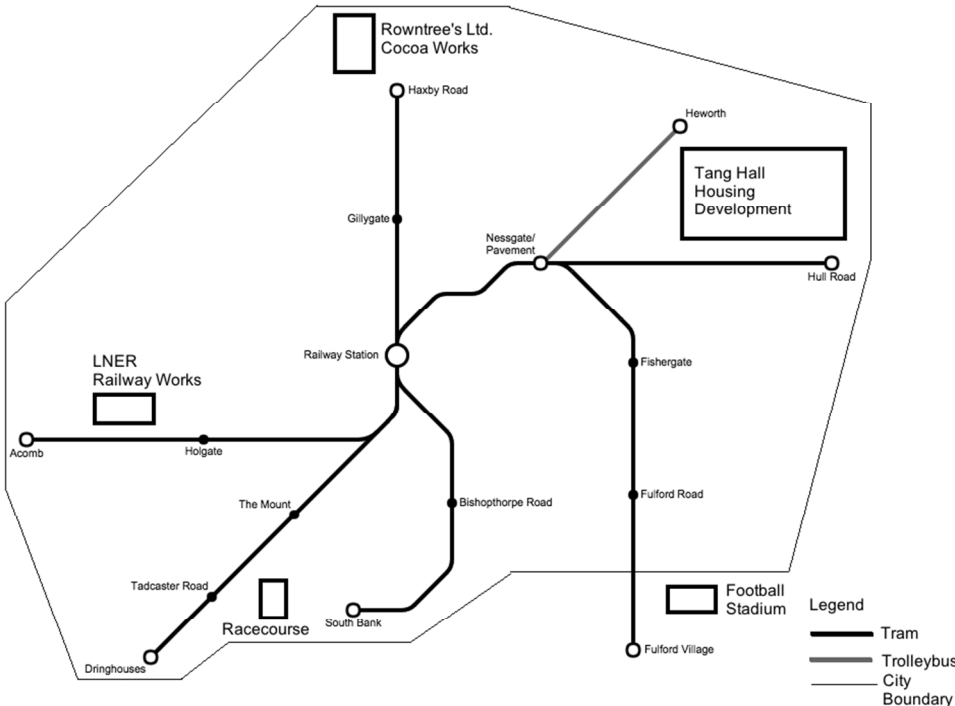
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**Profit or Utility Maximizing? Strategy, tactics and the  
Municipal Tramways of York, c. 1918-1935**

Journal:	<i>Journal of Management History</i>
Manuscript ID	JMH-05-2017-0026.R1
Manuscript Type:	Research Paper
Keywords:	Public policy, transport, Business strategy, Government and public administration, United Kingdom, urban planning

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347x251mm (72 x 72 DPI)

## **Profit or Utility Maximizing? Strategy, tactics and the Municipal Tramways of York, c. 1918-1935**

**Purpose:** This paper contests Mees (2010) theory that publically owned public transport operators normatively target their resources to maximize service rather than profit. Mees argues that neoliberal governments in the Anglosphere were mistaken to privatize their undertakings yet we show that the British ethos of municipal trading meant that municipalities always saw public transport as more of a business than a service.

**Methodology:** We use an archival microstudy of the municipal tramway undertaking of the English city of York, using municipal archives triangulated with local and industry media sources.

**Findings:** We propose the refination of the Mees spectrum of public transport from public to private (2010, pp. 73–75) to note that public undertakings can be operated within a profit-maximizing framework.

**Originality/Value:** We provide a rare historical explication of an individual municipal trading enterprise and tramway system placed in its economic context together with its wider theoretical implications.

### **Introduction**

The tramway industry sat on the front line of interwar Britain's rapidly changing transport industry, which was shifting from rail to road as the dominant mode.<sup>1</sup> Wolmar (2016) drew on Mees (2010), to bemoan the failure of British politicians to properly manage this transition. Transport policy had been constructed around the concept of mobility, rather than that of access, creating an obsession with the private

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car, disadvantaging those unable to afford a car and reducing their opportunities to access workplaces, shopping facilities, and other public buildings. Mees (2010, pp. 129–200) argues that a service, or essentially utility maximizing public co-ordination of transport together with a policy of creating a multi-modal network effect is critical in increasing opportunities for access across any urban area or indeed a whole country. Only such a system can capably and feasibly reduce car use and increase social mobility in all locales regardless of settlement size and population density. Such a policy, highly successful in Switzerland (Haefeli, 2005; Haefeli et al., 2014), a highly capitalistic country with relatively low population densities, typically ruled by right of centre governments, seems anathema across the Anglosphere, where the prevailing doctrine is that public transport must be market based and attempt to make a profit. This has been epitomized by the UK’s deregulated local bus system which leaves all strategic, tactical and operational control to private companies, giving politicians and planners almost no role at all, and precludes the introduction of routes that do not enter a city centre as they will not attract sufficient loads to make a gross profit, and thus require cross subsidy from other routes (Mees, 2010, p. 152).

This tendency is usually portrayed as being a consequence of neo-liberal politics influenced by neo-Austrian Chicago school economists (Mees, 2010, p. 147); this ideology, which has consumed conservative political parties throughout the Anglosphere (and some beyond) assumes that the market is the most efficient provider of goods and services (Friedman, 1962). This drove the British de-regulation process, inspired by the neo-romantic vision of a patchwork of small firms providing the nation’s public transport needs (Hibbs, 1972).

This paper uses a management history of the municipal transport undertaking in the English city of York in the interwar era to illustrate how the Anglosphere’s

belief in profit-maximizing public transport has deep roots in the principle of municipal trading. By doing this we aim to refine Mees' (2010, pp. 72–75) taxonomy of public transport governance structures which makes the critical assumption that public agencies are utility-maximizing bodies which aim to use their resources to provide the maximum service possible to the public, by showing that public bodies in the UK originally aimed to be profit-maximizing.<sup>2</sup> We interpret Mees' view as utility maximizing because his argument that publically accountable transport bodies design and price services to attract modal shift are compatible with Marshall's (1920, pp. 78–83) concept of consumer surplus derived from increased utility, utility being the benefit derived from consumption of a good. Consumer surplus is a measure of the benefit derived from a good in excess of its price – in the transport case, consumer surplus has the potential to be high if it exposes a person to new opportunities, such as the possibility of commuting to new places of work. Consumer surplus, and thus utility, can be maximized by reducing the unit cost of a good – and in this case we interpret this as meaning the fare price of journeys through a network, as well as other potential benefits such as the convenience of changing line or mode without excess walking or waiting time where necessary. The heightened integration of services in the Mees model thus increases Marshallian utility. If services are disintegrated, and for instance a passenger has to pay \$1 for each leg of a journey requiring one change of mode, they will derive less utility than if they had paid a fare of \$1.50 for both legs. Yet this increase in passenger utility is offset against the income for the operator, which reduces to \$0.75 per leg, hence Mees' contention that private operators have a clear incentive to price journeys per leg to maximize income and potential profit.

We then show that although by the 1920s and 1930s pressure was growing for a more redistributive model of public transport, the profit-maximizing model saw the

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abandonment of the streets to the car as tramway and trolleybus networks were lifted on economic grounds. Capital recovery for the ratepayer, rather than the provision of mobility or access, was the core aim, sealing the fate of the heavily centralized systems designed by municipal authorities. York, which was a Conservative controlled municipality for the entire length of the case study period, but there was an increasingly powerful Labour insurgency that rose as the Liberal Party declined, provides a useful illustration of these phenomena. York further constitutes a case study of global interest in that it was chosen by Seebohm Rowntree in his pioneering 1899 study of industrial town life, followed up in 1936, just after the tramways closed (Rowntree, 1941, n.d.). This study was important to social historians in forming our view of *fin de siècle* British industrial city life. Rowntree also drew attention to the issues of population density and wellbeing in his book on social conditions in Belgium that praised the state planned vicinal network for allowing workers to live in the countryside (De Block and Polasky, 2011; Seebohm Rowntree, 1910).

Much of the prior historical literature on the development and decline of public transport systems has tended to see the issue on a national or even international scale, but we argue that this highly atomistic industry requires local level perspective because the topography of individual towns influences traffic patterns within them.<sup>3</sup> Without deep archival research on individual organizations it is difficult to gain an appreciation of their dynamics as organizations. Data is sometimes cherry picked from the archives or local newspapers of various cities, apparently at random. Schmuki (2012) follows this serendipitous approach by using archival materials from a range of cities including York, but in attempting to construct a metanarrative, claims there was an appetite for suburban tramway expansion even while local histories demonstrate that there was opposition (Richardson, 1963, p. 45). Where case studies

do exist they are often deeply focused on the sequential narrative at the cost of real analysis (Klapper, 1974), or focus on the experience of larger cities (Barker and Robbins, 1974; Gibbons, 1983; Passalacqua, 2014; Yearsley, 1962; Young, 1998), likely to be outliers, or focus on the passenger experience rather than the overarching institutions (Carr, 2003; Whitworth, 2003).

A managerial and organizational understanding of public transport history can help us understand some of the larger debates around the history of management more broadly. Transport history, and especially railway history, has been foundational in the expansion of business history research, led by Chandler (1977) and who saw nineteenth century American railways as the first modern industrial enterprise, which developed a coordinative hierarchical management structure in response to the agency and safety costs of operating a dispersed rail network. Chandler and Daems (1979) broadened the scope of this view to Europe. Gourvish (1973, 1972) paralleled this in the UK, identifying nineteenth century British railways as having developed similar hierarchies, and even managerial elites; this view was later reinforced by Turner's case study of the London and South Western Railway (2013). Gourvish's (2008, 1986, 2004) work on British Rail and its successors further contributed to our understanding of the railways as a complex industry of strategic importance to society which necessitated public sector involvement, ably illustrating the chaos unleashed upon the industry's privatization. Public transport away from the mainline railways had a considerable organizational scope and impact upon society within itself, yet still holds considerable potential for management history enquiry.

In exploring the field of public transport governance we need to further understand further how political processes in municipal organizations intermesh with organizational dynamics. We follow the lead of Holt and Popp (2013) in constructing



a microhistory to delve into the monad, to explicate the ‘exceptional-typical’, and to escape from the narrow modal determinism which characterizes many macrostudies on urban transport, such as Post (2007), or Green (2016).<sup>4</sup> Almost all traditional British tramway systems failed, and most of those were municipalized, but significantly most of them were also in mid-sized towns rather than large cities. Mundane and everyday the experience of these systems may appear, and at an individual level their collapse may seem inconsequential, but the cumulative impact of this collapse has been vast and a case study approach is critical in relating the illimitable knowledge of the specific to the global. Mees (2010, pp. 142–146) uses a microstudy of transport co-ordination in the Swiss municipality of Schaffhausen, which has a population of 44,000 to demonstrate that modal shift can be achieved using a utility maximizing strategy, even in small cities, or where population densities are low. The evaluative and narrative power of Holt and Popp’s approach to historical organization studies is further endorsed by Maclean, Harvey and Clegg (2016, p. 623–624;626) and Wadhvani and Jones (2014), demonstrating that microhistory allows us to reclaim forgotten knowledge from history, by ‘highlighting the general in the particular’ thus in this spirit we aim to achieve ‘dual integrity’ by refining historical knowledge while refining the theory explicated and conceptualized by Mees.

Scholars focusing on the decline of urban public transport systems have often looked to the most extreme and dramatic examples. It is unsurprising that Southern California, where the Pacific Electric and Los Angeles Railway systems declined from a vast network to closure over a forty-year period, should capture the imagination of so many scholars of public transport (Friedericks, 1992; Mees, 2010, pp. 15–20; Yago, 1984). These systems were conceived to drive urbanization and land

speculation over hundreds of square miles, rather than provide services in already existing urban cores; they were qualitatively different in both form and purpose to those seen in Europe, and it is hard to see how the Californian experience could have any real relevance for ancient cities such as York. Elsewhere in the US systems were generally privately operated by larger business groups involved in land speculation, water and electric utilities, and the creation of theme parks as destinations (Post, 2007, pp. 58–59), even if subject to heavy regulation by local authorities. They came at a time when the US was an expanding settler economy, with many new cities springing up; it was not surprising perhaps that the resistance to overhead wires was greatest in the older cities of the East Coast (Schatzberg, 2001). The companies, owned by figures such as Henry E. Huntington who were often portrayed as robber barons were never popular, and the high costs of cooperating with them often meant that it was easier for US cities to allow streetcar networks to fall into disuse than to assist them in evolving into sustainable public transport systems (Mees, 2010, pp. 12–20).

This was not the case in Britain where the 1870 Tramways Act allowed for systems to be municipalized at asset price after 21 years of operation (Knoop, 1912, pp. 27–28). Studies show that local democratic control has been important in sustaining public transport systems, particularly in late twentieth century Zurich (Haefeli, 2005; Haefeli et al., 2014; Mees, 2010, pp. 129–142), but the presence of municipal control, and an increased franchise, in the UK did not deter local authorities from dismantling their tramway systems in the 1920s and 1930s. British tramways were typically built to generate profit and support electricity systems for the common good in existing cityscapes using existing radial roads rather than acting as conduits for private speculation, becoming integral to the socio-technical systems of the city,

much as in other European countries. While Schatzberg (2001, 2006) demonstrates that Americans were angry at the introduction of overhead wires, Schmuki (2012) shows that Europeans welcomed the demise of horse drawn tramways, mechanical propulsion being more conducive to urban hygiene.

British urban planning itself also followed distinct patterns from those seen in the USA, where suburbanization started earlier. Much of the real British suburban expansion started from the mid-1920s, driven by slum clearance and an increasing appetite for owner occupancy (Pooley, 2000), and tended to be more influenced by the reactionary arts and crafts planning ideals of architects such as Richard Parker and Raymond Unwin (Grindrod, 2013), and the town planner Ebenezer Howard (1902), who favoured urban rail, than Le Corbusier who viewed trams as an unjustified obstruction to the passage of traffic in the modern city (1929, p. 169). Nonetheless, the bus was the primary means of providing public transport to these new suburbs (Whitworth, 2003). Le Corbusier's influence in the UK would mostly express itself from the late 1950s onwards, long after most tramways had disappeared (Grindrod, 2013). For reasons not explored by Whitworth but which will be explicated by this paper, bus services were rarely integrated with the trams, which typically served the more established parts of a city.

This disintegration was simply the continuation of a longer term British pattern of disjointed transport management, which this paper proposes was a product of the peculiarly British tradition of municipal trading, overlooked by Mees in his continuum of transport management models. British tramway funding and management derived from the circulatory ethos of Victorian and Edwardian capitalism which emphasized the embodiment of the economy and society as the essential circulation between capital and production (Ashford, 2013; Schivelbusch,

1986).<sup>5</sup> People were circulated around the body of the city; capital was circulated in through investment in infrastructure and rolling stock, and returned back through the relief on rates offered by tramway fares. Municipal trading had first emerged in the gas and water industries where natural monopoly prohibited the existence of multiple suppliers (Coombs and Edwards, 1996; Falkus, 1977; Foreman-Peck and Millward, 1994; Kellett, 1978; Matthews, 1986; Millward, 2005, 2014; Millward and Ward, 1993; Roberts, 1984). Cities instead moved to capture the rents of these monopolies, reducing the rates paid by wealthy burghers, legitimating intervention in private business even for the politically conservative. The emergence of electricity and the need for a daytime load for power stations created an entrepreneurial opportunity for British local authorities to expand their revenue creating businesses into the transport of the working classes (Foreman-Peck and Millward, 1994, pp. 163–165; Hannah, 1979, p. 19). This had similarities to the US model where streetcar routes were promoted by electric power companies, but was different in that the tramways were intended to be viable in their own right. Finer (1941, p. 28) showed that industries with a local scope yet where a large start-up capital was required compared to operating cost had been ideal for municipalisation; the alternative being that competition between producers would result in wasted resources yet a private monopoly would leave local consumers at the mercy of producers. The anti-municipaliser Porter (1907, p. 43) conceded that the economic superiority of private utilities was contingent upon their owners being ‘good citizens’. In the US local authorities spent years in legal wrangling with companies to restrict fares or set service patterns, a tendency which ironically forced many into bankruptcy after the inflation spike following the First World War (Mees, 2010, pp. 14–20; Post, 2007, pp. 35–90; Young, 1998). As will be seen below, while statutory fare restrictions still

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3 applied, British local authority tramways, situated in a country where financialized  
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5 capitalism had been established since at least the 1690s (Smith and Tennent, 2017),  
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7 were closer to classic profit maximizing businesses in their own right than either the  
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9 US or continental models. To construct a loss leader by charging fares below that  
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11 required for a return on capital would have been inimical to British local authority  
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13 thinking which stressed the need for a return on capital, and the idea that municipal  
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15 trading organizations should at least be ‘self-supporting’ was championed in  
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17 contemporary textbooks (Knoop, 1912, pp. 10–12). There was one slight exception to  
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19 this framework in Scotland where local authorities were legally obliged to pay any  
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21 surpluses into a ‘common good’ fund for municipal improvements (Warren, 1923, p.  
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23 75), despite Glasgow Corporation having pioneered the surplus generating model in  
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25 the tramway industry (McKay, 1976).  
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30 Local government in England and Wales had evolved over the centuries in a  
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32 hotchpotch model of local privileges distributed from Westminster, until it was  
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34 regularized by the 1888 Local Government Act, which created a framework of 62  
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36 elected County Councils which administered rural areas together with a framework of  
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38 district councils, and 61 County Boroughs, which governed urban areas and were  
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40 granted the powers of both County and District councils together (Wilson and Game,  
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42 1994, pp. 56–58). County Boroughs had independent powers to raise finance and  
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44 thus were extremely powerful within their areas; as well as being able to trade  
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46 municipally they had powers and responsibilities including the provision of education,  
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48 highways, policing, sanitary facilities, public health, and urban planning among others  
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50 (Finer, 1933, pp. 40-42-82). York, falling on a three way boundary between three  
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52 counties, the North, East and West Ridings of Yorkshire, was a natural choice to  
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54 become a County Borough in 1889. The local government franchise evolved  
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separately from the national franchise and was somewhat ambiguous before the Representation of the People Act 1918 regularized it; generally before 1918 all ratepayers who had occupied houses for two and a half years were allowed to vote, although Smellie (1946, pp. 97–98) suggested that this excluded working class voters as rates were often not levied on their properties. This may have increased the incumbent Conservative and Liberal vote before 1918 and encouraged local authorities to seek trading opportunities that could relieve the rates. After 1918 this was expanded to all men over 21 and women over 30 who had occupied any property in the borough area for six months, as well as to the wife of any occupier, again if over 30. This may have brought more households into ratable value for the first time as well as expanding the franchise and put local authorities under broader pressure to move away from trading towards a more redistributive view of the polity. Certainly English local authorities enjoyed a wider franchise yet, being reliant on property taxes, had less freedom over spending than those in Germany, where in Prussia it was possible for cities to levy a surcharge on income tax, perhaps encouraging the growth of the more communally based system of local government there, though the Weimar period would see some regularization of their powers (Bingham, 2008, pp. 10–33).

Unfortunately full financial statements for York in terms of income flows and expenditure apart from the property value based rate tax do not appear to have survived for the years before 1929, so it is difficult to fully see the impact of this on our case. By the end of the 1920s almost 90% of the Corporation's revenue was derived from the rates, with profits from municipal trading in reality negligible, despite the overbearing ideology (table 1) (York Corporation, 1929a, 1930a, 1931a, 1932a, 1933, 1934a, 1935a, 1936, 1937). Grants from central government would also become more important in the 1930s, but generally the Corporation was still heavily

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reliant on local ratepayers for its income by this time, and as the generally low net profits from the corporation’s tramway undertaking suggest (table 2) it would be realistic to assume that profits from municipal trading were not sufficient to support it at an earlier time.

**Insert Table 1 here**

Yet despite their apparent low contribution to rate support in practice the principal of self-supporting undertakings was even reinforced by left leaning authors such as Shaw (1904) and Warren (1923), as well as Robert Donald, the editor of the *Municipal Journal* (Roberts, 1984, p. 25), who argued that municipalization could generate social as well as economic profit, increasing the wellbeing of both tramway workers and workers more generally. Municipal capital, underwritten by ratepayers and thus generally available at lower interest rates, could lower operating costs meaning that fares could be reduced almost to cost price while staff pay and working conditions improved (Shaw, 1904, pp. 29–52). Warren (1923, pp. 7–11) saw municipal trading, including transport, as constituting into a separate sphere from redistributive services provided to the public below cost or out of the rates such as schools or hospitals, street maintenance or lighting. While dividends were not paid to outside shareholders, and supply could be maintained close to cost, small surpluses had to be generated to repay interest and loans, which were themselves supported by the security of ratepayers (Warren, 1923, pp. 32–35). Therefore because ratepayers expected municipal enterprises to be self-supporting, public transport investment was more likely to be concentrated where traffic was already sufficient to justify it, that being where population densities were greatest. Knoop (1912, p. 39) reflects this view, suggesting that tramways could not be viably made to pay at all in smaller



cities, while larger cities might subsidize population decentralization using tramways, but only if the overall undertaking remained profitable.

Municipalities followed this prescriptive advice by targeting commuters from residential areas to city centres and large factories, constructing radial tram and later bus systems which made it difficult, slow or costly to travel from one part of a city to another. The York case demonstrates the practical implementation and influence of these ideas; in later years Labour politicians and to some extent the system's management tried to introduce more equitable policies but were ultimately thwarted by the dominant idea of financially self-sufficiency. York was a relatively small city, yet twice the size of Schaffhausen, with a population of 75,812 in 1899 rising to 89,680 in 1936; density fell rapidly too from 50.6 persons per hectare in 1899 to 34.3 in 1936 (Rowntree, 1941, n.d.). We suggest therefore that rather than high quality public transport itself, the tendency towards profit maximization in public transport is the unsustainable paradigm for small urban centres.

We now proceed to narrate the case study, traversing in and out of the monad, placing it into a contextualized discussion, following Mees' framework of the strategic, tactical and operational in a transport organization (Mees, 2010, p. 72).

### **Strategizing for Profit: Before 1927**

The York Tramway Company built York's first tramway system, opening in 1881 (Murphy, 2002, p. 1). This initial single line undertaking proved unable to make money, and was overtaken by the growth of the tramway municipalisation movement and the subsequent electrification of these systems around 1900 (McKay, 1976). York Corporation eventually purchased the system for £11,000 in 1907 (Murphy, 2002, p. 5), holding a plebiscite to approve plans to electrify the original line and add five new



radial routes, funded by powers to raise a loan of £149,500 (Peacock, n.d., p. 177). The 3 foot 6 inch (1.0668 m) gauge system was completed by 1916 (see figure), financed by a £128,600 bond issue (Murphy, 2002, p. 6; York Corporation, 1932b; “York Corporation Tramways”, 1910).<sup>6</sup> In his speech at the opening ceremony, Alderman Meyer outlined his hopes that the system would ‘pay’, while providing ‘every facility’ for workmen and symbolising York’s belief in progress and modernity. Radial petrol bus and trolleybus routes were added by 1921, but indebtedness exceeded £200,000 by 1922 (Murphy, 2002, pp. 8, 11; York Corporation, 1932b). In this early stage the Corporation did not secure the cooperation of all outlying districts – notably the parish of Acomb blocked an extension at a town hall meeting in 1914 (Richardson, 1963, p. 45). Profit maximisation was important in route design – wealthier suburbs in the south and west were preferred while ‘civic duty’ consisted of serving prominent enterprises in the city, such as the Rowntree confectionary factory (Municipal Tramways Association, 1926, pp. 85–87).

**Insert figure here**

Reflecting Hannah’s (1979, p. 19) view that tramways offered a captive market for municipalised electricity, until 1923 the Corporation’s electricity committee managed the tramway; the two were then split (York Corporation, 1923a, p. 1). The two undertakings had already been split managerially in April 1922, with the appointment of J. A. Bromley who had worked for Leeds and Keighley Corporations, as tramways manager (*The Yorkshire Post*, 1922a). The tramways manager enjoyed considerable tactical and operational power, but strategic

management was to a large extent a concern of the committee, a body made up of eleven delegated councillors, although major decisions were always subject to approval by the full council.

**Insert Table 2 here**

Profit maximisation proved difficult to achieve in practice. As table 2 demonstrates gross margins of 10-20% were maintained throughout the 1920s, but this was insufficient to repay the capital cost of the system. Only two rate relief payments would ever be made, in 1912 and 1913 (York Corporation, 1932b). Passenger journeys by tram had reached a high of 1 million in the 1918-19 reporting year but suffered a slow decline thereafter (York Corporation, 1918, 1919, 1928a, 1929b, 1930b, 1931b, 1932b, 1920, 1921, 1922, 1923b, 1924a, 1925, 1926a, 1927a). The debt burden created political pressure for cutbacks in service levels without a reduction in fares. In April 1922 frequencies between 9am and 12pm on four routes had already been cut from eight trams per hour to six, while fares remained at 2d minimum, a rate that was maintained above the statutory level of 1d per mile by special dispensation from the Ministry of Transport (MoT), until cut to 1.5d per mile with extra gradations of 2d and 3d from March 1924 (The UK National Archives RAIL 1055/6, 1908; *The Yorkshire Post*, 1922b, *The Yorkshire Post*, 1923; York Corporation, 1923a, pp. 52–54, 83–84). Bromley publically warned that any price below 1.5d would force the corporation to subsidise the tramway out of the rates (*The Yorkshire Post*, 1923). Fares on workpeople's trams, which were statutorily required to operate before 8am or after 5pm, were fixed at a ½d per mile with a minimum fare

of 1d, making it difficult to exploit commuter traffic (The UK National Archives RAIL 1055/6, 1908; *The Yorkshire Post*, 1923; York Corporation, 1924b, pp. 83–84).

Strategic ambitions for the extension and modernisation of the system remained. Ratepayer requests for new services usually led to expansions of the corporation’s motorbus system (York Corporation, 1932b). Road improvement was often required but cheaper than laying rails and had the potential to attract funding under the MoT’s unemployment relief scheme (Bromley, 1923, p. 40). A protracted discussion through 1923 saw the introduction of a new bus route in the western suburbs in spite of Bromley’s preference to create a tramway loop by joining the new route with an existing one (Bromley, 1923; Richardson, 1963, p. 45; York Corporation, 1923a, 1924b). He also proposed to modernise by converting existing lines to inter-urban style off-road routes built on sleepers and ballast to reduce maintenance costs (Bromley, 1924; York Corporation, 1924b, pp. 87–88). These initiatives were restrained by the council’s wariness of committing further capital, even if expansion into the countryside might encourage further commuting. When a major urban housing development was undertaken in the mid-1920s, opportunities to expand the tramway or trolleybus system as part of this work were not taken. Instead a bus route to the city centre was introduced, paralleling a tramline for some distance (York Corporation, 1927b, pp. 355, 370, 438). When considering new transport provision the committee remained determined see it only as a business proposition. The setting of fares was always a political decision rooted in the necessity of keeping the tramways ‘off the rates’. Indeed, the Corporation tried to keep rates at the low level of around 8 shillings in the pound despite the economic disruption of the war and its aftermath, but was forced to more than double them by 1922 before setting at around 14 shillings in the pound (see table 1).

Knoop (1912, pp. 115–119) and Shaw (1904, pp. 59–61) had both suggested that the English local government system which confined municipal undertakings to operation within their boundaries, even if run on profit-maximising lines, was likely to undermine the viability of municipal trading. This would prove decisive in York. Nationally this had precluded the introduction of vicinal or inter-urban systems as seen in France, Belgium or Southern California (De Block and Polasky, 2011; Hilton and Due, 1960; Turner, 1999). The unforeseen legacy after 1918 was the creation of a space for bus operators who had no loyalty to any single jurisdiction. Small bus operators initially dropped their passengers off at suburban tramway termini; as they grew they demanded licenses to run into the city (York Corporation, 1924b, p. 87). The Corporation had powers to enforce a minimum fare of 3d on bus operators but in a 1926 appeal against this clause by one such private operator, Northern Motor Utilities Ltd., Bromley admitted that without these powers, the municipal tramway would not be a feasible undertaking (Municipal Tramways Association, 1926, pp. 85–87). As suburbanization crept beyond the city boundaries, opportunities for competing bus services would increase, but York Corporation assumed those living there would still walk the short distance to use its trams and buses. These private bus services remained disintegrated from the Corporation's tramway system while sometimes running on the same streets.

### **Political controversies c. 1927-1932**

By the late 1920s the profit maximising approach started to come under political pressure, while councillors would increasingly step into the tactical and operational spaces. In the 1925-1926 municipal year, at a time when the Conservatives dominated the council with 26 councillors to 11 Liberals, 6 Labour members and 5 independents

(*The Yorkshire Post*, 1925) there were three Labour members on the transport committee together with four Conservatives, two right leaning independents, one Liberal, and the Lord Mayor. This proportion would gradually increase until the 1929-1930 municipal year, when Labour's position on the council reached its high watermark in our period with 13 seats to the Conservatives 26, the Liberals retaining 7 and independents 2 (*The Yorkshire Post*, 1929); Labour were given five committee seats to the Conservatives' four. There was also a change in professional management, as J.A. Bromley took up a new post as General Manager of the tramways of Durban, in South Africa, being replaced in Spring 1928 by Robert Asher, Edinburgh Corporation's Assistant Manager and Permanent Way Engineer, who remained committed to the profit maximizing model but was slightly more passenger focused (York Corporation, 1928b, pp. 392, 397–398, 403).

Fares, a tactical concern, became a political battleground, characterised by the Corporation's resistance to issuing transfer tickets that would allow travellers to change line without paying twice. This policy was typical of British local authorities who were more concerned at a strategic level with self-sufficiency than the provision of access; by contrast German cities encouraged passengers to change lines regardless of route by using a zonal model determined by distance travelled.<sup>7</sup> Bromley took a hard line against cross-subsidy, arguing that passengers changing from one vehicle to another would do so at a 'dead loss' (York Corporation, 1926b, p. 260). This discouraged cross-city journeys. In 1928 the Traffic Sub-Committee suggested a 2d transfer fare, with passengers allowed to change at specific central points (York Corporation, 1928b, pp. 376, 381). This was implemented from 1<sup>st</sup> July 1928 (York Corporation, 1928b, p. 409), though it was increased to 3d later in the year, partly to mitigate cross subsidy – 2d of revenue could be attributed to the first vehicle used by

a passenger, and 1d to the second (York Corporation, 1927b, pp. 448, 452). Timetables were changed to encourage transfer – previously three tramlines met together at the railway station at six-minute intervals, but this created six-minute gaps through the city centre where two or three lines ran together, encouraging passengers to walk rather than waiting. A staggered system allowed passengers two minutes to change at the station, improving integration (York Corporation, 1928b, pp. 437–440, 445–449). York's transfer tickets, though charged at a premium, were relatively progressive - Finer (1941, p. 355) found that of 86 UK undertakings surveyed, 56 still allowed no form of transfer tickets, seven more than Knoop had found in 1912.

Single route tickets were controversial too, with the operation under pressure to become self-sustaining from the Conservative faction yet more redistributive from the Labour side. In the first twelve weeks of the 1927-28 financial year operating costs exceeded receipts by 2d per mile (York Corporation, 1927b, p. 350). In October 1928 Asher proposed the introduction of  $\frac{3}{4}$  mile stages of 1d, with 2d the maximum fare. This system was implemented on 11 January 1929 (York Corporation, 1929c, pp. 466–467), but was undermined by a sudden rise in petrol prices by 2d per gallon in March 1929 threatening the annual profit after interest of £143 projected for the bus services (York Corporation, 1929c, pp. 487–488). The fares sub-committee argued for an increase back to 2d for bus services and further reconsidered fares for the tram and trolleybus services (York Corporation, 1929c, pp. 488–489), leading to political disagreement. Labour's Councillor Horsman moved for a return to the 2d fare, but keeping a 'popular 1d stage' in the city centre. The Conservative Councillor Rowland counter argued for a 2d flat rate including transfers between trams, and 3d transfers for changing mode. In the end, Councillor Morrell, a more independently minded Conservative, moved that the fares experiment be continued until 31<sup>st</sup> May

and this was carried as a compromise (York Corporation, 1929c, pp. 495–499). The full committee, meeting on the 14<sup>th</sup> May, resolved that given the traffic statistics from April there should be a return to the 2d minimum (York Corporation, 1929c, p. 499). Councillor Harwood, a Liberal, took up Horsman’s position at the next council meeting (*Yorkshire Evening Press*, 1929). At the meeting the chair claimed a 1d fare would ‘have the trams on the rates’; yet councillors of all parties feared the electoral consequences of higher fares. Those representing parts of the city served only by bus feared that residents would feel discriminated against by an increased transfer fare. The eventual compromise saw a 2d fare with 2d transfer tickets for all services. Asher responded critically to this political intervention, as dropping the 3d transfer fare had cost £853 in the first three months of 1929, added to a £73 loss a week from the 1d fare. Like Bromley before him, he also believed that transfer tickets were open to ‘misuse’; the buses, which ran only on 20 or 30 minute frequencies, were now said to be overcrowded with connecting passengers (York Corporation, 1929d, pp. 1–5). Having encouraged extra passengers onto these bus routes, resources were not forthcoming to improve service frequency.

Political and commercial pressure produced a continued lack of effective tactical and operational thinking. In December 1929, Asher sought to cut operating costs by ending trolleybus operation and introducing petrol-powered buses, although the overhead line was kept in place (York Corporation, 1929d, pp. 18, 24–25). Lower fares had meant lower gross margins for all routes, falling from 19% in 1928–29 to 15.85% in 1929–30 (York Corporation, 1932b). Around 1930 the tram depot was enlarged to house the Corporation’s buses in readiness for ‘the ultimate form of transport adopted in the city’ (York Corporation, 1929d, p. 870), but this required an additional loan of £11,048 and further stretched the Corporation’s resources.



The committee asked Asher to set out his future strategy in a special report presented in September 1929, at a time when a £131,036 debt was still outstanding. The commitment to the profit maximising ideal remained; the long-term strategic vision was to keep the tramways, now seen as more old-fashioned, open until around 1940, before conversion to trolleybus operation. This allowed for a longer capital repayment period on the overhead equipment, which was in better shape than the permanent way. Full replacement immediately would require a fleet of 80 vehicles together with reinstatement of the roadway, and the doubling of overhead lines, costing more than £130,000. Doubling the undertaking's debt was unattractive. Asher also argued that in York's narrow streets trams still had the advantage of carrying more people per vehicle than trolley or petrol buses could yet manage, and on a fixed track that was less vulnerable to obstruction from other, slow road traffic. But the capital cost of new overhead, at £3,000 per mile, was deemed too expensive to expand the trolleybus system into the suburbs (York Corporation, 1929d, p. 870). Asher's thinking was similar to the policy of other authorities in the north of England, notably Doncaster, a similarly sized town where the tramway was replaced like for like with trolleybus around 1930 (Buckley, 1987, pp. 267–284; York Corporation, 1930c, p. 132, 1931b).

After the 1929 compromise the Corporation reluctantly subsidised the system, but the bus side received more investment, with the first double deckers being purchased in 1931 (York Corporation, 1930c, pp. 128–130, 1931c, pp. 134–136). A subsidy of £4,420 was required in 1931, while Asher attempted to modernise the trams without making strategic changes (York Corporation, 1932b). The continued operation of open topped double deck cars proved unpopular, but the MoT refused permission to enclose them on safety grounds in 1926; downstairs wooden benches



were slowly being replaced with upholstery (York Corporation, 1926b, p. 261, 1929d, pp. 24–25). Profitability deteriorated as usage declined; half a million fewer tram journeys were recorded in 1931 than in 1930 (York Corporation, 1930b, 1931b). In December 1930 earnings per car mile amounted to 13.36d while gross costs amounted to 12.37d, increased to 15.01d after interest. Bus usage did improve, with receipts per mile at 12.53d, working costs only 8.97d and net costs 10.72d (York Corporation, 1930c). Nonetheless competition and disintegration increased as four small bus companies emerged to serve the outer suburbs (*Commerical Motor*, 1930). The corporation’s powers over these competitors were removed to a regional system of Traffic Commissioners, who licensed the routes and fares of all road based public transport operators, under the 1930 Road Traffic Act. One of the reasons given for the introduction of the commissioners was concern that the local authorities had a conflict of interest as regulators of their competitors (HMSO, 1929, pp. 23–24).

**The end of Municipal Operation c. 1932-1935**

By the end of the 1931-32 financial year despite continued operating profits the undertaking had failed to make a net profit since 1927-1928 (see table 2) and the net revenue account showed a £10,467 overdraft (York Corporation, 1932b). The Corporation as a whole had fallen under financial pressure with the onset of the Great Depression in England, with income from the rates falling by almost £40,000. This

shortfall was only made up by a tripling in grants from central Government (see table 1). Their response in terms of transport would be to prioritise economic rationality over social service. The effects of disintegration were exposed; in the 1931-2 year nearly ten million journeys were made across the whole network, but 3 million were now by bus; in 1918-19 the trams had carried ten million passengers on their own (York Corporation, 1919, 1932b). Humiliated by its new reliance on Whitehall's generosity the council's response was fiscal austerity, and to comply the transport committee attempted to renegotiate its settlement with the trade unions (York Corporation, 1931c, pp. 198, 203–204, 1932c, p. 256). The committee also approved the reduction of workpeople's services, including those serving Rowntree's despite their previously alleged prestige (York Corporation, 1932c, pp. 247–252). Two years earlier a request from the City's soccer club to run dedicated cars to its ground, at the end of a radial route (see figure), on match days had been rejected on economic grounds, and the committee's reluctance to cater for the club forced it to relocate into the city centre in 1932 (Batters, 1990, pp. 114–118; York Corporation, 1930c, p. 103, Special Report on Football Traffic).

Austerity coincided with a national wave of consolidation in the bus industry, with three large groups emerging - British Electric Traction, Crosville and the Tilling Company (Hibbs, 1968, pp. 72–73). A subsidiary of Tilling, the West Yorkshire Road Car Company (WYRCC), absorbed the small operators serving the routes running into York (Hibbs, 1968, p. 262; Holding, 1979, p. 170; Leach, 2000). The Traffic Commissioners reactively confirmed the routes already in operation by the Corporation and WYRCC in October 1931, but suggested that the municipalities and private operators in Yorkshire should make agreements for the protection of tramways (York Corporation, 1931c, pp. 192, 210–211).

In February 1932 WYRCC approached the Corporation with a view to discussing the possibility of a co-ordination agreement in a ‘general scheme of transport for the City’. Negotiations continued throughout March (*The Electric Railway and Tramway Journal*, 1932a, p. 96b; York Corporation, 1932c, p. 227), and on 4<sup>th</sup> April a Special Transport Committee composed of mostly Conservative Aldermen and Councillors who were not on the existing committee was appointed. The Transport Committee was now forbidden from taking any decisions of consequence (*The Electric Railway and Tramway Journal*, 1932b, p. 132; York Corporation, 1932c, pp. 233–234). This was a signal from the Corporation that the Committee, many of whose members were longstanding, was not to be trusted with the transport portfolio any longer.

A. R. Fearnley, the General Manager of Sheffield Corporation Transport, was commissioned to report on the future of the York system. Fearnley had profitably run the Sheffield system since 1904. Anticipating competition from the bus groups, when the railways were granted road powers in 1928 he had negotiated a ‘joint board’ working arrangement with the LMS and LNER railways, with the Corporation running outer suburban bus routes as a contractor, while it continued to fully own and operate its own tramways in the inner city and suburbs (Buckley, 1987, pp. 330, 346). Fearnley envisaged a similar ‘Joint Committee or Board’ for York with the Corporation and WYRCC pooling their assets and being entitled to a 50% net revenue share, the joint committee being able to remove duplication of services as well as administration and depot facilities, while potentially continuing the tramways. This was considered preferable to the full disposal of the undertaking in that it would allow the Corporation to retain some strategic control while largely ceding tactical and operational (Fearnley, 1932, pp. 290–292). The Corporation moved forward with

negotiations with WYRCC, finding public consent for it at a town hall meeting in December 1932 (*The Electric Railway and Tramway Journal*, 1932c, p. 294).

The eventual agreement reached in February 1934 (*Yorkshire Evening Press*, 1934, p. 7), for the pooling of services within a six mile radius of York was intended to be joint in spirit, as the Joint Board was to have three members from the Corporation and three from the Company, with a rotating chair, but, in complete contrast to the joint operations in Sheffield 'day to day' managerial control was completely handed over to WYRCC's general manager, Major F. J. Chapple. Asher's services were dispensed with in April 1934, at the same time as an effective coup saw the former Special Transport Committee officially replace the Transport Committee (York Corporation, 1934b, p. 319). The joint board was in effect a reconstitution of the transport undertaking without its outstanding debt, which by now amounted to a total of £138,346 which would not be fully repaid until 1971 (Littlefair and Asher, 1934, pp. 301–303); the Corporation's 45 tramcars were taken into the venture at a value of £1,600 each, on the assumption of three years remaining life, while the infrastructure was not taken into the joint venture, the corporation remaining liable for its upkeep and potential removal. The joint committee was also given free use of the expanded depot. Employees were transferred to WYRCC, but while administrative and tramway staff retained the Corporation terms of employment, bus drivers were moved to the company's terms (York Corporation, 1934c, pp. 294–300). WYRCC were thus given an incentive to remove the trams as, while they were required to retrain as many staff as possible to operate buses, these staff would now be outside of tramway industry union agreements. For the Corporation there was also a financial case for tramway abandonment - the latest estimate put infrastructure renewal costs at £140,000 (Littlefair and Asher, 1934, pp. 301–303). In September 1934 the Transport

Committee gave Chapple the power to apply to the Traffic Commissioners for route licenses on their behalf, effectively ceding Corporation control of strategy (York Corporation, 1934b, pp. 329–330); he quickly applied for permission to replace the tramways with seven consolidated bus routes that would merge the former tram routes with the WYRCC routes outside of the city boundary (York Corporation, 1934c, p. 300, 1935b, p. 338). The last tram in York ran in November 1935 (*Electric Railway and Tramway Journal*, 1935a, p. 212B, *Electric Railway and Tramway Journal*, 1935b; York Corporation, 1935b, p. 347), but despite the attempts to avoid redundancies by stipulating the need for retraining in the agreement, a number of men were dispensed with, probably infrastructure and maintenance employees (York Corporation, 1935b, p. 346).

The abandonment of the tramways and the loss of political control brought about by the privatisation of the Corporation’s transport services was not universally welcomed. Finer (1941, pp. 293–294) commented that, although financial performance under WYRCC had improved ‘there is some dissatisfaction that the town cannot be in complete control of its transport’. Not surprisingly Conservative councillors had been more favourable to the joint agreement than the Labour faction, who expressed concern that employees would lose union recognition and that the citizenry as a whole had not been consulted (*Yorkshire Evening Press*, 1934, p. 7). By the end of 1935 Labour alleged that the new committee had not been supervising WYRCC effectively (*The Yorkshire Post*, 1935, p. 4), pointing out that the council had not been consulted about the change over from tram to bus nor had there been consultation over a fare reduction, even though the Corporation was sharing half the expense. It was also alleged that staff were working longer hours for less pay, and that the committee was already considering disposing of its stake to WYRCC for

£100,000, as the company was already exposing the Corporation to more expense. A December 1935 report showed that trading profits had only modestly improved; they had been £10,061 in the last nine months of 1933, under Corporation ownership and so far in 1935 they had only amounted to £11,802, with a subvention to the Corporation of £5,901 (York Corporation, 1935b, p. 351). This figure was expected to rise as the changeover to bus services became better established, and WYRCC financed the 28 double decker buses required to replace the tramway (York Corporation, 1935b, p. 343). Certainly, those employees lucky enough to survive had suffered a reduction in their working conditions. Men under fifty, even with more than twenty years of service found themselves frozen out of the Corporation's pension scheme, and all employees lost two days annual leave a year (York Corporation, 1935b, pp. 320, 343). Although the Corporation had generally always seen the transport undertaking as a business, it had now reduced itself to the status of a regulator that only expressed tokenistic approval of fares and timetables rather than an authority capable of deciding these things on its own merits, effectively pre-figuring the de-regulation of 1986.

## Conclusion

While it is tempting to view the development of the York Corporation Tramways purely from a financial point of view, deeper ideological and institutional concerns affected the decision makers involved. A concern with profit maximisation, and the resistance to the tramways being 'on the rates' meant that the Corporation failed to actually give the inhabitants of York an attractive and practical public transport system. It was always anticipated that farebox revenue would sustain the system financially. In line with the broader British trend transfer tickets were either not sold

or overpriced (Finer, 1941), and systemwide passes were not sold either. Radial routes were favoured over arterial and the cross subsidisation of less well used routes resisted, meaning that as suburbanisation advanced the system became less responsive to user's needs. We propose therefore that the Mees spectrum of public transport from public to private (2010, pp. 73–75) should be refined to note that public undertakings or even agencies can be operated within a system actually falling closer to private operation with discretionary regulation or private operation with de-regulation. This can happen even with democratic political input. This falls closer to the British model of municipal ownership, which persisted until at least de-regulation in 1986, and indeed which cleared the path culturally for the introduction of full private ownership. This microstudy, in a typical provincial city, illustrates the extent to which the British, encouraged by their particular history of financialized commercial culture based upon the ethos of circulatory capitalism have in essence always understood transport as more of a business than a public service, even when placed in public hands. This is a cultural tendency that applies in the UK and which according to Mees (2000) influenced other English speaking countries, particularly cities such as Melbourne, Australia, during the late nineteenth and early twentieth centuries long before the neoliberal turn; further research will be required to explicate the extent to which this occurred. Certainly, we cannot assume that the central European model of public transport ownership and operation can be normatively applied internationally, nor that it was so historically.

The political circumstances surrounding the demise of the York system illustrate this British profit-maximising tendency well. From an economic and accounting point of view the physical plant of the York system had been exhausted by the early 1930s while MoT regulations on 3'6 gauge tramcars meant that the vehicles



could not easily be updated. York's tramway system also reflected the critique of the 1929-31 Royal Commission on the basis that it had failed to recoup its start-up capital. The municipal trading business model championed by authors such as Knoop, Shaw and Warren on the basis of cheap municipal borrowing had failed. The hopeful policy makers of the 1900s and 1910s, encouraged by the prescriptive literature, could not have foreseen this. Given the expansion of the city's boundaries in 1937 (Richardson, 1963, p. 17), there was more of a financial choice open to the Corporation than the Conservative faction alleged; the undertaking having repaid £113,457 of debt by 1932, was still £127,042 below its legally sanctioned credit limit of £304,176, this being £13,000 short of the required sum of £140,000 for tramway renewals (York Corporation, 1932b). Given that trolleybus and bus gross margins had now reached 35% and 20% respectively, there was clearly at least the option for conversion to trolleybus, petrol or diesel buses under municipal ownership. The decision not to even entertain this possibility was clearly a political one. Indeed, Table 1 shows that there was no discernable positive impact of the privatisation and closure on the Corporation's overall financial position with expenditure continuing to rise in the 1935-36 and 1936-37 financial years. In any case, failure was conceived from a profit maximising rather than utility creating point of view – viewing the system as public infrastructure, facilitating access in the city, rather than a business intended to benefit the ratepayers might have created a more communalist response to its renewal. The main gain for York's passengers was that duplication between WYRCC routes running from beyond the municipal boundaries and Corporation routes ended, but the city succeeded only in replacing one radial transport system with another, lacking real integrative power.



Similar patterns were followed elsewhere in the UK, even where the buses that replaced tramways were retained in municipal hands. This did at least mean that these local authorities could thus continue to service their tramway debts from bus fares by perpetuating the profit maximising model within public ownership; York, receiving only half of the profits from WYRCC was less able to do this. But it demonstrates that the British preoccupation with profit maximising transport provision predates the 1986 deregulation and did not die away during the years of municipalisation. It further demonstrates for contemporary theorists such as Mees that while utility maximising systems where the public sector takes control of setting the strategy for public transport appear to be the most successful, they should not assume that utility maximisation will be the default mode of public ownership.

<sup>1</sup> Edwards (2015) summarizes the political dimension of this struggle in the freight industry.

<sup>2</sup> We appreciate recent communication with Bernard Mees, which was extremely useful background in terms of the preparation of the paper (2017). We note that the late Paul Mees demonstrated that municipal undertakings in tramways and public transport throughout the Anglosphere followed a municipal trading model, with particular reference to Melbourne in Mees (2000). However, this paper was conceptualized as a piece of historical organization studies in particular response to the Mees (2010) model which is aimed at urban planners and aims to refine the taxonomy set out in that work, which this paper fully aligns itself with the general thrust of. We believe the refination of the 2010 taxonomy remains valid as this taxonomy appears to view both the category 1) government or municipal department and category 2) public corporation models as modes of utility maximizing provision. We also believe that this case study, which takes place in the first twenty years of the automobile age in the UK, and which features a rare early privatization offers an extremely relevant demonstration not only of the genesis of the profit maximizing model, but also the inept responses of policy makers to the challenge to public transport wrought by motorized road transport and the market re-configurations that it brought.

<sup>3</sup> For instance, Buckley's (1987) study of South Yorkshire tramways shows that the Sheffield system survived partly because of that city's unique topography.

<sup>4</sup> For a fuller explanation of the power of microhistory to uncover the links between the micro and macro see (Peltonen, 2016).

<sup>5</sup> Ashford (2013) shows the influence of this mode of thinking on the early promoters of the London Underground system.

<sup>6</sup> There were fifteen miles of track in all; 6 miles 2 chains and 7 furlongs double, 2 miles 1 chain and 2 furlongs single.

<sup>7</sup> Knoop (1912, p. 258), found that 49 out of 85 UK municipal tramway systems did not offer transfer tickets. A further 16 allowed them only on certain sections, and 3 had previously offered them but discontinued them. In Cologne and Dresden meanwhile passengers paying 15pf were entitled to one change; in Frankfurt-am-Main all fares entitled a passenger to two free changes if necessary.

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**Table 1: York Corporation Finances c. 1914-1937**

	<b>Rate Income</b>	<b>Rate in the £</b>	<b>Grant from Exchequer</b>	<b>Total Revenues</b>	<b>Total Expenditures</b>	<b>Surplus/Deficit</b>
1914	158157	8/1.5				
1919	179218	8/11				
1920	237084	11/6				
1921	304862	14/11				
1922	365418	17/9				
1923	314733	15/9				
1924	296508	14/11				
1925	303798	14/11				
1926	294078	14/0				
1927	307464	14/0				
1928	309424	14/10				
1929	344254	13/1	21650	383941	385804	-1863
1930*	339922	13/2	23253	379850	382183	-2333
1931	301027	13/0	66000	385701	377974	7727
1932	304482	13/0	66000	385417	384666	751
1933*	302161	12/10	66000	385039	388207	-3168
1934*	303508	12/10	68000	391940	395315	-3375
1935	317879	12/6	77250	419079	426627	-7548
1936*	325901	12/6	77250	418506	421311	-2805
1937*	337844	13/0	77250	435161	434848	313

**Source: York Corporation Minutes Finance and General Purposes Committee 1928-1937.**



Table 2: York Corporation Tramways Undertaking Summary Finances, 1909-1932

	Net capital to be redeemed	Total Revenues	Operating Costs	Operating Profit	Operating Ratio	Net Profit after debt servicing
1911	115695	17604	11291	6313	64.1%	1924
1912	120120	21396	14507	6889	67.8%	1356
1913	122596	22633	15862	6771	70.1%	981
1914	150827	26850	17936	8914	66.8%	2599
1915	148553	30280	21656	8624	71.5%	1364
1916	166978	35962	24533	11429	68.2%	2019
1917	184851	40560	30939	9621	76.3%	-331
1918	182681	45632	38450	7182	84.3%	-4472
1919	177841	55190	44518	10672	80.7%	-1067
1920	175538	67961	56059	11902	82.5%	213
1921	186653	70679	65443	5236	92.6%	-5778
1922	188361	70288	57019	13269	81.1%	-34
1923	186209	69303	56201	13102	81.1%	-36
1924	183759	70584	53354	17230	75.6%	3981
1925	179887	69440	57050	12390	82.2%	-622
1926	178608	74045	58901	15144	79.5%	795
1927	172946	66939	56900	10039	85.0%	-5013
1928	168388	76364	59455	16909	77.9%	1188
1929	165914	76294	61853	14441	81.1%	-697
1930	168594	81506	68424	13082	83.9%	-2686
1931	174958	82370	67302	15068	81.7%	-1963
1932	177134	80462	67721	12741	84.2%	-5547

Source: York Corporation Minutes, Tramways/Transport Committees 1911-1932