Effect of technology on public transportation

What evidence of the social shaping of technology, if any, is provided by the history of public transport in London & Paris (1820-1990)?

The following will discuss the evidence or otherwise of the social shaping of technology with regard to public transport in London and Paris between 1820 and 1990. During this period technological advances in public transport were pronounced and whether they shaped social changes will be outlined below. London and Paris are apt examples to use as they developed rapidly during the 19th Century and had continued to change until the end of the period.

In 1820 both London and Paris were expanding cities yet their transport systems with the exception of canals to London had hardly changed at all in hundreds of years. However, the impact of industrialisation and urbanisation would mean that London and Paris would need the improvements in public transport to get their populations to work, school and home again. These advances in technology in turn would bolster the social and economic changes that had fostered them in the first place. The British population increased from 10 million in 1800 to 36 million in 1990 whilst that of France went from 27 million to 40 million (Roberts, 1996, p. 322). In the same period the population of London went from 900, 000 to 4. 7 million whilst that of Paris went from 600, 000 to 3. 6 million. Most of the rise in the London and Paris populations resulted from the increased migration promoted by public transport (Roberts, 1996, p. 322). The term ‘ commuter’ came into everyday use during the 1850s to describe the people that travelled into and around London daily to work. These commuters travelled by train and in any of the 800 horse drawn bus services. After 1862 commuters could travel on the first complete section of the underground from Paddington to Farrington Street.

The underground was developed and built by partners including the City of London and Great Western Railway. The construction of such systems in London and Paris showed great engineering skills not least because of the need to tunnel or bridge the Thames and the Seine respectively (Evans, 2000, p. 101). The Paris metro was opened on July 19 1900 when it only went from Porte de Vincennes to Porte Mailliat. Like the London underground the metro was extended much further than the original line. Line 1 for example now runs from Chateau de Vincent to La Defense. The Paris metro gained a reputation for not only being more efficient that the London underground but also more elegant. The metro resulted from the engineering know how of Fulgence Bienvenue and the architectural elegance of Hector Guimard. The metro has 211 kilometres or 130 miles of track that serves 380 stations that means that any within Paris is merely 500 metres away from the nearest station. The metro is slightly bigger than half of the London underground yet has a hundred stations more (Mills, 1997-2005).

Improvements in technology meant that more people travelled to London and Paris to live and work, thus more of them could travel within and beyond the city limits. That was due to the increase in the provision of public transport. In the early part of the period 1820 to 1990 was the advent of the railways. The first successful rail service between Stockton and Darlington was developed by George Stephenson provided the impetus for a great expansion of railways (Hobsbawm, 1962, p. 187). As respective capital cities London and Paris were logically at the centre of their national rail networks. Technically speaking, although the train services into, from and in London were providing a public service they were privately owned until after 1945.

Britain had a head start over France when it came to the amount and density or rail and track not only in the capital but nationally as well, over 750 kilometres squared compared to between 250-499 kilometres squared for France (Hobsbawm, 1975, p. 310). The advent of the railways meant that the Londoners and Parisians could have better links to the provinces, also cities such as Newcastle and Marseilles were easier to reach. The railways also meant that other parts of their cities were easier to get to (Hobsbawm, 1975, p. 56). Southern Railway that ran the majority of train services in and around London was the only private rail operator (before nationalisation) that was regularly in profit (Black, 2000, p. 89).

Linked to the spread of the railways was the adoption of underground – systems in both London and Paris. The underground and metro systems offered the capacity and ability to carry millions of commuters daily without causing as much disruption as having all the rail tracks above ground. London expanded its operative underground -system in 1890 and Paris alongside other cities followed within a decade. The London underground is roughly double the size of the Paris metro since the completion of its last extension in 1999 with 392 kilometres or 244 miles of track with 280 stations (Crystal, 2003, p. 950). In contrast to the railways the London underground continued to expand during the 1960s and beyond. The new Victoria Line of the 1960s was followed by the Jubilee Line and the extension of the system to Heathrow Airport in the 1970s (Black, 2000, p. 91). The underground systems gave the advantage of transporting more people with greater speed than other forms of both private and public transport. At that point cars and buses were barely in existence. Even as cars became more common they

remained out of the price range of many Londoners and Parisians until the 1950s. Using public transport had the advantage of being cheaper without the need to worry about parking or having to stay stuck in traffic jams (Black, 2000, p. 86).

Another way that public transport has made on the social shaping of technology in London and Paris was the role of buses. Prior to the invention of the internal combustion engine there had been the horse driven bus. However, the buses driven by petrol or diesel engines were able to carry more passengers further than their horse driven predecessors. Buses could pick passengers up from places where the train and the underground did not go. Buses were introduced into London and other British cities from 1898 (Black, 2000, p. 87). Buses tended to operate later services than the trains did in London. Within London and outside it, train companies before the Second World War often ran bus services. The Second World War led to London’s travel infrastructure been badly damaged whilst Paris had escaped heavy bombing although other parts of the French rail and roads had been destroyed (Black, 2000, p. 88).

In most respects the coming of railways amply demonstrated the social shaping of technology. It helped to speed the movement of people from the smaller towns and villages to major cities such as London and Paris. The railways allowed goods or people to travel much faster and also generated great wealth for their investors. Such wealth was shown in the elegant stations such as King’s Cross and Paris du Nord. The railways employed thousands directly or indirectly whilst transporting millions more (Hobsbawm, 1987, p. 27). France had been slower in building railways than

Britain yet managed to double the amount of track it had between 1880 and 1913 (Hobsbawm, 1987, p. 52). The railway workers and other transport workers shaped society in ways linked to technology or in times of industrial disputes the refusal to use that technology. Both the British and French transport workers had a reputation for their radical trade unionism. In the British General strike of May 1926 support amongst London's transport workers was solid and not a bus, train or underground train ran for nine days (Brendon, 2000, pp 46-47). France tended to be more prone to strikes than Britain. In the summer of 1936, Paris and the rest of the country came to a halt after a series of strikes spread to the transport workers after starting at Renault (Brendon, 2000, p. 296). Even in more recent times strikes on the metro are frequent, especially if the French trade unions are unhappy with their government. Unlike their counterparts in London most Parisians can walk to work if that happens (Mills, 1997-2005).

There was another development in public transport that allowed some social shaping due to technology, the aircraft. At first air travel was restricted to the rich, the military and cargo carriers. However the increasing cheapness of flights and the opening of airports such as Charles de Gaulle and Heathrow near Paris and London respectively made package holidays and internal business flights easier (Hobsbawm, 1994, p. 15). It was in the production of the supersonic airliner Concorde that both countries collaborated to show how technologically advanced they were. Concorde would allow people to travel to and from London and Paris in luxury as well as been good for national prestige (Crystal, 2003, p. 214). Whilst the French have made efforts to maintain and modernise their rail network in Paris and

nationally the decline in the British railways has been marked. The total mileage of track halved between 1945 and 1992 whilst the number of car owners increased twenty fold in the same period. That meant that public transport was taken more seriously in Paris than London (Black, 2000, pp. 90-92).

Therefore, it can be argued that social shaping technology was evidenced by public transport in London and Paris between 1820 and 1990. It was the development and expansion of the railways that greatly contributed to the expansion of London and Paris during the 19 th Century. The railways generated wealth and trade as well as bringing people and jobs to both London and Paris. The development of underground-systems also contributed to social shaping and more and more people were able to commute to work and school. Public transport was further enhanced with the introduction of powered buses whilst the availability of cycles and later cars meant that not everybody had to rely on public transport. Whilst the greater availability of public transport had made social shaping changes the wider availability of cars led to more people moving out of the cities centres in to the suburbs. Public transport still remains vital for millions of Londoners and Parisians and commuters that travel from further afield to go about their everyday business in London or Paris.

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