

Set out the way in which the Industrial Revolution impacted on urban form and development

The Industrial Revolution was a major turning point in history, a period in the late 18th and early 19th century of massive advancement in manufacturing, agriculture, transport and mining which all started in Britain but spread to the rest of Europe, America and eventually the rest of the world. These changes resulting from mechanisation had profound social, economic and cultural effects on nations. This essay will discuss the impacts specifically on the urban form and development of these newly industrialised nations. (Perkin 1969)

One of the most defining features of the industrial revolution period in Britain was the socioeconomic development, the replacement of a labour economy by that of machines allowed for a general rise in the living standards for the majority across all classes. The National income per capita quadrupled in the 19th century, whether the working class really benefited from it is debateable but it cannot be denied their living standards were higher after 1850 than before 1790 (Neale 1966).

However Perkin (1969) states that the rapid growth of the new industry and also of towns and cities during the Industrial revolution created new social problems and aggravated and expanded the scale of older social problems. There were fluctuations in employment to concentrated workers without anybody or anything to fall back on in distress. This insecurity added to the existing problem of chronically depressed and the abandoned urban poor. The poverty this caused among sections of the working class was felt most in the slums of urban areas, with filthy living conditions, overflowing drains and cesspools, contaminated water supplies, rampant spread of disease and increased death rates for the people living there. Also connected to all these was the increasing segregation of society in urban areas into different districts, streets and suburbs according to different status and income, different classes lived in isolation from one another.

Looking deeper into the segregation of classes into different areas, Aiken (1968) noticed that as far back as 1795, there was flight of the middle class to suburbs of Manchester. Aston (1804) backed this up when he observed in 1804 that many people

who carried out business in the town resided a little way from the smokey chimney factories and to areas of larger personal space.

One of the largest impacts on urban form in Britain was that of rapid urbanisation, workers moving from the rural areas working in agriculture to the factories. In England and Wales, the population of the country living in urban areas rose from 25% in the early 18th century (Holderness 1976) to 54% in 1851 (Law 1967). Scotland had a similar result; by 1851 over half its population lived in towns (Weber, 1899). In the late 18th century, the government did little to control the evolution of the urban environment during this rapid increase of rural to urban migration, that there was inadequate or perhaps no administrative institution capable of looking after the physical environment until between the mid 18th and mid 19th centuries, a few hundred local boards of improvement commissioners were set up to perform improve the urban environment like paving, lighting and drainage.

Government realised in 19th century that public health was a real issue, causes of diseases like Cholera and Typhus spread through cramped living conditions of workers and polluted water supplies, this supplemented by the enhanced awareness of the problems of working class housing prompted national legislation to rectify this. The main objective was to improve the sewage system and water supplies. This was the first move towards greater public intervention in what would be called the “planning system”, they began to restrict free use of private land by drawing up codes of building regulations in by-laws.

It was not until the introduction of the Town improvement Clauses Act 1847 and the Public Health Acts of 1848 and 1875 that there was widespread adoption of building regulations (the 1848 Public Health Act did this by granting extensive sanitary powers to new local authorities, these were known as Local Boards of Health). The local government published a model set of bylaws after the 1875 Public Health Act which influenced the evolution of existing building codes. Effectively from the 1870’s onward, urban building in Britain was governed by regulations that didn’t vary a lot place to place. (Perkin 1969)

Now as building regulations developed, they increasingly sought to regulate the urban form, the arrangement of housing and the spaces that lay between them. Ventilation was the main objective as medical authorities believed the reason diseases spread was through vapour transmissions emitted from putrefying matter. So to counter this in the urban environment, there was an attempt to ensure there was free movement of air around the home (Sutcliffe 1981). The best ways to do this it was thought was by making the house face a broad street and have an open space behind it, so that draughts of wind could blow through the house. As a result Sutcliffe states the Town Improvement Clauses Act suggests a width of 30 feet for all streets for traffic and 20 feet for streets with no traffic. Open areas behind homes were strongly resisted, as the 1840's "back to back" arrangement which was two rows of houses which shared the same wall had become the normal type of housing for workers in the bigger industrial urban areas. It wasn't until the 1860's with the imposition of Local Government bylaws that banned the practice was there any progress and open spaces were finally implemented. Throughout the 19th century, the interaction between developers and more stringent regulations often produced a standard layout for both working class and middle class housing. In it residential streets were arranged in parallel lines with as little cross streets as possible, this produced blocks that looked like elongated rectangles. Unbroken rows of 2 story houses lined the streets. The block interior was occupied by gardens or back yards which were divided by low walls. A narrow alley running the length of the block parallel to streets provided access to the back yards.

The industrial revolution ultimately changed the built form in these nations, beforehand the design of their urban centres were whether planned or unplanned under the influence of agriculture, trade and defence (Brown *et al.* 2009). The industrial revolution really saw the introduction of segregated land uses becoming the standard, previously the place of work and home were often the same place. In addition, people often lived closer to each other in urban areas because of undeveloped transport even in the rigid of grid plans. Banishing disruptive uses from residential areas were rarely successful so in urban areas, there was a mix of residential and commercial uses. With the advent of coal and steam power, trains and railways came to prominence of aiding trade and economic activity. Trains allowed industrial factories to be able to locate anyway, not just under the influence of

locating beside resources or waterways. With the high availability of labour in the cities, large factories operating all day and night were seen popping up and overshadowing quiet streets, Mumford (1966) described factories as transforming “industrial towns into dark hives, busily puffing, clanking and screeching for 12 and 14 hours a day”.

In the early 20th century, philanthropist Ebenezer Howard published his influential *Garden Cities of To-morrow* (1902) which was in response to the problem of urban sprawl devouring the English countryside, his ideas about Garden Cities focused around the idea of “green-belts”, development stop lines. To stop the expansion of urban areas, he proposed substituting strings of separate mixed use communities of about thirty thousand people and around six thousand acres. In each new city, there would be its own shopping district, residential neighbourhoods and job centre, as well as plenty of open public spaces like parks. He wanted to surround each community with permanent agricultural land. Howard hoped these reforms would get rid of slums and provide better working and living conditions for workers. The first town to be modelled on this plan was Letchworth in 1904 which is located some thirty miles north of London. Garden cities sprang up over the world as well including Germany, Australia and the US to a smaller degree. Garden Cities is stated to be the origin of Regional Planning thought and the theory of garden cities is used today in planning suburbs (Sutcliffe 1981)

In conclusion there has been massive and continuous change in the urban form and development in Britain as well as in other countries through the Industrial Revolution. Urban areas were the location of key industry in the nation which brought workers in from the rural areas. Mass urbanisation increased the size of these cities and towns but also created social problems like poverty, overcrowding and spreading of disease among the working class. The Industrial Revolution was also possibly the first instance of land use segregation in Britain. Ebenezer Howard and his Garden City idea were in response to the poor living conditions of the slums and while Garden Cities did not become a widespread idea, it did influence modern planning thought today.

References

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