

UNIT 27

Industrialisation

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Learning Objectives

27.1 Introduction

In May 1851 queen Victoria opened the Great Exhibition, which was built from prefabricated iron and glass-called the crystal palace. The exhibition showcased Britain's achievements and industrial power. At that time, Britain was producing half its iron and coal and cotton. By late 19th century 75% of its population lived in fast emerging urban areas more than 80% of its population engaged in non agricultural activity. In 1900 other countries emerged as powerful industrial countries -USA , Germany and many more followed the path of industrilisation. You, of course, have an idea of what industrialization means and how powerful the industrilised countries are in their material wealth and how we all strive to be like the developed industrilised countries.

Industrialisation was such a wide-ranging phenomenon, involving every aspect of the economy and society, that there will always be scope for debate about its timing and speed, causes and consequences. The roots of change ran deep into the past, but from the final quarter of the 18th century industrialisation gathered pace. At first slow and patchy, by the time Victoria came to the throne in 1837, it had left few lives and few institutions unaltered.

In this unit we will try and under stand the process of industrilisation and the consequent changes in society. We will first look at the history of industrilisation in Industrial Revolution in England. Following this, we will examine the changes in society as a consequence of this far reaching revolution in technologies and production process. We will also try to understand this process through the eyes of different scholars who have analysed this process. We will then see what indutrilisation means for India and its implication for larger society. But first of all lets look at the term and understand the characteristic features of industrilisation.

27.2 Understanding Industrilisation

Industrilisation refer to a process of change in the technology used to produce goods and services. This basic economic process has also become the prime mover for cataclysmic changes in polity and society. This social and economic change is closely intertwined with technological innovation, particularly the development of large-scale energy production and metallurgy. Industrialisation is also related to some form of philosophical change, or to a different attitude in the perception of nature, though whether these philosophical changes are caused by industrialization or vice-versa is subject to debate. To understand why a change of technology should produce such far-reaching changes in society, it is essential to consider the essential features of the industrial form of production.

The three important features of industrilisation can be put as:

Factories: The Hallmark of industrial civilization is the large factory, which brings vast number of workers together under one roof and puts them to work on machines operated by inanimate sources of energy such as steam, gas or electricity. Industrial firm introduces a new form of division of labour- a technological division of labour within the firm. Large scale factory production requires the investment of vast sums of money as fixed capital in the form of machinery and equipment. This calls for a class of entrepreneurs who can raise the necessary capital and undertake the risk involved in operating the enterprise successfully. It also has the effect of separating the workers from ownership of his /her tools. He/she becomes a wage labours hired to work or means of production which are not his/her property. Mass production techniques typically leads to fragmentation of jobs into simple , monotonous and repetitive

skills. The large-scale industry has to be organized bureaucratically production has to be addressed to a large and impersonal market. This sets the process of monetization and commercialization going in the society. In turn impersonal market forces such as changing tastes and preference and fluctuations in demand being exact considerable influence on the production Process.

Urbanisation: the changes in the technologies of production led to social changes which were far reaching , as we mentioned earlier the very nature of production and labour relations changed from small crafts which are either family owned or guild owned to production processes concentrating in factories which were owned by the enterprising class of people. The mass production of factories created demand for labour which was location centers, so where ever factories were set up in the early days of industrialization centers of production grow which were distinctly different from traditional agricultural based production, People migrated to cities in large numbers and many urban centres grew as a result. In the 18th and 19th centuries, in England especially, such innovations as crop rotation , selective breeding of animals, and new tools in agriculture led to dramatic improvement in productivity. This meant a larger agricultural surplus was produced which meant urban populations could be supported.

Urbanisation is an important feature of all industrialised countries, the more industrial a country is more concentration there is of people in urban centres,

27.3 Historical Background of Industrialisation Process

In the 18th century a series of changes in society brought about a gradual change in the production process, powered machines were increasingly used in the production process, these series of changes were most accelerated in 18th century England and the changes were to have dramatic and far reaching influence not only for England but for Europe and for the rest of the globe. I am sure you have heard about Industrial revolution when you read history in school and elsewhere. Let us recapitulate what Industrial revolution meant and how it spawned a series of change in society, leading to industrialization.

Industrial Revolution

The Industrial Revolution may be defined as the application of power-driven machinery to manufacturing. It had its beginning in remote times, and is still continuing in some places. In the eighteenth century all of western Europe began to industrialize rapidly, but in England the process was most highly accelerated. England's head start may be attributed to the emergence of a number of simultaneous factors. England had large supply of fuel and raw material that it would get from its colonies abroad. There were abundant labour supply to mine coal and iron. The merchants of tea and tobacco had money to invest in technical and scientific innovation, to add on to scientific revolutions that were already taking place.

Agricultural Innovations: England between 1760 and 1830 was also experiencing innovative changes in agricultural techniques. As we already mentioned there was crop rotation, which did not allow the land to lie fallow, follow each planting. The open field system gave way to enclosed compact farming. Jethro Tull introduced horse hoe and seed drill and Bakewell pioneered stock breeding. Bakewell showed how to breed for food quality. Bakewell selected his animals, inbred them, kept elaborate genealogical records, and maintained his stock carefully. He was especially successful with sheep, and before the century's end his principle of inbreeding was well established.

Technological Changes: The technological changes of the eighteenth century did not appear suddenly. During the sixteenth and seventeenth centuries the

methods of making glass, clocks, and chemicals advanced markedly. By 1700 in England, and by 1750 in France, the tendency of the state and the guilds to resist industrialization was weakening. In fact, popular interest in industrialization resembled the wave of enthusiasm elicited by experimental agriculture.

By the beginning of the eighteenth century in England, the use of machines in manufacturing was already widespread. In 1762, Matthew Boulton built a factory which employed more than six hundred workers, and installed a steam engine to supplement power from two large waterwheels which ran a variety of lathes and polishing and grinding machines. In 1733 John Kay patented his flying shuttle and about the same time James Hargreaves came up with spinning jenny, where one operator could spin many threads. In 1779, Samuel Crompton invented a machine known as "crompton mule" which produced fine strong yarn. By 1812 the cost of making cotton yarn had dropped nine-tenths, and by 1800 the number of workers needed to turn wool into yarn had been reduced by four-fifths. And by 1840 the labor cost of making the best woolen cloth had fallen by at least half.

Advances in Transportation: Steam Engine developed by James Watt in 1773 was landmark of industrialisation. Other innovations and discoveries, which propelled industrialisation include the production of electricity the railroads. By 1836, England had built electric grid completely covering the entire country. Electricity was one of the chief factors which led to rapid industrialisation in Russia in 1930's. The railroads were another feature of rising industrial states in 19th 20th century. British success with steam locomotion, however, was enough to encourage the building of railroads in most European countries, often with British capital, equipment, and technicians. Railroads became a standard item of British export. After 1842 France began a railroad system which combined private and public enterprise. The government provided the roadbed and then leased it to a private company, which provided the equipment. In Russia, Canada, and the United States, railways served to link communities separated by vast distances. In Germany there were no vast empty spaces, but railroads did help to affect political and economic integration. The internal combustion engine used in motorcars completely revolutionized social patterns of mid 20th century. America took to motorcars in a great way. The growth of the automobile industry created large fields for investment, produced new types of service occupations, and revolutionized road-making. This was true in western Europe as well as in America after the Second World War.

The First World War saw the beginning of commercial aviation. Germany's geographical position and the ban on military aircraft imposed by the peace treaty led to the development of civilian airlines. By 1929 commercial planes were flying out of the European capitals to all important places on the globe. And the day was not far off when airplanes were to eclipse railroad trains as commercial passenger carriers

Communications: In 1876, transmitted human voice over the phone revolutionizing communication. "Although it was several decades before the telephone became popular. At the end of the century the wireless telegraph became a standard safety device on oceangoing vessels. Radio did not come until 1920; then it was commercially exploited in America to a much greater extent than in Europe. In Europe the broadcasting systems were either operated or closely controlled by the state and did not carry commercial advertising. The penny post on all letters was inaugurated in Britain in 1840 after it was discovered that handling, not the distance sent, was the critical cost in delivering mail. All letters weighing a half-ounce or less could be carried for an English penny (two cents). By 1875 the Universal Postal Union had been established to facilitate the transmission of mail between foreign countries.

In 1871 telegraph cables reached from London to Australia; messages could be flashed halfway around the globe in a matter of minutes, speeding commercial transactions. The world continued to shrink at a great rate as new means of transport and communication speeded the pace of life." (source:<http://mars.acnet.wnec.edu/~grempe/courses/wc2/lectures/industrialrev>)

Changing Social patterns: Industrial revolution with its attendant revolutions in the field of agriculture , transportation and communication brought in tremendous changes in the society. The consequences of this revolution would change irrevocably human labor, consumption, family structure, social structure, and even the very soul and thoughts of the individual. As we mentioned earlier, the production process itself changed substantially. Production at specified sites known as factories, which used machines changed the tradition production and manufacture process, which was largely family based and guild based. Earlier families owned their tools and procured the raw material themselves. Many such families moved to cities both in search of work because they were disposed of earlier land because of new acts which permitted lands that had been held in common by tenant farmers to be enclosed into large, private farms worked by a much smaller labor force. While this drove peasants off the land, it also increased agricultural production *and* increased the urban population of England, since the only place displaced peasants had to go were the cities. The English Parliament, unlike the monarchies of Europe, was firmly under the control of the merchant and capitalist classes, so the eighteenth century saw a veritable army of legislation that favored mercantile and capitalist interests. One of the major offshoots of industrial revolution is the emergence of new bourgeoisie class and the working class. The new class of industrial workers included all the men, women, and children laboring in the textile mills, pottery works, and mines. Often skilled artisans found themselves degraded to routine process laborers as machines began to mass produce the products formerly made by hand. Generally speaking, wages were low, hours were long, and working conditions unpleasant and dangerous. The industrial workers had helped to pass the Reform Bill of 1832.

Box. 27.1: Engels on the *The Condition of the Working-Class in England in 1844*

Fredrick Engels was often overshadowed by his co-author, Karl marx but he was one of the first to experience the conditions of working class and founding father's of a socialist philosophy. Engels worked as an agent in his father's Manchester cotton factory . He wrote about the working conditions of the working class with a strong sense of social consciousness. Here is an extract from his book *The Condition of the Working-Class in England in 1844*

"Here one is in an almost undisguised working-men's quarter, for even the shops and beer houses hardly take the trouble to exhibit a trifling degree of cleanliness. But all this is nothing in comparison with the courts and lanes which lie behind, to which access can be gained only through covered passages, in which no two human beings can pass at the same time. Of the irregular cramming together of dwellings in ways which defy all rational plan, of the tangle in which they are crowded literally one upon the other, it is impossible to convey an idea. And it is not the buildings surviving from the old times of Manchester which are to blame for this; the confusion has only recently reached its height when every scrap of space left by the old way of building has been filled up and patched over until not a foot of land is left to be further occupied... Such is the Old Town of Manchester, and on re-reading my description, I am forced to admit that instead of being exaggerated, it is far from black enough to convey a true impression of the filth, ruin, and uninhabitableness, the defiance of all considerations of cleanliness, ventilation, and health which characterise the construction of this single district, containing at least twenty to thirty thousand inhabitants. And such a district exists in the heart of the second city of England, the first manufacturing city of the world. If any one wishes to see in how little space a human being can move, how little air - and *such* air! - he can breathe, how little of civilisation he may share and yet live,

it is only necessary to travel hither. True, this is the *Old Town*, and the people of Manchester emphasise the fact whenever any one mentions to them the frightful condition of this Hell upon Earth; but what does that prove? Everything which here arouses horror and indignation is of recent origin, belongs to the *industrial epoch*" (Engels, 1892:48-53)

Another consequence was the growth of cities and urban centers which became trading centers as well as new political centers. Until the Industrial Revolution, most of the world's population was rural. However, by mid-nineteenth century, half of the English people lived in cities, and by the end of the century, the same was true of other European countries. Between 1800 and 1950 most large European cities exhibited spectacular growth. At the beginning of the nineteenth century, there were scarcely two dozen cities in Europe with a population of 100,000, but by 1900 there were more than 150 cities of this size.

By mid 20th century not only Western Europe but many other countries were fast industrialising. Replacing old feudal institutions with new ones whether it was in the economy, social life or politics. These tremendous changes were felt all over Europe and scholars tried to capture these changes and analyse them. In the following section we will look at some major thinkers and their views on Industrialisation and industrial capitalist society.

27.4 Social Thinkers on Industrial Society

Many social thinkers of late 19th century and early 20th century were seized with changes that were brought about by industrialisation and the characters that were part of these emerging societies. Thus, we find many early sociologists invariably contrasted earlier, pre-industrial societies with industrial societies resulting in classification and typologies of society, for instance Tonnies 'Gemeinschaft' and 'Gesellschaft', Durkheim's contrast of 'organic solidarity' and 'mechanical solidarity', Maine's 'status' and 'contract' and Spencer's 'militant' and 'industrial society'. Or Marx's more elaborate classification societies which was based on mode of production which included stages such as 'primitive communism', 'ancient', 'feudal' and 'capitalist'.

These theories and typologies tended to be evolutionary in their approach, as inevitable historical process was visualised. They all tried to look for fundamental organizing principles behind industrial societies which was then contrasted with non-industrial or pre-industrial society. For St. Simone (and Comte who followed him) industrial society was to be contrasted to military society. The latter was organized around plunder, waste, display, the former was organized around the orderly output of goods. For St. Simone there were four dimensions to an industrial society :

- a) It was concerned with production

b) Its methods were those of order, certainty and precision, c) It would be organized by "New Men" Engineers, Industrialists, Planners, d) It would be based on knowledge. For Tonnies it was impersonal relationships based on contract which characterized modern industrial society rather than the face-to-face interactions in smaller societies. Durkheim in a similar vein was looking at not only the basic principles of division of labour but he looks at various institutions which are held together by such elements as mechanical and organic solidarity. Let us examine some of these writings on industrial societies in detail, we will look at the writings of Marx, Weber and Durkheim as they are the most foundational of all thinkers in their analyses of industrial societies.

Karl Marx (1818-1883)

Marx's theory is very elaborate and covers not only the contemporary situation of his time but attempts to reconstruct the political economy of human history. In his analysis, the present industrial economy is a capitalist mode of production.

It was Friedrich Engels who kindled Marx's interest in the working class situation; he deepens this interest with his philosophy of historical materialism.

According to Marx, what distinguishes capitalist mode of production from the previous feudal mode of production is that labour becomes a commodity. "When peasants became free to sell their own labor-power, and needed to do so because they no longer possessed their own land or tools necessary to produce. People sell their labor-power when they accept compensation in return for whatever work they do in a given period of time (in other words, they are not selling the product of their labor, but their capacity to work). In return for selling their labor power, they receive money, which allows them to survive. Those who must sell their labor power to live are "proletarians." The person who buys the labor power, generally someone who does own the land and technology to produce, is a "capitalist" or "bourgeois." Capitalists take advantage of the difference between the labor market and the market for whatever commodity is produced by the capitalist. Marx observed that in practically every successful industry input unit-costs are lower than output unit-prices. Marx called the difference "surplus value" and argued that this surplus value had its source in surplus labour. Marx believed that surplus value appropriated from labor is the source of profits. (Source: http://en.wikipedia.org/wiki/Karl_Marx).

In essence, the working class is exploited for its labour, the wages they earn are enough to keep them at subsistence level. Because wage -worker sells their labour power to earn a living, and the capitalist owns the labour process, the product of the workers' labour is alien to the waged worker. It is not his or her product but the product of the capitalist. Marx calls this separation of labour process from oneself as alienation.

Alienation, Marx says is a feature of the industrial capitalist society where labour is not only a commodity but the process of production and the product which the worker has produced is estranged. The worker has no control over what she/he produces. Marx pointed out, workers are alienated in several distinct ways: from their products as externalised objects, existing independently of their makers; from the natural world out of which the raw material of these products has been appropriated; from their own labor, which becomes a grudging necessity instead of a worthwhile activity; and from each other as the consumers of the composite products. These dire conditions, according to Marx, are the invariable consequences of industrial society.

Marx's did not visualize this dehumanised existence of the worker in an industrial capitalist system to be inescapable. He, along with Engels came with revolutionary way out , they not only developed a critique of the conditions but a political action in *Communist Manifesto* (1848). Marx envisioned that workers who were exploited soon would rally together to overthrow the capitalists. And that increasing class antagonism would result in revolutionary overthrow of the capitalist and means of production would be wrested from them.

Marx is one of the most influential and inspiring thinkers of our times. His prescription for a world free of conflict was attempted, in a reformulated way, by Soviet Russia and other communist countries. The collapse of such economies has made Marxist more virulent. Even before that his critics have pointed out "that the increasing class antagonisms he predicted never actually developed in the Western world following industrialization. While socioeconomic gaps between the bourgeoisie and proletariat remained, industrialization in countries such as the United States and Great Britain also saw the rise of a middle class not inclined to violent revolution, and of a welfare state that helped contain any revolutionary tendencies among the working class. While the economic devastation of the Great Depression broadened the appeal of Marxism in the developed world, future government safeguards and economic

recovery led to a decline in its influence" (Ibid). Despite these criticisms Marx's basic propositions continue to inspire not only as a critique in academic circles but as an inspiration for all kinds of movements. And his views on industrialization and capitalism still hold sway. Let us now turn our attention to Max Weber who saw rationalization principles that inform modern industrial world.

Max Weber (1863-1920)

According to many scholars, Weber's attempt to analyse capitalism was meant to supplement Marx's largely economics oriented perspective. According to Zeitlin, "he set himself a special task, *viz.*, to examine the economic relevance of specific religious ethic, which he felt had not been given the consideration it deserved. Although he sometimes speaks of correlation and causal influence, he states clearly that he is deliberately treating 'only one side of the causal chain', i.e., the impact of religious values on economic conduct. He wanted to somehow assess the contribution of the protestant ethic in particular to the modern economic system and more generally to contribute to our knowledge of how "ideas become effective forces in history" (Zeitlin 2000:122-123).

The singular value, which defines all modern institution, according to Weber, is rationalization. This rational legal oriented value on which actions are based is different from value orientation, which is derived from traditions, whether it is in politics or economics. "Rationalization is the process whereby an increasing number of social actions and interactions become based on considerations of efficiency or calculation rather than on motivations derived from custom, tradition, or emotion. It is conceived of as a core part of modernization and as manifested especially in behavior in the capitalist market; rational administration of the state and bureaucracy; the extension of modern science; and the expansion of modern technology" (source: <http://en.wikipedia.org>) This rational value in protestant ethic, according to Weber propelled capitalist development in Occidental or western countries. He elaborates this thesis in his book *Protest Ethic and the Sprit of Capitalism*.

According to Weber the sprit of capitalism is such ideas and values which help in the pursuit of rational actions such as; rational permanent enterprise, rational accounting, rational technology and rational law and rationalization of the conduct of life in general.

"In order that a manner of life well adapted to the peculiarities of the capitalism... could come to dominate others, it had to originate somewhere, and not in isolated individuals alone, but as a way of life common to the whole groups of man" (quoted in *ibid*). Weber believes that certain sects of Protestantism, especially Calvinism encouraged worldly activities as pursuit of spiritual 'calling'. In Catholicism an individual was assured of salvation by following the sacraments of the church and its authority but Reformation severed this authority of the Church and therefore they had to look for alternatives of sign of salvation, according to Weber, Protestantism encouraged pursuit of any secular vocation as vocation of God, which was limited to the clergy earlier. Weber says that Protestantism ethic encouraged individuals to pursue vocations with zeal, thus work became worship. It also encouraged money to be invested in rational economic gains rather than being spent on luxuries and pursuit of happiness. This ethic, Weber believed helped the nascent capitalism. Weber cites the work of Benjamin Franklin which emphasise frugality, work and thrift.

"It should be noted that Weber maintained that while Puritan religious ideas had had a major influence on the development of economic order in Europe and United States, they were not the only factor (others included the rationalism in scientific pursuit, merging observation with mathematics, science of scholarship and jurisprudence, rational systematisation of government

administration and economic enterprise). In the end, the study of Protestant ethic, according to Weber, merely explored one phase of the emancipation from magic, that disenchantment of the world that he regarded as the distinguishing peculiarity of Western culture. The result, according to Weber, is a “polar night of icy darkness”, in which increasing rationalisation of human life traps individuals in an “iron cage” of rule-based, rational control”(ibid).

By extension therefore, Weber argues that in the Orient where rational ethic was missing in Hinduism or Confucianism the capitalist enterprise did not develop. Regarding Hinduism in India, he notes the idea of an immutable world order consisting of the eternal cycles of rebirth and the deprecation of the mundane world, and finds that the traditional caste system, supported by the religion, slowed economic development; in other words, the “spirit” of the caste system militated against an indigenous development of capitalism. He notes further, that the beliefs tended to interpret the meaning of life as otherworldly or mystical experience, that the intellectuals tended to be apolitical in their orientation, and that the social world was fundamentally divided between the educated, whose lives were oriented toward the exemplary conduct of a prophet or wise man, and the uneducated masses who remained caught in their daily rounds and believed in magic(ibid). There were lots of debates about Weber’s thesis on India. Some scholars explored his idea further in the Indian context to see if the work ethic and frugality of business communities such as the Marwaris and Jains fitted in with Weber’s thesis. Others like the historian Irfan Habib argued that India had potentials for capitalist development ,which were thwarted by colonial rule and the flourishing textile industry was completely destroyed by the British. We will discuss aspects of Indian industrialisation in the following section. At this point it will be worthwhile to point out that Weber’s ideas of rationalization and disenchantment finds resonance in lot of social science thinking when visualising industrial societies, But before that let us examine Durkheim’s work and his ideas on industrial society. Durckhiem is a contemporary of Weber and like him was seized with analyzing changes that were brought about by industrialisation.

Emile Durkheim (1858-1917)

Durkheim’s primary interest was what happens as societies begin to industrialise and modernize. When they begin to industrialize and labor becomes increasingly specialized. Durkheim calls the new form of solidarity resulting from modernization *organic solidarity*. In modern, industrial societies, labor is tremendously divided. Individuals no longer perform the same tasks, have the same interests, nor necessarily share the same perspectives on life. But Durkheim quickly points out that this does not cause a society to fail or disintegrate. Organic solidarity is formed. Like the organs within an animal, individuals perform certain specific functions, but rely on the well-being and successful performance of other individuals. If one organ fails, the rest of them fail as well. A body—or in this case a society—cannot function at all if one part crumbles. This reliance upon each other for social (and even physical) survival is the source of organic soldarity, according to Durkheim.

Durkheim discusses social solidarity—the bond between all individuals within a society—in considerable depth, especially in his first major work, *The Division of Labor in Society*, first published in 1893. He first described the social cohesion particular to pre-industrial societies. This *mechanical solidarity* as he called it, occurred when all members of a society performed the same or nearly the same tasks as all others in a society. If one person were to die and not be replaced, the society would not change, because all other members did exactly the same thing as the member that died. The collective conscience of a mechanical society is identical among all members, and the bond derives not from dependence on other individuals, but from the dependence on the total social system(source: <http://durkheim.itgo.com>). For Durkheim the world of ‘organic solidarity’ was a world of specialization, complementarities and

independence. The ruling principle is “Structural Differentiation”. In industrial society, there is a separation of the economic system from the family system, the workplace from home. With the breakup of the traditional ‘Collective Conscience’ core beliefs are to be organized around occupational codes and mediated through professional ethics.

As you must be already aware, from your various readings on Durkheim, that he saw essential harmony in the way societies functioned. Modern society writes Durkheim “will be definitely in equilibrium, only when organized on a purely industrial basis” (quoted in Zeitlin, 2000:238) This equilibrium will be achieved because of positive consequences of division of labour; “it leads to exchange of services, reciprocity of obligations, interdependence etc. Contracts and other formal legal relationships governing these exchanges lead to what he defined as organic solidarity” (ibid:244). If this division of labour did not produce a solidarity, Durkheim claims, that it is because it is an abnormal condition, a consequence of pathological form that it had momentarily assumed. Marx accentuates the conflicting nature of modern industrial society where men are alienated from one another and from themselves: a condition in which exploitation, conflict and domination were normal and unavoidable so long as the existing “relations of production” prevailed. For Durkheim on the other hand, it is only its pathological form that division of labour produces negative consequences. Durkheim calls this pathology anomie. Durkheim defined the term *anomie* as a condition where social and/or moral norms are confused, unclear, or simply not present. Durkheim felt that this lack of norms—or preaccepted limits on behavior in a society—led to deviant behavior. Industrialization in particular, according to Durkheim, tends to dissolve restraints on the passions of humans. Where traditional societies—primarily through religion—successfully taught people to control their desires and goals, modern industrial societies separate people and weaken social bonds as a result of increased complexity and the division of labor.

We have examined three of the main social thinkers who have looked at industrialisation from various perspectives. A lot of theorizing which came about subsequently on industrialisation and modernity and contemporary society have been inspired and informed by these thinkers, in one way or other.

Reflection and Action 27.1

1. Do you think that Marx’s idea of alienation is still relevant in present society?
2. Is rationalization process that Weber talks of an inevitable process of modern world? Do you find any resistances to such rationalization?
3. Do you think extreme differentiation and specialization in industrial societies leads to chaos and anomie?

27.5 Industrialisation In India

Industrialization as we know is a term that is specifically employed to indicate the use of machines in the production process. It is also generally believed that Industrial Revolution in England has propelled industrialisation not only in England but elsewhere also. This easy connection with technological innovation and revolution to industrialisation makes one ask whether similar conditions existed in India and whether industries were developing in an indigenous fashion and what role colonization had on the development of industries or de-industrialisation of already existing industries. Post Independent India saw industrial policies being shaped by not only the aspect of colonialism but it was also informed by dominant paradigms of development discourse and by contemporary politics. Let us look at colonial phase of industrialisation before we examine the industrialisation in post-independence India.

Colonisation of India and Industrilisation

Whenever there is discussion on industrilisation in India, the colonial state is brought to the centre stage. It is held by many that the empire heralded development in India, the apologist of the Empire often cite examples of British investments in infrastructure etc as laying the ground for further industrilisation. The other arguments highlights the disastrous results of colonialism on the indigenious economies, completely taking it out of competitive edge it had in textile industry. This argument was particularly favoured by the nationalist who at that time argued for increased control of governance by the natives. Dadabhai Naoroji's *Drain of Wealth* and R.C. Dutt's work of *Economic History of India* had become works that were part of the nationalist historiography. The nationalists argued that competition with cheap British mill cloth drove Indians out of the handloom industry and into agriculture.

There is another argument which does not agree with notions that India was stagnant till the British came and took over. A view shared by people like Marx as well, though he pointed out to the exploitative nature of colonialism. Against this notion of oriental stagnation were arguments from historians like Irfan Habib who says that the economy was far from stagnant. Hamza Alvi writes, quoting historical sources, that the Indian society of the 17th century, except for its military and especially naval weakness, was fully equal, in the arts of manufacture and agriculture and culture, to the Europeans at the time. Contrary to the stereotype of the medieval Indian society as a stagnant rural backwater we find evidence of a high degree of urbanisation. Habib speaks of 'multitudes of artisans, peons and servants found in the towns ... in 120 big cities and 3200 townships (in the second half of the 16th century)' He adds that 'Agra and Fatehpur Sikri (twin cities) were each held to be larger than London. Delhi was held to be as populous as Paris, then the biggest city in Europe'. (Habib,1963: 75-76 quoted in Alvi, Source: <http://ourworld.compuserve.com/homepages/sangat/Colonial.htm>) A high proportion of the Indian urban population was employed in industrial crafts. The manufacturing industry was geared not only to the luxury consumption of the aristocracy and the more modest needs of the population in general but also a rapidly growing volume of exports. Naqvi points out that since the 17th century there was a 'wide growth of cities and towns as centres of cotton manufactures'. (Naqvi, 1968:142 quoted in Ibid).

Hanza Alvi and many of the dependency theorist (see unit 9 of Course on sociology of development for a detailed discussion) argue that capitalism was a global phenomenon from the outset, not only by way of trade but also by way of extraction of resources from the colonies that underpinned capital accumulation in the metropolis like the British Empire. In other words, the resources from conies were used to fuel the mills and factories of Manchester and other places of England. What started off as unfair trade soon made way to plunder and greed. Not only did the British protect their domestic industry by imposing heavy duty of Indian textiles but once the started to rule India they collected revenues, taxes and other impositions. "Once the East India Company acquired a large local source of funds in the form of land revenue, it was no longer necessary for Britain to pay for India's textile exports in bullion and precious stones as it had so far done. It could now buy Indian textiles from the wealth that it extracted from Indians. Textiles for exports were bought from the huge amounts of land revenue that now accrued to the Company and its employees. It was now to be a one-sided flow of unrequited exports from India to Britain. It was to be spoken of by Indian nationalists as the 'Economic Drain' from India"(ibid).

In the early phase of colonialism, there was very little capital investment in India. However, to aid trade to England infrastructure like railways, telegraphs, post etc were introduced. The capital investment which followed eventually

was from English entrepreneurs and capitalist who wanted to be closer to raw material and cheap labour. They also enjoyed the patronage of the Empire. Very few Indian entrepreneurs started manufacturing business as British polices did not favour them and they were reluctant to enter in to unknown fields.

There were however several business communities who were initially the collaborators and middlemen with the British, like the Parsis and Marwaris who ventured in to setting up industries. The Marwaris of Calcutta moved from being traders to industrialist in the jute business. The transformation of a few Marwari families from 'traders to industrialists' was gradual. "This pattern can be described in the following steps: (A) They slowly increased their importance in the trade of raw jute and jute manufactures; (B) Some of the Marwari traders became members of the formal jute-trade organisations. Others became brokers to British managing agency houses, or, by buying shares got a place on the board of directors of British managing agency houses; (C) Finally, in the early 1920s, a few Marwaris entered the jute industries by setting up their own jute mills." The birlas started their first jut emill in 1919, whereas Goenka and Bangur started theirs after World War II (Oonk, 2004:4) The Parsis on the other hand did not face stiff opposition from the British like the Marwaris. They were the collaborators of the British and sympathized with them. "They partly financed the military defence of the Bombay fort; they were loyal to the British during the Mutiny (1857), financing the British military apparatus. Third, a part of the Parsee community was fast to recognise that is was very useful to learn English, to adopt British customs and to intensify their relation with the British in order to improve the socio-economic position of the community in West India. The Parsis were among the first to build up the Indian cotton textile industry in Bombay. Parsis owned nine of ten mills built in Bombay between 1854 and 1863. This included two mills of the Petit family. In the period between 1878 and 1915, the Parsis owned between 41 and 30 per cent of the mills in the city. " (ibid:9).Apart from this communities the bankers of Ahmedabad without any British intervention or association started setting up mills.

After this initial forays many trading families started to invest in industrial enterprise. This challenged the monopoly of British capitalist, the government started adopting discriminatory policies towards them. The tariff, taxation and transport policies were made favourable to the British capitalist. Thus there was stiff competition in the marketing of goods as well. The Indian capitalist organized themselves in to Federation of Indian Chambers of Commerce and Industry (FICCI).

The capitalists were aware that they would be better off in a free India and were active supporters of nationalist struggles. The leadership of the national movement were also aware of the need for industrialization of the country.

Industrilisation in Post-independent India

The colonial past very much played a part in the economic path India took, especially under the leadership of Jawaharlal Nehru the new Prime minister of India. The link between colonialism and underdevelopment was firmly established . This history made Indian leaders wary of international free trade. Nehru who was inspired by Fabian socialism and by the Russian example decided to adopt a socialist pattern of economic development. Much of early economic activity in newly independent India was state induced, and state controlled. Nehru wanted to adopt Harold Laski's idea of mixed economy, which he did. The state controlled major industries and public related services.

In setting a path for the economic policy after Independence, Nehru followed a development discourse and models which were current and popular at that time. He truly believed that like Russia India needed to develop its heavy

industries which were capital intensive. Thus in the initial phase of economic development saw setting up heavy industries and the construction of dams. He chose from a set of options considerably more limited than those available today, and followed to a large degree the conventional wisdom among Indian academic economists of the time. India's growth rate in GDP stayed moderately above 4% during all the years that Nehru was Prime Minister. It is hard to say definitively how much growth there might have been with different economic policies: predominantly capitalist Western Europe grew slightly faster than India during the Nehru years (especially during the decade after World War II); but so did the command economies of communist China and the Soviet Union. The strongly capitalist USA grew somewhat more slowly, as did most of the newly independent nations that followed WWII (with the exception of oil-producing nations). The Soviet Union was the only major power during Nehru's tenure to aid India in developing independent capabilities in areas of heavy industry, engineering, and technology. This political fact, combined with Nehru's preference for state-led development, promoted suspicion about the sincerity of India's non-aligned foreign policy positions. In hindsight, the Nehruvian model failed in many of its objectives; however, many Indian economists—particularly among Nehru's contemporaries—believe Nehru's emphasis on central planning was the right policy for India of that time.

Some critics of Indian economic development believe that the economy of the Nehruvian and post-Nehruvian era, with inefficient public sector entities on the one hand, and crony-capitalist private sector entities on the other, that used the so-called license raj to carve out lucrative niches for themselves on the other, was a product of economic policy foundations laid during Nehru's tenure (source: http://en.wikipedia.org/wiki/Jawaharlal_Nehru).

Box 27.2: Five Year Plans

After independence, India opted to have a centrally planned economy to ensure an effective and equitable allocation of national resources for the purpose of balanced economic development. The idea of planning was taken from Russian centralized planning system. Indian Economy is based on the concept of planning. This is carried through her Five-Year Plans, developed, executed and monitored by the Planning Commission. After liberalisation, the emergence of a market economy with a fast growing private sector, planning has become indicative, rather than prescriptive in nature. The process of formulation and direction of the Five-Year Plans is carried out by the Planning Commission, headed by the Prime Minister of India as its chairperson (source: http://en.wikipedia.org/wiki/Indian_economy).

India followed policies of import substitution, industrialisation and state intervention in labour and financial markets, a large public sector, overt regulation of business, and central planning. Till 1980 this was the general tone of economy, the growth rate was steady but not substantially and it was generally referred to as the 'Hindu growth rate', because all other surrounding Asian economies, especially the 'East Asian Tigers' were growing at rapid pace.

In 1980 the first steps towards liberalization were taken up by Indira Gandhi and followed by his Rajiv Gandhi, this involved easing restrictions on capacity expansion for incumbents, removed price controls and reduced corporate taxes. The economic liberalisation of 1991, initiated by then Indian prime minister P. V. Narasimha Rao and his finance minister Manmohan Singh in response to a macroeconomic crisis did away with the *License Raj* (investment, industrial and import licensing) and ended public sector monopoly in many sectors, thereby allowing automatic approval of foreign direct investment in many sectors. Since then, the overall direction of liberalisation has remained the same, irrespective of the ruling party at the centre, although no party has yet tried to take on powerful lobbies like the trade unions and farmers, or

contentious issues like labour reforms and cutting down agricultural subsidies(ibid).

In our next section we will look at two main perspectives which have dominated Indian thinking on industrialisation. These perspectives are of Mahatma Gandhi Jawaharlal Nehru's. In our course on 'Sociology of Development' we have detailed discussion on this perspective(see unit Unit 8 in MSO-003) . Here we will give you a brief introduction.

27.6 Gandhi and Nehru on Industrialisation

There many approaches, writings and opinions on the issue of development. The more dominant theories of development, which are top down and industry oriented, have been criticized and alternatives have been proposed. In the present age of increased awareness of environmental degradation caused by exploitation of earth's resources and heavy industries that have proved to be more than harmful, the consumerist-oriented approaches of development have come under severe criticism. In this context Gandhi's views on development have been especially lauded by many. Let us examine the two perspectives.

Gandhi: Swadeshi and Khadi

As we mentioned earlier, a lot of thinking on what is the best path for independent India's economy has been in some way or other informed and influenced by colonial experience.

Gandhi believed that India's progress was tied up with its villages. He was distrustful of the overarching powers of the state and conceived of a series of village republics for India. He was not for industrialisation which would destroy traditional handicrafts and artisans and industries associated with them. He strongly believed the concept of self reliance or *swadeshi*. This meant that we, as Indians should find sustenance in our efforts -labour and intellect derived from the people themselves. Khadi-the hand spun cloth symbolized to him the spirit of swadeshi. Gandhi believed that one need not take recourse to mass production for individual needs a lot of life's necessities can be met by production at village level and at individual level. He realized that the state of unemployment in villages can be improved with setting up of village industries. Though mass produced items may be cheaper , he believed if we really want the villages to prosper and the poor 's substance taken care then we are on the path to development.

Items such as the spinning wheel even more than a handloom was a symbol of self reliance of the individual and gainful labour and simplicity of living. He cautioned against the modern world's rush towards material wealth. He wondered if this could be seriously counted as human progress. He believed that material progress did not necessarily mean real progress or moral and spiritual progress. He cautioned against blindly aping the West in pursuit of wealth.

Gandhi's views are finding special resonance with people and development practitioners who are looking for alternatives to dominant paradigms of development, which have been top down approaches and which do not take in to consideration the real needs of people. The idea of decentralized, village level development that Gandhi advocated has special appeal in this context.

Nehru's Socialist Ideal of Industrialisation

We have already talked about Jawaharlal Nehru's vision of restructuring of India's economy was inspired by socialist ideals, especially the Fabian school of thinking who looked to democratic and gradual change towards socialist

society.

Box 27.3 The Fabians

The society was founded on January 4, 1884 in London, UK as an offshoot of a society founded in 1883 called The Fellowship of the New Life. The Fabian Society is a British socialist intellectual movement, whose purpose is to advance the socialist cause by social democratic, rather than revolutionary, means. It is best known for its initial ground-breaking work beginning in the late 19th century and then up to World War I. Fabian socialists were also critical of free trade and embraced protectionism in the interests of protecting the realm from foreign competition. In the period between the two World Wars, the "Second Generation" Fabians, including the writers R. H. Tawney, G. D. H. Cole and Harold Laski, continued to be a major influence on social-democratic thought. It was at this time that many of the future leaders of the Third World were exposed to Fabian thought; most notably, India's Jawaharlal Nehru. (source: <http://en.wikipedia.org/wiki/Fabians>)

Jawaharlal Nehru played a vital role in the formation of the Congress' economic policy during the National Movement. Unlike Gandhi, Nehru's approach for the Indian economy was based on a firm belief in modern western ideas of development. He was all for developing India into a modern state. He considered industrialisation as a crucial prerequisite for Indian development. He was instrumental in identifying economic goals for India in the resolution passed at the Karachi session of the Congress in 1931. The resolution, among other things, suggested state ownership of major industries, mineral resources, railways, waterways etc. He wanted the state to take major responsibility for development work, the public sector in free India was an outcome of this thinking. As we already mentioned, the planning of the economy was inspired by the Russian system.

Nehru was opposed to landlordism and the feudal set-up. One of the major steps he had taken in his tenure is to abolish the Zamindari system in free India. He was for scientific temper and a rational secular outlook and worked towards trying to make a path for India in this direction.

Though there are drastic differences in the approaches of Gandhi and Nehru, it is clear that they both wanted India to come out of the legacy of colonialism towards a path of self-reliance and progress.

We have discussed a great deal on the history of industrialisation in England and in India but things have been changing since the traditional notion of factories and industries, which employed people on subsistence level wages for long hours. The production process may have remained the same to some extent, but new technologies—especially communication technologies, have dramatically altered not only economies but lifestyles and geographies of the globe in a big way. Many social thinkers have been pointing out to a post-industrial society that we live in. In our next section, let us have a brief look at what is meant by post-industrial society.

27.8 Post-Industrial Society

Daniel Bell, a professor of sociology, was the first to use the term post-industrial society. In fact, it was the title of his book *Post-Industrial Society* (1973). As far back as 1973, Bell predicted that we are fast moving towards a society where services and knowledge-related technologies would dominate rather than industrial production that was conventionally viewed. He held that post-industrial society would replace the industrial society as the dominant mode. There are three components to a post-industrial society, according to Bell:

- a shift from manufacturing to services
- the centrality of the new science-based industries

- the rise of new technical elites and the advent of a new principle of stratification

Another term used for post-industrial society is 'information age', as another characteristic feature of post-industrial societies is the domination of information technologies and industries related to it.

The crux of difference between industrial and post-industrial lies in what Daniel Bell calls the axial principle, the fundamental logic of economy and society was theoretical knowledge (axial principle in industrial society was technical knowledge) which is a strategic resource of the new society, the university, research institutions are the axial structure where this resource is located. Intellectual Technology i.e. problem solving system using electronic gadgetry which allow for rational macro planning, forecasting monitoring with every responsibility of society become important than machine technology. White collar jobs replace blue collar jobs. Within this society there is increase of professional technical and scientific groups.

Bells prediction of post-industrial society was based on already emerging patterns in America in the 1970s. and these are:

- 1) Employment figures in 1950's: US became the first country to have a majority of its working population in services i.e. trade, finance, transport, health, recreation, education, government. Within service there was a rapid growth of professional and technical carders.
- 2) Evidence showed that contribution to service sector to GNP was steadily mounting.
- 3) Increase in Financial allocation towards higher education i.e. theoretical knowledge is central organizing principle in society.

To bell post industrialization offers a solution to many problems in industrial society such as :

- Individual talks to individual rather than interacting with machines.
- Vision of new worker
- Performs interesting and varied jobs in pleasant surroundings
- Is engaged in production of a service and not in production of good.
- Interacts with life people and not mindless machines.
- As customer demands vary, offers personalized service
- Service not fragmented to which there was lack of identification with product - there is a certain unity in service provided by worker
- Finally new work places is a pleasant office room and personal shop floor.

Some argue that post industrialism is unlike industrialism in its consequences for people. Industrialism promoted alienation as it made material affluence possible. Post industrialism in contrast allowed individual to set its own pace, instead of being paced by machines, by offering work i.e. varied and interesting. Worker does complete jobs instead of fragmented bits of work. Hence post industrialism offers solution to the alienation of man. The critics say that it is too rosy a picture. Marxist would not agree that is alienation can be solved within the frame work of capitalist system of production. To them root cause of alienation is private ownership i.e. what robs worker of his control over tool and production. Employment in service class implies that it is at the cost of agriculture. It's fallacious to equate industrial employment with blue collar manual job services with white. Many tasks involved in the provision of services such as catering, cleaning, entertainment, and transportation or of manual or even menial kind are not very different from

general run of industrial jobs. If industrial employment has remain stationary and many of the new jobs created by the services are manual, the optimistic claim that the alienating condition of industrial work now applies to fewer people would appear to be totally misplaced. The argument that whitecollar workers in the service sector perform varied jobs in a pleasant atmosphere and has come under severe attack. Vast bulks of service sector employees are clerks who have been handed into large impersonal offices. The repetitiveness, division of labor, fragmentation of tasks and monitory that characterize industrial employment are to be found here as well.

Finally, Bell's assertion that there is a growing proportion of professionals within the white collar has been questioned. The expansion of professionals in the service sector is taking place at lowest levels. These people are assigned impressive littlest such as engineer and technologist. However, they hardly enjoy freedom on their job. Their actual job is to perform according to someone else's specifications. They are more providers of information production of scientific knowledge itself has become an industry. With vast number of people performing fairly simple and regulated jobs for a coordinator who alone knows how the pieces fit together to make a whole.

While there are many critiques to Bells's arguments and his prediction, we are indeed moving from a industry oriented economy to a post-industrial one. The new technologies have definitely altered social structures, they have speeded up the globalization processes, of which we will read in our next unit.

27.9 Conclusions

In this unit we have tried to understand what is meant by industrilisation, by try to identify its central features. We have traced industrilisation to Industrial Revolution in England , which definitely propelled industrilisation, not only in England but Europe to be followed by rest of the world. Many scholars were trying to understand the far-reaching changes that were brought about by industrilisation, which has drastically changed the social structures besides, changing production processes. Some of the thinkers, who are important figures of sociology, have commented on these social changes and their implications can still be seen in our present society. The development and progress and quality of life in some of the wealthy nations became a shining model for countries which were left behind-theThird World countries. India too adopted development models from the West. Modernisation which accompanied industrilisation westernization had its impacts on Indian society that have been extensively chronicled. We have tried to cover some of these issues of modernization in many of our other units in this course. We have however tried to present you with two fundamental perspectives on industrilisation, that of Gandhi and Nehru. In our concluding section, we have tried to show that in our fat changing society we are moving even beyond traditional industrialism to processes which involve information technologies.

27.10 Further Reading

Gill, K. S. 1986, *Evolution of Indian Economy*, N.C.E.R.T : New Delhi

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