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EDUCATION AND THE ENGLISH INDUSTRIAL REVOLUTION.

Thesis for Ph.D. of University of Dublin.
Submitted by V.C. Vaman Rao. 1939

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CHAPTER I

ENGLAND ON THE WAY TO THE INDUSTRIAL REVOLUTION.

I

The latter half of the eighteenth century and the beginning of the nineteenth in England constitute a period of dramatically swift changes, social and economic, which transformed her rapidly from an agricultural to a manufacturing country. The term Industrial Revolution was first used by Toynbee to describe the changes in the economic structure of the country during the period 1760-1840, and has since become a familiar term in the economic history of England. The origin of these changes, observes Arthur Jones, can be traced to the inventive genius of a few individuals; but they so altered the character of English life and created so many new social and political problems that they may be rightly regarded as constituting a revolution in themselves (1).

The economic changes in England during the period 1760 to 1840 were, beyond doubt, very swift; but this should not blind us to the fact that the Industrial Revolution was the result of a slow process of evolution. As in France various forces were at work for centuries which brought about the French Revolution, sudden though it may seem to have been, even so in England the long interval between the death of Elizabeth and the accession of George III was really a period of preparation during which "the forces which caused the Industrial Revolution were slowly gathering momentum" (2).

(1) Arthur Jones, 'The Period of the Industrial Revolution' p.9. London, T.C. and E.C. Jack, 1914.
(2) Meredith, Economic History of England, Pitman, London, 1936. p.181.

Some of the forces which operated during this interval deserve consideration. The first of these is the Commercial Revolution of the fifteenth and sixteenth centuries, caused by the discovery of the Atlantic routes, which, as the Hammonds observe, may be considered an essential preliminary to the Industrial Revolution of the eighteenth and nineteenth centuries. This revolution in commerce was characterised by the import of popular cargoes like tea, instead of pepper, and cotton, instead of silk, which in turn inevitably gave rise to conditions which made possible "so strange a spectacle as that of a Lancashire town using a raw material not grown on English soil to produce goods that are exported for popular consumption to India or China" (1).

Secondly there is the revolution in transport caused by the construction of good roads and canals. The Industrial Revolution began much earlier in England than in countries on the Continent or in America. This was due in part to England's maritime supremacy which made her prominent in overseas trade. But at the beginning of the eighteenth century she underwent only a partial change from an agricultural to a manufacturing country. The proper impetus to a complete industrial expansion did not come until her roads were improved and a net work of canals was constructed. The roads in England at the beginning of the eighteenth century were far worse than those in contemporary France, and there was no improvement whatever in their condition until Turnpike Trusts, which were made responsible for the construction and maintenance of definite pieces of road, were set up by private Act of Parliament. The improvement of the roads made possible the operation of stage-coach services and wagon services for the conveyance

(1) Hammond, J.L.& B, The Rise of Modern Industry, pp 21-23.

of passengers and goods between the principal towns, as regular as the service of the modern railway.

Again, the development of coal fields which brought coal into use in the iron industries instead of charcoal, made the problen of canal construction very urgent The cost of carrying coal by road from one place to another was enormous, and the Duke of Bridgewater, one of the largest owners of coalmines, was very desirous to have a canal between Worsley and Manchester in order to reduce the expenses of transport. His ambitions were fulfilled and the canal between Worsley and Manchester, the first in England, was constructed by James Brindley, a genius, although a man who could neither read nor write. Before the close of the century there were in England nearly 300 miles of canals (1).

Among other factors which prepared the way for the Industrial Revolution in England account must be taken of the stability of the English Government for centuries before the revolution began. "Watt invented in an England that had accepted and adapted the Reformation, established an oligarchy in power, achieved a unity of law and government, created a constitution more flexible and liberal than that of its contemporaries, acquired an empire in distant seas" (2). It is therefore no surprise that the Industrial Revolution first began in England and that through its benefits the English became one of the most powerful nations of the world.

So much, to show that the Industrial Revolution was the result of a slow process of evolution and not a sudden outbreak like some political revolutions. It is now necessary to pass on to a consideration of the religious,

(1) Hammond, J.L.& B., The Rise of Modern Industry, pp 75-78.
(2) Hammond, J.L.& B., The Rise of Modern Industry, p.4.

social and economic conditions of England during the eighteenth century, for the state of education at any time in a country depends largely on social and economic conditions. This is clearly so in the case of English education; and, as Dobbs observes, the statement of a modern writer that "progress in English education has owed less to the zeal of its advocates than to changes in the structure of social life which have no apparent connection with educational movements", paradoxcial as it seems to be, is yet true (1).

II

The first half of the eighteenth century was a period of general prosperity and, as has been noted, the profound changes in the social and economic life of the people belong to the second half. There were very few large towns in this period and in 1760, next to London, only Bristol and Manchester had a population of over 50,000. England during this period was still a country with peasant occupations and local markets, and both agriculture and industry were operated on a small scale to meet local demands. Manufacturing industry, no doubt, grew steadily during the first half of the eighteenth century, but it was mostly on old lines and with the old tools. The farms in most parts of England were even in 1760 still small and they were cultivated in the old traditional ways with little or no skill and without adequate capital. "Custom alone", writes Arthur Young, "has been the guide of the farmer. Deduct from agriculture all the practices that have made it flourishing, and you have the management of small farms"(2). Nevertheless, farmers in England, in the early eighteenth century, lived comfortably, the reason being that they did not depend on agriculture alone for their subsistence. They

(1) Dobbs, Education and Social Movements, Longmans 1919. Preface pp v11-v111.
(2) Quoted by Powell and Tout,Hist of England, Longmans, 1900. p.819.

were all engaged in some domestic industries which while supplementing their usual earnings also provided variety of occupation.

The prosperity of the English during the early eighteenth century led naturally to a religious stagnation comparable only to the similar state of religion that prevailed in Europe as a whole before the dawn of the Renaissance. "As is always the case", wrote Lecky,"the habits prevailing in other spheres at once acted on and were influenced by religion". "Again", as the same writer continues, "the selfishness, the corruption, the worship of expediency, the scepticism as to all higher motives that characterised the politicians of the school of Walpole, the heartless cynicism reigning in fashionable life which is so clearly reflected in the letters of Horace Walpole and Chesterfield, the spirit of a brilliant and varied contemporary literature eminently distinguished for its measured sobriety of judgment and for its fastidious purity and elegance of expression, but for the most part deficient in depth, in passion and in imagination, may all be traced to the popular theology" (1).

Addison observes that there was "less appearance of religion in England than in any neighbouring state or Kingdom" (2). To Dr.Edmund Gibson, Bishop of London, "it seemed as if the entire nation was on the point of being overwhelmed by profligacy and unbelief and he was unable to entertain any hope for a generation so evil and rebellious except a diligent endeavour on the part of the parochial clergy to check and resist it by putting fresh incense in their censers and standing between the dead and living"(3).

(1) Lecky, Hist of England in the Eighteenth Century, vol 11, page 531.
(2) No.47 of the "Freeholder", Quoted by William Connor Sydney, England and the English in the Eighteenth Century (1891), P.324.
(3) Ibid. P.326.

Hannah More in her "Estimate of the religion of the fashionable World" observes that "our religion has decreased in a pretty exact proportion to our having secured the means of enjoyment" (1).

All these evidences lead us to the inevitable conclusion that Christianity in England during the eighteenth century was in a state of decadence and that piety had altogether vanished. The rich and the poor alike were highly immoral and drunkenness was a common characteristic of all ranks of society. Even the clergy, the higher as well as lower, were not free from these vices. They were too worldly to attend in earnest to their spiritual duties and their private lives were deplorably scandalous. Abbey describes the average sermon of the eighteenth century as "too stiff and formal, too cold and artificial"; but, worse than that, most clergy never preached at all, while most of those thatdid bought a stock of manuscript sermons, which were very commonly sold in those days, and which lasted them for life (2). "If Walpole's peace policy led to material prosperity", writes Smith, "a stagnant Church was planting the seeds of a coarseness and brutality of behavious and outlook which were soon to bear fruit" (3).

Such then were the general social and religious conditions prevailing in England during the first half of the eighteenth century. But the latter half of the century bears a striking contrast to the former; for it was by no means a period of prosperity, especially for the poorer classes; and though the state of religion was still deplorable, there were attempts at a revival. Before

(1) Estimate, I. pp 11-12. Quoted William Connor Sydney, opcit, P.328.
(2) William Connor Sydney, opcit p.365.
(3) F.Smith. A Hist of English Elementary Education. p.6.

giving an account of the religious revival of the last decades of the eighteenth century, it is necessary to examine those economic changes of the century which were responsible for most of the social evils and sufferings of the poor and for the deplorable state of their education.

III

In the agricultural world there was a rapid spread of the system of enclosure which did incalculable harm to the peasants all over England. The growth of scientific experiments in agriculture, the high standard of living among the landowners, which made them greedy and anxious to own large tracts of land, and the resort to large-scale production in agriculture following the example already set by the manufacturing industries, were some of the innumerable causes that led to the spread of this movement. Between three and four thousand Enclosure Acts were passed in the reign of George III and about the same number in the reign of George IV. By the year 1843 nearly seven million acres of land were enclosed and passed into the hands of big landlords. From a purely economic point of view the policy of enclosure was undoubtedly sound, for "without enclosure", wrote Arthur Young, "there can be no good husbandry". But so far as the poor peasants were concerned they were very adversely affected by this change for which they were quite unprepared. While the landlords grew richer and richer under the new conditions the peasants became poorer and poorer. The great majority of the rural population became by the end of the century a class of mere labourers who formed the counterpart of the large masses of factory workers in towns.

We must now pass on to an examination of the changes in the field of industry during the latter half of the eighteenth century in England and the social problems these changes raised. It has been noted that the Industrial Revolution consisted in the transformation of

England from a mainly agricultural into a mainly industrial country: and the description of this process as a revolution is apt, not because it was sudden or rapid, but because the change when accomplished was fundamental. This period was characterised by the introduction of new machinery and new methods in the manufacturing industries, by the growth of large factories and the consequent increase in the number of towns and town population, and by the rapid increase in the population of England which, during the period 1760-1830, almost doubled itself. Another point deserving notice is the redistribution of the population during the period 1760-1830. In 1750 the southern half of England was the most populous part of the country, and the counties of Norfolk and Suffolk and the west of England were noted for their manufactures. By the end of the century, however, the textile industries of the South East and South West lost their importance, and Lancashire and the West Riding of Yorkshire became the chief textile centres and hence also the most populous counties. Similarly, Leeds and Huddersfield came to be thickly populated areas, having become the chief woollen centres. Prior to 1760 the two important towns of England were London and Bristol in the South: but the towns that grew rapidly during the period of the Industrial Revolution all grew in the North in the coal and iron areas. As there were no building regulations houses were constructed in any fashion, often with inadequate ventilation and sanitary arrangements. Hence the new towns were always infected with plague, small pox and virulent fevers. Navertheless, the population of the new towns went on increasing at a rapid rate as the factories in them were multiplying, and the peasants who were ruined by the new agrarian changes sought work in these factories. Again, there were the Irish immigrants, to whose heavy rush into the new manufacturing towns the rapid increase of population is very generally attributed, and whose low standard of morality and living in general were

responsible not a little for the poverty of the masses and the moral degradation that prevailed in England during the last decades of the eighteenth and the beginning of the nineteenth centuries.

But no account of the evils of the new industrial age can be complete without a description of the depressed condition of children during this age and the hard labour imposed upon them. A detailed account of child labour and the deplorable state of the education of the poor will be given in the next chapter, but a few general remarks will be in order here.

Child labour in England was employed long before 1760, but then it was not on a large scale, nor was it accompanied by very acute sufferings on the part of the child workers as it was in the years that followed. There were two main reasons why children were frequently employed in factories after 1760. Firstly, the new machines that were employed in the manufactures were such that they could be easily attended to by very young children; and secondly, child labour was cheap and the greedy employers tried to make as much profit as they could by resorting to it. This was not all. Children could be made to work for longer hours and much harder than adulits - sometimes by threats and punishments and sometimes by small bribes: and, indeed, it was such hard labour for long hours during a tender age that made the children unhealthy and often deformed. "These children", wrote Dr.Aikin, "are usually too long confined to work in close rooms, often during the whole night: the air they breathe, from the oil, etc., employed in the machinery and other circumstances, is injurious: little regard is paid to their cleanliness, and frequent changes from a warm and dense to a cold and thin atmosphere are predisposing causes to sickness and disability, and particularly to the epidemic fever which so generally is to be met with in these factories" (1).

(1) 'Description of the Country round Manchester', pp.219.220.

Factories in the early years of the Industrial Revolution were very badly constructed and it is no wonder, therefore, that diseases in epidemic form were too often prevalent in the manufacturing districts. In 1784 there was an outburst of fever in the Radcliffe Cotton factories, and the Manchester magistrates appointed a committee of medical men to investigate the causes of this epidemic. Later on a permanent committee was formed which became known as the Board of Health. One of the members of this board, Dr.Percival, drew up a series of resolutions drawing the attention of Parliament to the unhealthy conditions in which children worked in the cotton factories and to the neglect of their education and religious instruction (1).

It should be remembered, however, that it was not the employers alone that were to be blamed for the sufferings of children during this period. The parents in the England of the eighteenth century very seldom sought to prevent the exploitation of child labour: most of them were in fact, too willing to live on the earings of their children. In giving an account of the New Lanark Mills under David Dale, William Lochart wrote that the greater the number of children a widow had, the better it was for her, for on this account alone she often became a tempting object to a second husband. Again the statement of Sir Robert Peel, who was himself a millowner, is adequate testimony to the very miserable conditions under which children worked in England during the close of the eighteenth century. "The house in which I have a concern", stated Peel to the Committee of 1816, gave employment at one time to near a thousand children of this description (Parish apprentices). Having other pursuits, it was often not in my power to visit the factories, but

(1) Report of the Select Committee on the State of Children employed in Manufactories 1816, pp.139-40.

whenever such visits were made I was struck with the uniform appearance of bad health and in many cases stunted growth of the children: the hours of labour were regulated by the interest of the overseer,whose remuneration depending on the quantity of work done, he was often induced to make the poor children work excessive hours, and to stop their complaints by trifling bribes" (1). This being the state of affairs in his own mill, Peel came to the conclusion that the conditions prevailing in other parts of Britain were much worse: and as a remedy against the evils which existed he introduced the Act of 1802, called the "Health and Morals of Apprentices Act". The Act prescribed the periodical white-washing of all factories and the introduction of proper ventilation; fixed the maximum working hours for apprentices at twelve hours a day; required night work to be discontinued; and, lastly, insisted on the instruction of the apprentices in reading, writing and arithmetic. The Act of 1802 is important as being the first attempt of the State to improve the conditions of child labour; but its clauses were very often violated, and in reality the evils of child labour continued almost unabated until the passing of the Factory Act of 1819.

IV

Almost simultaneous with the very rapid industrial expansion and the increase of the sufferings of the poor, especially of the child workers, proceeded the religious revival of the latter of the eighteenth century. Two main movements - the Methodist and the Evangelical - constitute this revival. The Methodist revival, as Tyerman thinks, sprang from the various societies that were started at the close of the seventeenth century for the general reform of morals. These societies existed in different parts of the

(1) Report of the Select Committee on the State of children employed in Manufactories, 1816, p.133.

country and they all conformed to the same rules and regulations. Their chief business was to conduct prayer-meetings, to encourage the study of the scriptures and "to reprove, to exhort and to edify one another by religious conference". They also performed deeds of charity like "supporting lectures and daily prayers in Churches, releasing imprisoned debtors, relieving the poor and sending their children to school". The beginnings of Methodism may therefore be traced to these societies whose members took a great interest in the movement and were responsible not a little for its progress (1). The founder of the movement, John Wesley, was a simple and enthusiastic preacher, and 'the force of his reasoning' and 'the practical character both of his means and of his object' were invaluable assets which led to the rapid success of the movement. Wesley in his revival work mostly employed the method of the two friars, Saints Dominic and Francis, of sending pairs of itinerant preachers to all parts of the Kingdom. The adoption of this plan at a time when the parochial organisation of the Church had become ineffective owing to the worldliness and sloth of the clergy brought to the poor workers those spiritual blessings which otherwise they would never have had. Wesley's exertions, however, were little encouraged in the higher circles. Far from getting any help or encouragement he earned from the "high folk" and from the wordly Anglican clergy "plenty of sneers, hooting and ridicule". But Wesley steadily continued his good work and large numbers of people eagerly heard his discourses which taught that the poor and the rich alike were "heirs of God". By diverting the attention of the labouring poor to his new teachings, which included among them "loyalty and submission to the King and Government, Wesley did the great service to

(1) William Connor Sydney, opcit pp 352,353.

England of averting a political revolution similar to the French Revolution. "It was methodism, evangelicalism", wrote Halevy, "which in the first years of the nineteenth century, gave to the English Nation its moral tone; and it was among the bourgeois class whose social importance increased with the progress of industry, that first was manifested this protestant awakening (1).

The Methodist movement has an educational significance as well. Wesley could not stop with merely instructing the masses in the way of salvation. He had also to educate them for without education progress in religion was impossible. He established a number of Sunday schools and Charity Schools, as many of the other Dissenters did; but Wesley was so moved by the poverty and misery of the people that in his schools he made provision even for clothing the needy.

Behind all his educationsl work Wesley had a definite philosophy which he worked out by intelligent and hard thinking, and the practical results of which were due to a 'living spirit' which characterised it. Wesley had opportunities of putting his theories to test while he was in America, and when he came back to England he could quite easily solve the difficulties that were involved in opening a school at the Old House, Kings Wood, which was among the earliest of Wesley's schools in England. He then opened a school at the London Foundery, and for the proper conduct of this school he devised, from his practical experience and his theoretical knowledge, certain definite rules which were adopted later in all the Methodist Schools and which gave them a strict disciplinary tone (2).

Education among all sections of the English population, especially among the poor, was very much

(1) Quoted, F.Smith, op cit, PP.32-33

(2) Body, A.H: John Wesley and Education, pp 134,135.

neglected i n Wesley's day; the morality of the English people had reached its lowest ebb. The strict monastic discipline of Wesley's schools was therefore the special need of the times, and Wesley replaced by such a discipline "the lax and vicious conditions of public school life, organised the poorest classes into a strict yet kindly orderliness, teaching them self-respect as well as reading, writing and arithmetic", and he challenged with his "Academic course" even the universities of Oxford and Cambridge (1).

Wesley was keenly interested in the cause of adult education also his 'evening schools' for adults were perhaps the first of such schools opened in England. For the convenience of those who could not attend in the evenings he arranged classes during the early hours of the morning, thus giving to a great many the opportunity of learning to read, write and 'cast accounts' (2).

As an educationist Wesley's main task was to restore the moral and intellectual tone of the English nation; but he freely experimented even in matters of educational practice. For example, he was the only educationist of his day, who thought of bringing the parents in close touch with the schools, and he tried this plan at the Foundery school by arranging a weekly Wednesday meeting of masters and parents. What the schools of to-day are trying to achieve through 'Parents' Evenings, Special Days and open weeks', Wesley sought to achieve nearly two centuries ago.

In the curriculum Wesley introduced a 'novelty' by including Hebrew. He thought this language specially suitable for study as the Old Testament writings had given the language an 'aura of sanctity'. A period a day was spent by the eighth class (sixth form) in the study of

(1) Body, A.H: opcit, p.138.
(2) Ibid, p.139.

Hebrew Antiquities. But in addition to the classics, Wesley included geography (from the sixth class onwards) algebra, physics, gardening and music in the regular programme of studies. Thus Wesley attempted to give a really cultural education by widening the curriculum long before such changes were contemplated in the Grammar and Public schools.

Wesley's educational work is of no slight importance especially when we think of the opposition he had to face from the higher classes of society. He not only established schools, but maintained throughout his life time their healthy moral and intellectual tone. "If education means character building and the imparting of ability to live nobly, usefully and co-operatively, Wesley, beyond comparison, was the greatest educationist of his century, and one of the greatest of all time" (1).

After his death, Wesley's educational work was continued by his followers who were so well trained by him that among various religious bodies that undertook to educate the poor, the success of the early Methodists was greatest. At the commencement of the nineteenth century the Methodists had their own elementary schools, secondary boarding schools and even training colleges for training their own teachers.

So much about Methodism and the educational work of Wesley. Now passing to an account of the Evangelical movement, we find that, unlike Methodism, it was a movement within the Church of England and led by very wealthy men. The two movements may of course in a sense be regarded as complementary, for the Evangelicals carried on some educational work which was a help to Wesley. The supporters of this movement, as noted above, were educated men of high rank, who were indeed zealous in the pursuit of

(1) J.Wesley Bready, England : Before and After Wesley, p.266.

good ends, but who were nevertheless most anxious to maintain social and class distinctions. Hannah More, one of the Evangelicals, who was very earnest in her work of moral uplift of the poor, once remarked that "beautiful is the order of society, when each according to his place - pays willing honour to his superiors - when servants are prompt to obey their masters, and masters deal kindly with their servants; - when high, low, rich and poor - when landlord and tenant, master and workman, minister and people, instead of each proudly pushing himself into the chair of his superior, sit down each satisfied with his own place"(1).

That the Evangelicals were swayed by economic and class motives is quite evident from the fact that in the ten schools in the village of Mendip Hannah More made provision for the teaching of only those subjects which would fit them to be good servants. "I allow of no writing for the poor", she wrote, and "the only books we use in teaching are two little tracts called 'Questions for the Mendip Schools' and 'The Church Catechism'"(1).

But in spite of all its shortcomings the Evangelical movement did great service to the poor during the latter half of the eighteenth century. It is said of Thornton, a banker and one of the Evangelicals, that before his marriage he spent six sevenths of his income on charity, and of Wilberforce, another member of the movement, that in one year he spent £3000 on a similar cause (2). The educational benefits which the poor received from the philanthropic motives of the Evangelicals, meagre as they were, were nevertheless of considerable value in an age when the state undertook no responsibility towards educating the masses.

V

We may now consider briefly some of the effects which the Industrial Revolution produced on English

(1) W.Roberts, Memoirs of the Life and Correspondence of Hannah More, Vol. 11, p.72.
(2) Smith, F. A Hist of English Elementary Education, p.32.

education. Education in England from the days of the Industrial Revolution onwards became a matter of the greatest importance. The reason is obvious. It has been pointed that prior to 1760, when none of the profound economic changes of the eighteenth century had yet taken place, the majority of the English population lived in villages and agriculture was the main occupation (1). Again the farmers carried on a number of domestic industries which not only increased their earnings, but provided a variety of occupation, which, we may say, was the main educational provision of those happy and prosperous days of the early eighteenth century. There is no doubt that the early training which the sons of peasants received on the farm and at home was educationally sounder than the purely literary training given in the schools that arose later in towns. In fact, Prof.Dewey, in his university Laboratory School which he founded in 1896, aimed at giving children the same kind of practical education which was given them prior to the Industrial Revolution when the majority of the people lived in villages. But such a practical education in the years preceding the Industrial Revolution was not by itself complete. After the child had undergone its training in agriculture and other domestic industries it had nothing fresh to learn; and naturally with the close of the period of childhood there began a period of intellectual stagnation. There were, of course, a few schools in the rural districts which supplemented the home training of children by giving them a knowledge of reading, writing and arithmetic. In days of prosperity, when the majority of the English population were engaged in agriculture, the practical training on the farms and at home and the meagre knowledge of reading and writing provided by the dame or charity schools were regarded by the poor as ample educational provision and they never clamoured for any further extension.

Conditions, however, changed with the introduction of machinery in the manufacturing industries and the growth of large factory towns. The peasants who, with the rapid spread of the movement of enclosure and the introduction of large scale farming, were reduced to the condition of mere agricultural labourers with very low wages, became extremely dissatisfied with their new lot and hence began rushing into the towns to work as labourers in the newly opened factories. Now the work in factories was based on the principle of division of labour and hence, as the Hammonds observe, "men, women and children lost range, diversity and incentive in their work, when that work was simplified to a single process or a monotonous routine" (1). That variety of occupation present in the rural life, in which agriculture and industry were combined, was altogether absent in the factory life where children as well as adults were engaged for years in one particular form of labour and hence never found opportunities for the proper development of many of their capacities. Adam Smith was therefore thoroughly justified when he said that the division of labour was harmful to the workers' minds though of course it facilitated large scale production. To counteract this harm resulting from the routine work in factories he suggested education as a remedy which he thought was at the same time essential to industrial growth. He said that the state should undertake the responsibility of educating the poor: for "in a commercial society", he wrote, "their mental training is more important than that of people of rank and fortune" (2).

Thus the need for public provision of education was plain enough, but very little was done in the early

(1) Hammond, J.L.& B, opcit. p.228.
(2) Quoted by Hodgen, "Workers' Education in England and United States. p.21.

years of the Industrial Revolution towards the fulfilment of this object. During these years education - nay even a little diversion - for the poorer classes was considered by the greedy employers and capitalists as wrong, "because it was believed that successful production demanded long hours, a bare life, a mind without temptation to think or to remember, to look before or behind" (1). Only a few well wishers of the poor, like Paine, Whitbread and Brougham, did all they could to realise this end. Their efforts, however, did not meet with any great success and the result was that in the latter half of the eighteenth century and the beginning of the nineteenth the provision for the education of the poor was hopelessly inadequate.

Conditions, however, were bound to alter. The need for popular education which the Industrial Revolution created could not be long suppressed. The suffering of the poor, especially of the child workers in factories, all the more emphasised the urgency of the demand for popular education: and with the first parliamentary grant for education in 1833, and the creation of the Committee of Council on Education in 1839, there began in England a period of slow but very steady progress in education. In fact, the origins of all movement in English Education from the nineteenth century onwards like that of the infant and nursery schools, national elementary schools, adult schools and schools for technical and vocational instruction, may be traced to the Industrial Revolution. It was the Industrial Revolution alone, which in the beginning did untold harm to the children of the poor by overwork and improper or no education, that made the twentieth century 'the age of the child', as Knowles calls it.(2)

There appears to be a very close resemblance between the growth of the English Constitution and the

(1) Hammonds, op cit. p.229.
(2) L.C.A.Knowles, The Industrial and Commercial Revolutions in Great Britain during the Nineteenth Century, London, 1926, p.96.

growth of English public education. The clear and formal beginnings of the English Constitution are to be traced back to 1215, when King John signed the Magna Carta, though the actual beginnings of the Constitution could be traced to a much earlier date. It was his long period of tyranny and misrule that led to his signing this Charter. Similarly the origin of a State System of education can be traced to the first State grant for education in 1833, though earlier instances of State intervention in education could be seen in the educational clauses of the Factory Acts. It was the miserable plight of the child workers and the utter neglect of their education during the period of the Industrial Revolution that led to this first State aid for the education of the poor. Again, the English Constitution is flexible and in fact does not exist at all, in the sense in which other written Constitutions exist. Its Statutes are scattered all over and can be found in no single book. All developments in the Constitution were the results of practical needs and were never prearranged according to any definite plan. So too is English education, the development and present state of which are the results of a slow process of evolution. The various education Acts that were passed since 1833 were not based so much on any definite educational principles as on the practical needs that arose from time to time. Hence it is that the present system of English National Education, though it may have been considerably influenced by examples set by Countries like Scotland and America, is unique by itself, even as the English Constitution is unique.

The comparison drawn so far is only between the growth of public education from the nineteenth century onwards and the growth of the English Constitution from early times. But even the structure of English education as a whole is as curious as that of the English Constitution. "Education in England", writes Herbert Ward, "is at once very old and very young". The statement is quite true inasmuch as schools in England have

existed from times immemorial, even before the days of Alfred, the Father of English education as he is often called. Again the universities of Oxford and Cambridge are as old as Parliament itself. What is new in the structure is really the National System of Elementary and Secondary Education which made the education of every child in the country compulsory, beginning with the age of 5 and ending not before the age of 14. There is no wonder if such a curious structure with its combination of old institutions and new has many points of similarity with the Constitution which is equally old, and consists of a strange combination of very old conventions which still retain their importance, with very recent Statutes that have been passed by recent parliaments.

Such a lengthy comparison between the English Constitution and English Education may seem out of place;but it serves to show that education in England from the earliest times onwards was provided through private enterprise and that the State has always been reluctant to interfere in this matter. Instances of State intervention in education are only - like other phenomena in English history - the result of dire necessity. Ward is therefore perfectly correct when he says that "the force of circumstances proved however more powerful than prejudice and as that tremendous and involuntary social transformation which we call the industrial revolution gathered volume decade after decade, individual effort was found to be totally insufficient of itself for the tasks of civilisation, and the need for State money to be more and more urgent". In spite of all that the State has done to this day for education it occupies only a secondary position, and its interference in educational matters is only to help private enterprise, never to replace it (1).

So far an attempt has been made to show that the Industrial Revolution created the need for the education of the

(1) Herbert Ward, The Educational Systen of England and Wales, Cambridge, 1935. p.17.

masses, for this alone ensured the personal well being of the workers in a complex state of society and at the same time helped industrial efficiency. But a few years later the education of the masses was urged not merely on grounds of physical or moral well being of workers, but on political and social grounds. It should be remembered that though the sufferings of the poor in the age of the Industrial Revolution did not result in a political revolution, the French Revolution produced very important changes in the outlook of the English masses. It created in them a distrust of the governing classes and a desire for the exercise of political rights. Such a tendency found expression in the rise of the Chartist movement which was a movement for the political and economic security of the English working classes and covered a period of about fifteen years - from 1832 to 1848. Chartism may therefore be regarded as the joint product of the French Revolution and the Industrial Revolution. The Rotunda Radicals, a group of Chartists, felt that they could accomplish much more by force than by peaceful means and they encouraged general strikes; but their efforts were unsuccessful. Another branch of the Chartist movement was called Knowledge Chartism, the leaders of which were self educated working-men who aimed at political franchise for the masses, not as an end in itself, but more as the means whereby they could provide themselves with better educational facilities. The Knowledge Chartists therefore set before themselves an elaborate scheme of education and it is this which gave to the Charist Movement "its fundamental intellectual flavour".

The three important leaders of this movement were Robert Owen, Thomas Hodgskin and William Lovett. Owen tried to convince the employers that the well being of the workers was as important or even more important for the progress of industry than the well being or perfection of their machinery. Though a business man by profession he was by his tastes an educationist and he never spared any opportunity to further the cause of the education of the working classes. But Owen did

not sympathise with the political aspirations of the workers, and his efforts to extend their educational facilities were not actuated by the desire to raise their political status. He was in fact autocratic in his dealings with workers and his chief object was to make them by education "more effective instruments for producing profit".

Thomas Hodgskin, however, was a man of broader views, having had some training in philosophy, and his attitude towards the working classes was very friendly and sympathetic. He thought that the then existing organisation of society was fundamentally defective and that the only remedy for such a state of affairs lay in a very rapid but peaceful change resulting in the formation of a new society. His educational ideas were superior to those of Owen, and but for the opposition of Francis Place he would have gained eminence as the author of the Chartist programme of education.

The third great leader of Knowledge Chartism, William Lovett, was again the son of a working man and his career very much resembled that of Owen. The education of the working classes always occupied the first place in his mind and, quite unlike Owen's, his motive in this matter was to win for them their political liberty. Indeed the very success of Lovett's educational schemes was due to this motive. Education for mere physical or moral well-being was no longer the thing the workers wanted. They were becoming more and more desirous of participating in the government of their Country.

The brief account of Chartism given above shows clearly that by 1832 the transition years of the Industrial Revolution were nearly over and that by then a slow but steady improvement in the standard of living and in the conditions of education of the poor began. It is only with an increased standard of life that the desire of having an education for leisure and of participating in the government of the country arises and the Chartist movement of 1832-1846 is an indication of such aspirations on the part of the workers. Indeed the various attempts at reform of Parliament, beginning from 1832, were

due to the higher standard of living and better educational facilities made possible for the poor by the Industrial Revolution.

Enough has been said to show that to England the Industrial Revolution was a blessing which, having made urgent the provision of education for the masses, ultimately made her the greatest power in the world politically, economically and socially. But there is no doubting the fact that during the transition years of the change the poorer classes suffered to an enormous degree, and their very low moral state is ample evidence of the utter neglect of their education during those years. In the next two chapters we shall consider in detail the state of the poor and the meagre provision for their education during the transition years of the Industrial Revolution.

CHAPTER II

EDUCATION IN THE EARLY YEARS OF THE INDUSTRIAL REVOLUTION - 1760-1800.

In attempting to examine the conditions of child-labour and the state of popular education in England, during the period of the Industrial Revolution, it is convenient to break the entire period into halves, the one ending with the close of the eighteenth century and the other beginning from 1800 and ending about 1840, a year after the appointment of the Committee of Council on Education.

The provision for the education of the masses which existed during the early years of the Industrial Revolution was the same meagre provision which the poor had during the first half of the eighteenth century. In addition, of course, there were the Sunday Schools which spread rapidly in the country during the eighties of the eighteenth century.

It was shown in the previous chapter that the first half of the eighteenth century was a period of prosperity. Agriculture was the main occupation of the people, and the farms were still small and cultivated in the old traditional way. The profits from agriculture were not substantial; yet the farmers were happy, because they carried on a number of domestic industries which supplemented their usual earnings, and at the same time made possible the necessary educational provision for their sons and daughters. The training which children in the years preceding the Industrial Revolution received on the farm and at home constituted the most important part of their education. It was a practical education in learning to grow food and to breed cattle: and again, it consisted of object lessons, which the child got "from the smithy, the weaver's shed and the carpenter's shop". Nor was this all. The child's

leisure hours were occupied in acquiring skill in domestic industries, like spinning and weaving, and other miscellaneous kinds of work. It will thus be seen that, though a knowledge of reading and writing was rather rare in the early eighteenth century, the early life of the child, being a period of discoveries that satisfied his curiosity, was one of profound educational significance.

It should be remembered, however, that there were a good many private schools, for the various classes of the people, which supplemented the home-training of the child by imparting a knowledge of either reading, writing or arithmetic, or sometimes of any two or all the three subjects. Important among such institutions, were the Dame Schools, the Private Day Schools, the Charity Schools, and the Schools of Industry.

The Dame Schools were quite common throughout England in the eighteenth century and even later. To these schools very young children were sent, more to be looked after during the absence of their parents from home than to be taught anything. As a general rule, such schools were taught by women who wished to supplement their usual meagre earnings by the two or three pence a week they charged for each child. "A dark room, a dame, a hornbook and a good birchen rod - a congested troop of infants droning in an oppressive atmosphere - a stray hen scouring for scraps on the threshold - and the mistress attending intermittently to her domestic affairs" (1), this is a prose version of the famous stanzas of Shenstone, given in a later age by the Royal Commissioners, and is indeed a typical description of the Dame Schools. But however true the statement may be, the Dame Schools still satisfied in a way the requirements of the people in the early eighteenth century, who, as has been pointed out, were happy countrydwellers and never cared

(1) Quoted by Dobbs. Education and Social Movements. p.90.

much for any great extension of the existing provision for education. Again, in urban districts we find many instances in which these schools were carried on under efficient conditions. Thomas Cooper describes the dame whose school he attended as an "expert and laborious teacher of the art of spelling and reading" and says that "her knitting too (for she taught girls also) was the wonder of the town". "It's little they pays us and it's little we teaches them", was the chief complaint of the dames, and if a meagre skill in reading was all that could be attained as a result of attending their schools for a prolonged period, it was no fault of theirs.

The nexttype of schools common in England throughout the eighteenth century was the Private Day School. These were meant for rather older children and were conducted by men who could not find other means of occupation, or who, like the dames, could not subsist on their ordinary earnings alone, and hence tried to increase them by teaching. In general, the condition of these schools was deplorable. Hardly anything but mischief could be learnt in them. The master usually set a task to each boy, and when the boy had learnt it by heart he had to repeat it at his desk. The teacher used to attend alternately to his trade and to hearing the lessons. The schools were often noisy places and their surroundings as well as the premises were very dirty. But, again like the Dame Schools, they answered the humble purposes of the predominantly rural population of England in the first half of the eighteenth century.

The Charity Schools were, by far, the most important of all the institutions available for the education of the poor in England in that century. The first Charity School appears to have been set up by the Jesuits in London: and as a rival to this institution, William Blake, a woollen draper, is said to have founded at Highgate, in 1685, the

Ladies' Charity School - so called because he expected support from the great ladies of the country. This school maintained "nearly 40 poor or fatherless children, born at or near Highgate, Hornsey, or Hampstead"; and all these children were "decently clothed in blue, lined with yellow; constantly fed all alike with good and wholesome diet; taught to read, write and cast accounts, and so put out to trades". There were some other Charity Schools founded during the last quarter of the seventeenth century, important among which was the one founded in 1688 by Bishops Patrick and Tennison at St.Martins-in-the-fields. The rapid spread of these schools all over England did not commence, however, until the beginning of the eighteenth century, which was, as Miss Jones calls it, the age of benevolence (1). We may briefly consider the circumstances that led to this growth.

The economic changes of the eighteenth century, especially of the latter half, made the lot of both agrarian workers and the factory operatives very miserable. Poverty increased tremendously and the cost of poor relief went up rapidly as the century advanced. The children of the poor during this period were naturally neglected and brought up in ignorance. They were apprenticed about the age of twelve - in scores of cases much earlier than at twelve - and until they were put to work they spent their time in idleness at home, or in vagabondage in the streets. The two possible means of disciplining the children of the poor during this period were the Charity Schools and the workhouses. Workhouses were of course quite common on the Continent, especially in France; but in England they were only newly introduced. To establish workhouses all over the country on the Continental plan large funds were necessary. Money was needed for the erection of special buildings, for the purchase of stock and tools for the workers, and for paying the wages of officials in charge of the

(1) M.G.Jones, The Charity School Movement, Cambridge, 1938. p.3.

workhouses. There were various other items of expenditure, and the total cost of maintaining workhouses was naturally very high (1).

It was on the other hand quite easy to provide Charity Schools for the children of the poor without any considerable expenditure of money. Any house that was unoccupied could serve as a school building, and the amount of money needed for the purchase of benches, slates, pencils and a few books, was small. The cost of clothing boys and girls was also very low. It came to about 15s.8d. per year in the case of a boy, and to about 16s.1d in the case of a girl (2). Lastly, an efficient teacher could be procured at a salary of £20 per annum (3). It is therefore not surprising that the method of disciplining the infant poor by a system of Charity Schools all over the country was adopted by the English, in preference to workhouses, whose development in England was slow, both on account of the heavy expenditure involved in their establishment and on account of their foreign origin.

Again, it was not merely a matter of preferring the Charity School to the workhouse that contributed to the strength of the Charity School Movement. The movement was supported on religious grounds as well. "Rome and its machinations constituted a danger to the Protestant Succession, which Anglicans and Nonconformists could not fail to recognise, hence catechetical schools, which could creed up sturdy Protestants to bulwark the faith against the assaults of Rome, met with immediate support " (4). One of the chief objects for which the Society for Promoting Christian Knowledge was founded was the religious education of the poor;and it is to this Society, which began its work about the year 1698, that all credit is

(1) M.G.Jones, opcit., p.34.
(2) Ibid., p.376.
(3) Ibid., p.34.
(4) Ibid., p.35.

due for the rapid extension of Charity Schools all over England. Its founders subscribed within the first twelve months £450 for the purpose of starting schools, and as these subscriptions were made from motives of charity for the poor, the schools that were founded were called Charity Schools (1). When funds were lacking sermons were preached and lectures delivered, inviting subscriptions from the rich and well-to-do. In the parish of St.Catherine-by-the-Tower, two of the trustees of the Charity School of that place, who were appointed collectors of land tax, gave their poundage to the school. It is said that in the parishes of St.Catherine-by-the-Tower and St.Paul (Shadwell), the lamps were farmed and the profits arising out of this were given to the schools (2). Thus, by adopting various means, the S.P.C.K. did a great deal of service to the cause of Charity Schools. In 1704 there were 54 Charity Schools in London, Westminster, and the surrounding districts. The number of children studying in these schools was 2131, of whom 1386 were boys. The annual subscriptions from members is said to have amounted to £2164, and the collections at sermons during the year to £1042 (3). The annual cost of maintaining a school was very small, indeed. In 1704 a school for 50 boys, who were provided with clothing also, amounted to £75 per annum. Out of this amount provision could be made for the rent of one school room, the salary of one master, cost of lighting and fire, and cost of clothing for boys, who were given, each, "three bands, one cap, one coat, one pair of stockings and one pair of shoes" (4). A girl's school is said to have cost only £60 per annum, and out of this amount payments were made "for one room, books, firing and mistress", and for the clothing of

(1) Allen and McClure, Two Hundred Years, The History of the S.P.C.K. (1698-1898), p.136.
(2) Allen and McClure, opcit., p.139.
(3) Ibid, p.140.
(4) Ibid, p.141.

girls, each of whom received "two coyfs, two bands, one gown and petticoat, one pair of knitted gloves, one pair of stockings and two pairs of shooes" (1).

The progress of the Charity Schools received a temporary check after the death of Queen Anne, owing to a certain distrust with which the schools came to be regarded. It was thought that these institutions were "nurseries of sedition and rebellion instead of religion"(2). The S.P.C.K., however, continued its good work of promoting these schools, and we are told that by 1741 nearly 2000 Charity Schools were established in England and Wales, in which 40,000 pupils received instruction. An inspector of schools was also appointed, for the Charity Schools that were situated in London and Westminster and the surrounding districts, and a proposal was made for the establishment of an institution for training "young persons for the arduous and responsible work of instructing children". The proposal, however, could not be carried out (3).

Though the chief aim of the Charity Schools was the religious education of the masses - according to the principles of the Established Church - reading, writing and arithmetic were also taught, and girls were taught, in addition, "to knit their stockings and gloves, and to mark, sew, mend their clothes, spin", and to do "any other work used in the places where they live, to fit them for services and apprentice-ships" (4).

There is, therefore, no doubt that the promoters of Charity Schools endeavoured to rescue the children of the poor from ignorance and wasteful habits; but at the same time they were, doubtless, actuated by selfish motives of preserving, intact, all distinctions of class and rank, and of strengthening

(1) Allen and McClure, op cit, p.141.
(2) Allen and McClure, op cit, p.145.
(3) Holman, English National Education, p.29.
(4) Methods used for Erecting Charity Schools, London, 1717, p.8.

the Church party. The following observation of the Bishop of Norwich, in his sermon at the anniversary meeting of Charity Schools in and about London, held on May 1,1755, clearly establishes the point. "There must be", he declared, "drudges of labour (hewers of wood and drawers of water the Scriptures call them) as well as Counsellors to direct, and Rulers to preside....These poor children are born to be daily labourers, for the most part to earn their bread by the sweat of their brows. It is evident then that if such children are, by charity, brought up in a manner that is only proper to qualify them for a rank to which they ought not to aspire, such a child would be injurious to the Community".(1) Still later in the century Hannah More and Mrs.Trimmer, who did much for the education of the poorer classes, were influenced by similar motives. "My plan for instructing the poor", wrote Hannah More, "is very limited and strict. They learn of week days such coarse work as may fit them for servants" (2).

But, in spite of all their short-comings, the Charity Schools made invaluable contributions to the progress of popular education in England during the eighteenth century. These schools, by insisting on the whole-time attendance of teachers, and also on their possessing certain specific qualifications, made the quality of instruction superior to that given in the private adventure schools, and also gave to the Charity School master a 'professional status', which teachers lacked prior to the commencement of the Charity School Movement (3). Above all, it should be remembered that no education for the poor would ever have been possible without the Charity School Movement. While in Scotland and in most countries of the Continent, the State took a prominent part in educational matters, and established a system of elementary

(1) Quoted by M.G.Jones, opcit., p.75.
(2) Mendip Annals, p.6.
(3) M.G.Jones, opcit., p.96.

instruction, in England the State remained deliberately inactive, and it was in the Charity Schools that thousands of children of the poor were educated.

There was still one more class of schools accessible to the English poor during the eighteenth century. These were the Schools of Industry. Their numbers, of course, were small, but their importance lies in the fact that in the years preceding the Industrial Revolution the training they gave children in domestic industries, like spinning, weaving and carpentry, was of great utility.

The Schools of industry were also charitable foundations; but while the Charity Schools aimed at qualifying their pupils for positions as teachers and as domestic servants in decent families, the Schools of Industry prepared children for still more humble appointments like that of "common servants". Mrs.Trimmer draws clear distinctions between the aims of Charity Schools, Day Schools of Industry and Sunday Schools, and it may not be out of place to quote in full her views in the matter. "In Charity Schools a comprehensive plan of tuition holds forth advantages proper for the first degree among the lower orders, who in these seminaries might be qualified for teachers in schools supported by Charity, for apprentices to common trades, and for domestic servants in respectable families.

"Day Schools of Industry, by mixing labour with learning, are particularly eligible for such children as are afterwards to be employed in manufactures, and other inferior offices of life, as well as for training those who are usually called common servants.

"And Sunday Schools, while they hold out religious instruction suitable to all degrees of poor children, furnish a sufficient portion of learning for such as cannot be spared on weekdays from the labours of the plough, or other occupations by which they contribute to the support of families. Sunday Schools may also serve as probationary Schools to try

the capacities of children previously to their admission into Charity Schools" (1).

To have a clearer understanding of the objects and working of the Schools of Industry, we shall have to examine some of the accounts of particular schools which were established in England in the eighteenth century. In the Schools of Industry at Kendal, there were 112 children, of whom 66 were girls. The older girls, numbering 30, were taught spinning, sewing, knitting and other miscellaneous household work; the younger girls learnt knitting only. Of the boys, eight were taught shoe-making, and the rest were taught "cardsetting - the preparing of the Machinery for carding wool". All the children were taught reading and writing by a master,aged eighteen, who was paid half a guinea a week. The master was assisted by an usher, aged fourteen, who received a remuneration of eighteenpence a week. More than 40 pupils were provided with breakfast, for a payment of fourpence halfpenny a week; and the object seems to have been the punctual attendance of children in the mornings, who received breakfasts rather late at home (2).

Another good instance of a School of Industry was one established at Lewisham, in May, 1796. It was a school for 50 boys, and the children were admitted on the recommendation of the subscribers. All the children were given two meals a day - breakfast and dinner. They were engaged in spinning, winding, and knitting and were given instruction in reading, by rotation. The cost of maintaining each child was ls.6d. a week; and if a child earned more than this amount the balance was paid back to him. We are told that "one little boy (who came from the workhouse with but a bad character, but now posesses a very great one) earns not less than a shilling a week: he has during the last month, put into the master's

(1)Reflections upon the Education of Children in Charity Schools, 1792, pp. 11, 12.
(2) 16th Report of the Society for Bettering the Condition of the Poor, Dublin, 1802, pp. 151-154.

hands, in trust for him, the sum of five shillings". All the children whose behaviour was satisfactory received annually a suit of clothes made of cloth manufactured in the school. This enabled them to dress decently on Sundays and be regular in attendance at Church (1).

Among other examples of well-conducted Schools of Industry was one in the parish of St.Mary-le-bone for boys and girls, which was instituted in 1791, under the patronage of many great persons. It is said that the school was conducted "upon so judicious a plan", that fifty poor children attended the anniversary meeting of the Charity Schools at St.Paul's Cathedral, "clothed by their own industry". The boys were chiefly employed in the "heading of pins and closing shoes and boots", and the girls in spinning, knitting and needlework. Reading and writing were also taught in rotation, by a master appointed for the purpose.

From the foregoing account of the Schools of Industry which were established in England at the close of the eighteenth century we may conclude that they were useful institutions of popular education in those districts where the occupations were still rural. The industrial training they offered was needed by the poor in such districts, though, of course, the training given to boys was not so useful as that given to girls. The reason was that boys after leaving school often secured employment in factories, and hence the industrial training acquired in the Schools of Industry was of no benefit to them. Hence it was that Schools of Industry for boys were , in general, failures, and Mrs.Trimmer's efforts to point out their usefulness and perpetuate them proved ineffective (2). There was, however, one exceptional instance of a successful School of Industry for boys. It was the school in Whitechapel, founded by William Davis, where printing was taught, and three hours a day were entirely devoted to practising this art. From a financial point of view, the work was very successful, and

(1) Account of Foster, Extract in Mrs.Trimmers' "Economy of Charity" (1801),Vol.1 pp.262-268.
(2) M.G.Jones, opcit. p.155.

the boys themselves were very much benefited by such a training (1).

The foregoing account of the educational provision for the poor, prior to the Industrial Revolution, may be regarded as being very lengthy; but the justification lies in the fact, that all the institutions for the education of the poor which existed prior to 1760 continued to exist during the period 1760 to 1840, and perhaps even later. Though the industrial changes after 1760 made the question of popular education very urgent, no great extension of the then existing means was made. The same institutions, namely, the Dame Schools, the Charity Schools and the Schools of Industry, which served a rural population, were to serve the new urban population, and though, from the point of view of their total numbers, these schools were quite inadequate for the very thickly populated towns, they were thinly attended, owing to the fact that attendance at these schools was incompatible with the long hours of labour to which the children were subjected during these years.

II

Some account of the sufferings of the child workers has been given in the previous chapter, in connection with the industrial changes of the eighteenth century. But a closer study of the conditions under which they worked is necessary to a complete understanding of the effects that these conditions produced on the education of the poorer classes.

When factories were first opened in England the parents hated the idea of sending their children to work in them, although the offers made by the employers were very tempting. The main reason for this hatred was that the first factories, which were worked by waterpower, were built on mountain streams, in secluded parts of the country. If the children were to work in these factories they were also to live there, and the parents were unwilling to send their

(1) F.Smith. opcit, pp.45,46.

children away from home. The proprietors of factories, therefore, had to depend mainly on apprentices from work-houses, "stranger children", as they were called, and exploited them beyond all limits. "Under the operation of the factories' apprentice system", writes Alfred, "parish apprentices were sent out, without remorse or inquiry, from the workhouses in England, and the public charities of Scotland, to the factories, to be 'used up', as the cheapest raw material in the market (1).

The ages of the apprentices varied from about seven to fourteen, though there were also numerous instances of children under seven being taken. In return for their labour, the apprentices were clothed, fed and lodged in an "apprentice house", near the factory. The work of the apprentices was supervised by overseers, specially appointed for the purpose, and as the amount of their remuneration depended on the work turned out by the apprentices the overseers exercised the greatest cruelty on them, making them work until they had no more energy left in them. "The children were", as J.Fielden points out, "flogged,fettered and tortured, in the most exquisite refinement of cruelty, and in many cases starved to the bone, while flogged to their work, and in some instances they were driven to commit suicide to evade the cruelties of a world, in which, though born to it so recently, their happiest moments had been passed in the garb and coercion of a workhouse". Again, as the same writer continues, "the beautiful and romantic valleys of Derbyshire and Lancashire, secluded from the public eye, became the dismal solitudes of torture, and many a murder. (2)

But the matter for complaint was not, merely, that children were worked for long hours. They had to work in very unhealthy surroundings, "in stench, in heated rooms,

(1) Alfred (Samuel Kydd), History of the Factory Movement, 1857, p.16.

(2) J.Fielden, The Curse of the Factory Movement, p.6.

amid the constant whirling of a thousand wheels". Then there was the system of night-working even in the case of these little apprentices, and this evil, in turn, gave rise to another, namely, that the same beds, which were used by the set working during the day and quitted in the morning, were used by the night-set, retiring to rest during the day. This meant that the beds were occupied, practically, throughout the day and night, so much so that the saying became common in Manchester that "the beds never got cold". The excessive labour of the pauper apprentice children under such unhealthy surroundings naturally led, within a short period of time, to the outbreak of various diseases in epidemic form. As already noted, an outburst of fever in 1784, in the Radcliffe cotton factories, led to the appointment of a committee of medical men to investigate the matter: and later, in 1796, a permanent Board of Health was constituted, of which Drs.Percival and Ferriar were the chief members. The Board passed a series of resolutions drawing the attention of Parliament to the unhealthy surroundings of the cotton factories, in which the children were forced to work, and again to the total neglect of their education and religious instruction. The passing of "The Health and Morals of Apprentices Act" of 1802 (1), may be regarded as being due largely to the combined efforts of Sir Robert Peel, of Robert Owen, and of the Board of Health, the activities of which were so ably directed by Dr.Percival. But the Act was often disregarded, and moreover, it offered no protection to 'free'children. This led to the manufacturers employing these 'free' children in large numbers. It was said, above, that when factories were first opened, about 1760, the parents were never willing to send their children to work in them; but by the end of the century their poverty had increased to such an extent that they could no longer get on without the earnings of their children. Also,with the introduction of

(1) For provisions of this Act, see Chapter 1, p.11.

steam as a motive power factories were no longer built in out-of-the-way country districts. They were built in large centres of population, so that parents had no longer to part with their children, if they were to work in them. The history of child-labour, from 1802 onwards, is therefore, largely, a history of the exploitation of 'free' children, instead of the exploitation of apprentices. Government was as usual reluctant to take any positive steps to remedy the conditions. It adhered to the same old policy of 'laissez faire' - the policy of noninterference in the relations between employers and employees. But, considering the political situation of the times, it could not have done anything better; for, as J.H.Clapham observes, the country had "barely recovered from 22 years of war", and compared with other countries, Britain made "a creditable showing", in the later twenties of the nineteenth century (1).

What the few far-seeing statesmen and philanthropists did was to agitate for reform, and though such agitations never produced any immediate results, the first effective Factory Act came to be passed in 1833. Up to this year conditions remained much the same as they were prior to 1800, with this exception, that the practice of taking apprentices gradually dropped after 1800.

Peel, who was responsible for the Act of 1802, when he found that it gave no protection to 'free children', who were now being exploited, took up their case and did all he could to better the conditions of their labour. As interference in the relations between the 'free' child-labourers and the employers was a violation of the 'laissez faire' doctrine, he prepared a general case for all children, drawing attention to the very serious consequences that might result from the miserable conditions under which they worked. Opposition to his Bill of 1815, led to the

(1) F.Smith, opcit, Footnote, p.104.

appointment, in 1816, of a Committee to investigate the conditions of child-labour, and Peel, in giving his evidence, strongly urged, "that such indiscriminate and unlimited employment of the poor, consisting of a great proportion of the inhabitants of leading districts, will be attended with effects to the rising generation so serious and alarming, that I cannot contemplate them without dismay; and thus that great effort of British ingenuity, whereby the machinery of our manufactures has been brought to such perfection, instead of being a blessing to the nation, will be converted into the bitterest curse" (1). John Moss, the overseer of Backbarrow Mill, near Preston, informed the Committee that the Apprentice Act of 1802 was constantly set at nought, and that the children in the mill were mostly apprentices from London parishes. They were worked from five in the morning to eight at night, throughout the year, and had a recess of only one hour, for the two meals. On Sundays, invariably, from six in the morning till twelve, they were engaged in cleaning the machinery for the week. He also stated that there were a few children in the mill who were not apprentices, but were children from very poor families, mostly Irish, and that though the parents complained of the long hours of work, they submitted to it because of their poverty. (2).

But, inspite of so much convincing evidence that the Committee had gathered, the manufacturers urged that all the cruelties referred to were things of the past, and that they were no longer practised.

Such, then, were the conditions of child labour prior to the passing of the Act of 1819. According to this Act, no child under nine years of age was to be employed in any factory for the spinning of cotton wool, and no child under sixteen years of age was to be made to work for more than

(1) Report of the Select Committee on the State of Children employed in the Manufactories of the United Kingdom, 1816, p.133.

(2)Report of Select Committee on the State of the Children employed in the Manufactories of the United Kingdom, 1816, p.178.

twelve hours a day, exclusive of the meal-times. This may be regarded as a twelve hour Act for children, and this was all that Peel could do for the factory children. But, again, the Act of 1819, like that of 1802, was constantly set at nought, and there was no marked improvement in the conditions of child labour.

After Peel the sufferings of the factory children attracted the attention of Michael Thomas Sadler, who in 1832 introduced a Bill in the Commons to limit the hours of labour, for all children under eighteen to fiftyeight hours in the week. It was meant for the protection of children in all factories, woollen, flax, silk and cotton. There was great opposition on the second reading of the Bill, and a Committee was therefore appointed to investigate the matter, with Sadler as its chairman. The Committee made no report to the house and the voluminous evidence it gathered is wellnigh unreadable. Nevertheless, a cursory glance will make clear the point that all attempts made by parliament to remedy the evils of child-labour were shamefully disregarded and that children were still made to work beyond their strength. Dr.Farre, a medical witness, who practised in Barbadoes for a considerable period, thought that the slaves in Barbadoes were better treated than the factory children in England. "In English factories", said he, to the Committee of 1832, "everything which is valuable in manhood is sacrificed to an inferior advantage in childhood you purchase your advantage at the price of infanticide; the profit thus gained is death to the child"(1).

Mr.Green, another medical witness before the Committee, also expressed the view that the position of English labourers was no better than that of the Negro slaves in Europe, and said that no medical opinion in the matter was necessary; but it was "unsparing moral correction", that was needed, "or they await the punishment due to

(1) Report of the Select Committee on the State of Children Employed in the Manufactories of the United Kingdom, 1832, p.600

depriving man of the birthright of his humanity, of degrading him into a class of means and things to be used, instead of recognising as the end, his happiness and dignity as a moral and responsible agent" (1).

We may now turn to the Report of the Factory Commissioners of 1833, to see what they thought of the conditions under which children had to work in factories. Regarding hours of labour the Commissioners said that in most parts of England and Scotland the children worked for not less than twelve hours a day (2). They wrote that in many factories it was not unusual for the work people to stop during a part of the dinner hour to clean the machinery. This sometimes took them half-an-hour, with the result that they got a recess of only half-an-hour (3). Again, where the practice of working during the whole of the meal hour prevailed, the workpeople never left the factory from the time they entered it in the morning till the time they finished their work in the evening. Whatever food they took was either prepared for them in the factory or brought to them already prepared by their friends (4).

The Commissioners classified the effects of excessive labour on the children into two groups, the immediate and remote. The immediate effects which they found existing commonly were fatigue, sleepiness and pain; the remote effects, physical deformity, disease, and deficient mental and moral instruction.

Regarding the first set of effects, namely the immediate ones of fatigue, sleepiness, etc., they felt that the statements of the children themselves were very convincing and uniform. "The intensity of the feeling", they observed,

(1) Report of the Select Committee on the state of Children Employed in the Manufactories of the United Kingdom, 1832, P.589.
(2) 1st Report, Commissioners, 1833, p.7.
(3) Ibid, p.9.
(4) Ibid, p.10.

"is influenced, without doubt, by the age of the child and the constitutional robustness or feebleness of the individual, but the feeling itself is always the same and differs only in degree" (1). Such statements as - "often feels so sleepy that he cannot keep his eyes open", "often falls asleep while sitting, sometimes while standing", "the long standing gives her swelled feet and ankles", "night and morning her legs swell and often very painful" - were given by many parents before the Commissioners, and they show how very urgent was the need for immediate remedial measures.

Of the remote effects, namely, physical deformity, disease, and deficient mental and moral culture, the Commissioners thought that even if excessive labour did not produce the first two results, it certainly incapacitated them from receiving instruction. "On this head", said they, "the statements of the children themselves must be admitted to be of some importance, and it will be found that the young children very generally declare that they are too much fatigued to attend school even when a school is provided for them" (2).

The investigations of the Committee of 1832 and of the Commissioners of 1833 prepared the ground for the Factory Act of 1833, which may be regarded as the first effective Act passed by the English Parliament for the protection of the factory children. It prohibited the employment of children under nine years of age in all factories, from the first of January, 1834, and established an eight hour day for all children up to thirteen years of age; but the operation was to be gradual. According to the Act, no child who had not completed his or her eleventh year was to work more than eight hours a day, after the first of

(1) 1st Report Commissioners (1833) P.25.
(2) 1st Report, Commissioners, 1833, p.29.

March, 1834; again no child who had not completed his or her twelfth year was to work more than eight hours a day after the first of March, 1835; and lastly, from the first of March 1836, no child who had not completed his or her thirteenth year was to work more than eight hours a day.

This account of child-labour during the years 1760 to 1833, shows how much the child-workers were neglected during the period. Employers like Samuel Oldknow of Marple, and David Dale and Robert Owen of New Lanark, no doubt treated their apprentices with enough consideration, and gave them the advantages of good food, decent clothing, and facilities for education. About the apprentices under Oldknow, we are told, that though they worked long hours, they had outdoor exercise everyday, and as for their food, they were given "porridge and bacon for breakfast, meat for dinner, with puddings or pies on alternate days, and the fruit in the orchard was for their use" (1). But such instances, of humane employers were only striking exceptions to the general rule, and the fact remains that the child workers were utterly neglected during the transitional years of the Industrial Revolution. Quite naturally, under these circumstances, their education also suffered.

In the Report of the Committee of the Statistical Society (1834-35), the condition of the Dame Schools in Manchester is said to have been deplorable. They were generally to be found in very dirty, unwholesome rooms, - either in close, damp cellars or in dilapidated garrets. "One of these schools", according to the Report, "is kept by a blind man, who hears his scholars read their lessons and explains them with great simplicity; he is however liable to interruption in his academic labours, as his wife keeps a mangle, and he is obliged to turn it for her (2). The views

(1) F.Smith, opcit, p.13.
(2) Report, p.6, Quoted by Sir James Kay Shuttleworth, Four Periods, p.103.

of the Committee regarding the Common Day Schools, in Manchester, were very much the same as their views regarding the Dame Schools. They were very little fitted to give a really useful education to the children of the lower classes. Religious instruction was very badly neglected in these schools and except "the rehearsal of a catechism", nothing was done in this matter. Moral teaching was likewise never attended to, and in reply to a question as to whether morals were taught one master is reported to have said, "Morals! How can I teach morals to the like of these" (1).

But it was not in Manchester alone that the Dame Schools and the Common Day Schools were in a deplorable state. Their condition was equally bad in the other industrial centres. Again if the institutions of popular learning were so inefficient in 1834-5 when the transitional years of the Industrial Revolution had nearly ended, their condition must surely have been much worse in the earlier years of the change from a rural to an industrial civilisation.

The greatest hindrance to the progress of education among the poorer classes was the tremendous increase in the population of the new towns, which was due, not so much to the rush of the ruined agricultural labourers from the villages into the new towns, as to the immigration into these towns, of 'semi-barbarous' tribes, especially from Ireland, and from the hills and moors of the Penine Chain. The services of the immigrants were no doubt necessary to the progress of English industry; but the effects of the immigration on the lives and manners of the English inhabitants, were really most pernicious. "In some of the neighbouring towns", says Kay Shuttleworth, "in all other respects similarly situated to Manchester, but not colonised by the Irish, the dwellings of the poor contain more

(1) Report, p.10, Quoted by Shuttleworth, opcit, p.104.

furniture and are cleaner, and their diet is superior to that of a great portion of the population of Manchester" (1). On schools, in particular, the evil effects of this immigration were most clearly marked. In describing these effects, Sir James Kay Shuttleworth observes that "the ignorant, unkempt, and stultish children of a half brutish class of immigrants from the moors or border, render progress in a school difficult, or, if they are numerous, almost impossible. A School encumbered with this burden exhibits classes of half savage scholars, big, rude, dullards in the lower classes, some disorder, much inattention, none of the higher moral condition which is detected at a glance by an experienced eye" (2).

Such was the social and moral condition of the working classes during the transitional years of the Industrial Revolution; but the State did nothing at all, till 1833, to better their condition by improved provision for their education. All its attention was directed towards increasing the general wealth of the Nation and hence it supported the greedy manufacturers, who cared little, indeed, for the welfare of their workers.

III

In the absence of State intervention, philanthropic effort on a large scale was needed to rescue the children of the poor from ignorance. The rapid spread of the Sunday Schools all over England, from the year 1780, was due mainly to the tireless efforts of benevolent individuals who deeply sympathised with the lot of the factory children and did all they could to provide them those facilities for education which the State had failed to provide.

The idea of Sunday instruction was very old, and we are told that some Sunday Schools were started in England long before 1780; but it was the Industrial Revolution that,

(1) Shuttleworth, opcit, p.152.
(2) Ibid, p.153.

during its early transitional years of national demoralisation, gave birth to the national movement for these schools. The orginator of this movement was Robert Raikes of Gloucester. He was not, however, the founder of Sunday Schools in the sense that the idea of Sunday teaching originated with him; nor was he alone responsible for the establishment of Sunday Schools all over England. As noted above, long before Raikes began the movement the idea of Sunday teaching occurred to many persons in England, and there were actual instances of the idea being put into practice. Again, Raikes was assisted in his labours by several other individuals - notable among them being the Rev.Thomas Stock - and as much credit goes to them for the establishment of Sunday Schools as to Raikes himself. But the credit of making the movement national certainly goes to Raikes. By means of his newspaper, "The Gloucester Journal", he disseminated his ideas far and wide, until at last throughout England, and later on in Wales, Scotland, Ireland, and even in some foreign countries - for example, in America - Sunday Schools were established in large numbers. In the words of Alfred Gregory, one of the Sunday School historians, "he raised Sunday teaching from a fortuitous rarity into a universal system. He found the practice local: he made it national". It is in this third sense that Raikes could be regarded as the founder of Sunday Schools.

Charity begins at home: so did Raikes' efforts to give the children of the poor a moral and religious education begin in his own native county. Gloucestershire was in his days noted for its pin industry and most of its poorer class children were employed in the pin factories. These factories were, however, closed on Sundays, when the children were quite free to 'run wild' in the streets, causing a tremendous disturbance throughout the city. From his philanthropic work in gaols and his long observation of prison conditions Raikes learned that ignorance and crime were closely connected and that it was useless to punish the effect without

removing the cause. He thus came to the conclusion that the best plan for stopping the unruly behaviour of children on the day of the Sabbath was to engage them on that day in learning to read. He set immediately to execute his plan. He engaged the services of four persons, experienced in teaching reading, who were to instruct all those children whom he would send to them, every Sunday. Each of them was paid a remuneration of one shilling a week.

Raikes, as already noted, was assisted in his endeavours to promote Sunday instruction by the Rev.Thomas Stock. Among others who worked for this cause mention may be made of a Methodist lady, Sophia Cooke, who later on married the Rev.Samuel Bradburn, a famous Wesleyan preacher. During the early years of Raikes' endeavours in establishing Sunday Schools Sophia Cooke was living in Gloucester with her uncle, Alderman Weaver: and sympathising with the miserable lot of the children working in her uncle's pin factory, she decided to teach them on Sundays and take them to the Church where Mr.Stock preached. She thus rendered most valuable services to the cause of Sunday Schools, and we are told that on the first day when the children were taken to Church she even marched with Robert Raikes at the head of his band of 'ragged urchins'.

The efforts of the early workers for Sunday Schools in Gloucester, soon began to bear fruit. "The city of Gloucester", wrote the Rev.Dr.Glasse, "soon began to wear a very different aspect on the Lord's Day, instead of noise and riot, all was tranquillity and peace; instead of quarrelling and fighting, as heretofore, all was concord and harmony; instead of lying, swearing, and all kinds of profligacy, the children gradually imbibed the principles of honesty and truth,of modesty and humility; instead of loitering about the streets in a state of indolence, as painful to the observer as it was to themselves, they were soon in decent regularity, frequenting the places of public worship, evidently much happier in themselves than in their

former state of irreligious idleness" (1).

The success of the schools established in the city of Gloucester soon led to the establishment of other schools in the neighbourhood, and from the year 1783 Raikes started publishing several notices, in the Gloucester Journal, of the establishment of such schools. In so doing, however, he always kept his name out of print, and this shows clearly that he was not fond of vain glory, but that he was always zealous in the pursuit of noble ends. Some of these notices deserve our attention. A Sunday School was established at Hempstead, a village near Gloucester, and the account which Raikes gave of the establishment of this school was that "the worthy clergyman (Rev.T.Stock) has established a Sunday School for receiving all the poor children, where they are not only kept from acts of mischief and roguery on that day, but their time is employed in learing their catechism and in being taught to read"(2). About the work of the Sunday School at Bisley, another village in Gloucestershire, he wrote: "the children from being savage and filthy in their manners and appearance, are now become decent, orderly, and attentive to cleanliness" (3).

Such articles about the establishment of Sunday Schools in Gloucestershire, which appeared in the Gloucester Journal, were freely copied into the other Journals, and philanthropists all over England began to adopt Raikes' scheme. All thought that the new institution was indeed a boon to the poor. "No plan", remarked Adam Smith, "has promised to effect a change of manners with equal ease and simplicity since the days of the Apostles". John Wesley took the greatest interest in the establishment of these Schools. In a letter to Richard Rodda, a Cheshire Methodist,

(1) Quoted by Alfred Gregory, Robert Raikes, p.52.
(2) Ibid, P.80.
(3) Ibid, p.80.

which he wrote in 1787, he expressed his belief that "these schools will be a great means of reviving religion throughout the Kingdom". And again in 1788 he remarked, "I verily think these schools are one of the noblest specimens of charity which have been set on foot in England since the time of William the Conqueror".

The new institution even received the patronage of the Royal family. Queen Charlotte was anxious to establish Sunday Schools at Windsor, and when Raikes visited some of his kinsmen at Windsor she sent for him and made many enquiries about the scheme. Later, the Queen discussed the matter with Mrs Trimmer who was a great favourite at the Palace, and who established some Sunday Schools at Brentford which Robert Raikes had visited. "I have this day had",wrote Mrs Trimmer in her Journal "the unexpected honour of attending Her Majesty, and had inexpressible pleasure in her sensible, humane and truly Christian conversation. May her pious design of establishing Sunday Schools at Windsor, be put in execution" (1).

The formation of the Sunday School Society, in 1785, by William Fox, a rich merchant of London, added further strength to the movement. Fox had long been desirous of establishing a system of Day Schools for all the children of the poor, so that every one of them might be able to read; but having failed in his endeavours, and having been convinced by Raikes that one day in a week was quite sufficient to learn reading, he became a supporter of the new movement. The Society that was founded was called, "The Society for the Establishment of and support of Sunday Schools in the different Counties of England", and Fox, in his endeavours was assisted by other eminent philanthropists, like Jonas Hanway, Henry Thornton and Samuel Hoare. Within a year, the Society founded five Sunday Schools in London, and in a period of ten years it

(1) A.Gregory,opcit, p.96.

it distributed 91,915 spelling books, 24,232 testaments and 5,360 Bibles among 1,012 schools, which contained about 65,000 scholars (1).

Another great impetus was given to the extension of the Sunday School system when, in 1803, the Sunday School Union was formed. The objects of the Union were, "to stimulate and encourage each other in the education and religious instruction of children and youth; secondly by mutual communication to aim at improving each other's method of instruction; and thirdly, to promote the opening of new schools by influence and personal assistance, whenever it might be deemed expedient" (2). The Union organised other district Unions of Sunday Schools, and also published, in 1813, 'The Sunday School Repository' or 'Teacher's Magazine', which brought about a great improvement in the teaching methods adopted in the Sunday Schools.

Enough has been said about the spread of the Sunday Schools all over England. We shall now examine the educational facilities which these schools provided for the poorer classes. It should be remembered that the Sunday School movement was only a revival and continuation of the Charity School movement of the earlier part of the eighteenth century and the philanthropists that supported the movement aimed at supplementing the schools for the poor that were founded during the first half of the century. There was, therefore, very little difference between the curriculum of the Charity Schools and that of the Sunday Schools. The difference lay not in the quality, but in the quantity of instruction, which was, in the case of the Sunday Schools, restricted to one day in the week (3).

As in the case of the Charity Schools, the religious and moral instruction of the poor was the main aim of the

(1) A.Gregory, opcit, pp.104,105.
(2) W.H.Watson, The History of the Sunday School Union, p.12.
(3) M.G.Jones, opcit, p.143.

Sunday Schools, and this was emphasised in the rules of the Sunday School Society, which stated: "The objects of the Charity shall be poor persons of each sex, and of any age, who shall be taught to read at such times and in such places, as the Committee by themselves or their correspondents shall appoint. All scholars to attend public worship every Sunday, unless prevented by illness or any other sufficient cause. The religious observation of the Christian Sabbath being the essential object with the Society....the exercises of the scholars on that day shall be restricted to reading the Old and New Testaments, and to spelling as a preparation thereto"(1). It is not difficult to find an explanation for this great emphasis on religious instruction. It was noted earlier that the first half of the eighteenth century while being a period of prosperity, was also a period of religious stagnation. The industrial changes of the latter half of the century and the new evils of town life only resulted in further demoralisation of the poor. So great, indeed, was the need for moral uplift that when the Sunday School movement first began both Churchmen and Dissenters co-operated to make the movement a success. But jealousy and rivalry soon began between the two parties, when the Dissenters - especially the Methodists - owing to their greater earnestness and enthusiasm, produced results far superior to those of the Churchmen. As years advanced the gulf between the two parties widened, and the teaching in the Sunday Schools became more and more sectarian.

Here we find another reason for the importance that was attached in the Sunday Schools to religious instruction; but as this was the special need of the times the rivalry between Churchmen and Dissenters produced more good than harm. Again, it was this spirit of competition that was responsible for the gradual replacement of paid teachers by

(1) Quoted by Holman, opcit, pp 35,36.

voluntary workers, so that the Sunday Schools became places of free instruction for thousands of pupils of all ages and of either sex. The last record of payment was in 1851 (1), and the number of pupils for that year was two and a half millions (2). By 1898 the number rose to seven and a half millions (3).

Next to religious instruction, reading was the only subject that was taught in most of the Sunday Schools, and the object in teaching reading was to enable the pupils to read the Bible. Writing was very seldom taught, for it was generally thought, as Jonas Hanway thought, that "reading will help to mend people's morals, but writing is not necessary"(4). It was only a few individual schools such as at Leeds, that taught writing and certain other additional subjects (5). But in a great majority of schools, the promoters of Sunday instruction were satisfied with the mere provision made for the teaching of reading.

Hannah More and her sisters rendered pioneer services to the cause of Sunday Schools. Their work began in 1789, when the first Sunday School in the Mendips was opened at Cheddar. By the end of the century the Sunday Schools in the Mendips numbered twelve, and their scholars - both adults and children - numbered 3000. But notwithstanding all their zeal for the promotion of Sunday instruction, reading was the only subject that was taught in their schools, and even in the selection of books for reading all possible precaution was taken. "To teach the poor to read, without providing them with safe books, has always appeared to me a dangerous measure", wrote Hannah More: and if such were the fears of the aristocratic Evangelicals and philanthropists of the eighteenth century, on whom the existence of Sunday Schools mainly depended, it is no surprise that the curricula

(1) F.Smith, opcit, p.52.
(2) Ibid, p.60.
(3) Ibid, p.60.
(4) Ibid, (Quoted) p.53.
(5) Ibid, p.53.

of these schools were far too narrow.

But, whatever may have been the short-comings of the Sunday Schools, their establishment all over England, may be regarded as her first advance towards a universal education. They were the only means of education for a great majority of the poorer classes in the Factory Age, as the Factory Commissions of the nineteenth century shew us. Some of the manufacturers even paid teachers to instruct their child-workers on Sundays. To consider a few instances, the Strutts of Derby required all workers under twenty, to attend Sunday School, and in the Potteries, where the total population was 57,000, the number of pupils in the Sunday Schools was 11,544, and only 1,453 children attended the Day Schools. At Macclesfield, we are told the total number of child-workers in the silk mills was 2000, of whom about 1900 attended the Sunday Schools (1). These facts are sufficient to prove that the poorer classes in England, during the last decades of the eighteenth century and the beginning of the nineteenth, would have remained altogether ignorant but for the knowledge of reading and religion which the Sunday Schools diffused.

The period 1780-1815 is the darkest part of the transitional years of the Industrial Revolution in England; but the Sunday Schools form the silver lining of this cloudiest aspect of the picture; for the promoters of Sunday Schools were full of zeal and entertained very high hopes for the future. When trying to raise funds for the new building, in 1806, the Stockport Sunday School Committee said: "Should the scheme meet with support, we may fairly hope that twenty years hence there will not be a native inhabitant of Stockport who cannot at least read his Bible"(2). The statement clearly shows that the Sunday Schools tackled, not merely the educational problem of the factory child, but also of the

(1) F.Smith, opcit, p.63.
(2) Wild, History of the Stockport Sunday School, Quoted by F.Smith, opcit, p.60.

adult operative. The aspirations of the Stockport Committee in short, the aspirations of all the Sunday School promoters - were not vain. They, indeed, created among the poorer classes, children as well as adults, so strong a zeal for reading that they were anxious to acquire a knowledge of it at any cost. There were many instances of poor men in the eighteenth and nineteenth centuries, whose only education was a Sunday School education, but who, nevertheless, made effective use of the knowledge of reading they acquired in further efforts throughout their lives to improve their learning. One great evidence of the thirst for reading, which the Sunday Schools spread, was a series of publications of books for children. Mrs.Barauld, Mrs.Trimmer, Maria Edgeworth and Hannah More were the most prominent writers of the period, and they wrote interesting stories of great literary value for children. But one great defect of their tales was the undue emphasis they laid on morals, so that, as Smith points out, "they sacrificed the tale for the moral, and the famous 'Fairchild Family' of Mrs.Sherwood (1815), gathers up all the faults of the School which created it" (1). But judged by the standards of the early nineteenth century the books were quite perfect and were widely read by all children. The Select Committee of 1816 points out that the library of a large Sunday School in New Castle-on-Tyne, which contained such books as, 'The Religious Tradesman', 'The Art of Divine Contentment', etc., "continues to be resorted to by the children with increasing avidity". Compared with such books, the tales of Mrs.Barauld, Mrs.Trimmer and others were certainly much better suited to children, and Charles Lamb's denunciation of these writers, in his letter to Coleridge, in 1802, seems rather unjust (2).

(1) F.Smith, opcit, p.66.
(2) Ibid, p.66.

What is of utmost significance to us is the fact that the Industrial Revolution made the English poor extremely self-conscious, and Foster's statement (in his essay on the "Evils of Popular Ignorance") that in the eighteenth century they were "free from all sense of shame", could no longer be applied to the poor of a later generation. It is the Sunday School that was responsible for this change in the mentality of the poor, who eagerly availed themselves of the opportunities they got to educate themselves.

IV

In conclusion it may not be out of place to give a brief account of secondary and higher education in England during the eighteenth century, for the meagre provision for the education of the poor during the period was to a certain extent due to the deplorable state of secondary and higher learning. As Miss Jones observes, "the quality of the material which the universities sent out as teachers reacted directly upon the Grammar Schools,....and indirectly upon the innumerable private venture schools which honeycombed London and the towns" (1). Thus it was that the eighteenth century was a period of general decadence in all grades of education, though active discussions and theorising about education were common characteristics of the period. This was not in any way peculiar to England. It was so throughout Europe; but in England the decadence was more clearly marked, owing to the fact that the Industrial Revolution, while it made the middle and higher classes in society more and more anxious to acquire wealth and care little for learning, reduced the poorer classes to a condition of economic slavery, which in turn resulted in the neglect of their education.

We shall discuss this question, first from the point of view of the numbers that received education in the Grammar Schools and the Universities, and then from the point

(1) M.G.Jones, opcit, p.96.

of view of discipline and curriculum. In both types of institutions it would appear that the number of pupils that received education was very low throughout the century. At Winchester,in the year 1751, there were only eight Commoners, whereas fourteen years earlier there were in residence at this school not less than ninety three Commoners. The school at Westminster, which was considered one of the most typical, and had 434 boys in 1727, had a strength ranging from about 250 to 300, during the period, 1765 to 1800 (1).

When the Grammar Schools which prepared boys for the University were in this state, it was inevitable that the numbers entering the Universities should also be thin. Oxford and Cambridge were affected by the low numbers at the Grammar Schools, and the result was that at Oxford the number of admissions annually, which was more than 300 during the reigns of Queen Anne and George I, fell to about 200 during the period, 1726 to 1810 (2).

The unpopularity of the Grammar Schools during this period seems to have been due to their harsh discipline and a general fall in their moral tone. It was, therefore, quite a common practice for boys to be accompanied by their tutors, and some authorities seem to have considered this a necessity even in the case of undergraduates at the universities. The staff at most of the schools was inadequate and there was practically no check exercised on boys after school hours. Games, of course, were very rare in these schools, at least till late in the century, with the result that boys, during spare time, were engaged in all sorts of mischief. The teachers never realised that the mis-behaviour of children was owing to the absence of healthy pursuits and games during their leisure hours. Instead of investigating the causes of misbehaviour and removing them,

(1) Adamson, A short History of Education, p.219.
(2) Adamson, opcit, p. 219.

to avoid further misconduct, they believed in the use of the rod, which only resulted in resentment on the part of the boys and a continuation of their old bad ways. As Holman observes, "whilst parents controlled their children with great formality and some severity, schoolmasters managed them with the greatest severity and very little formality." Dr.Busby, the master of Westminster, was considered the champion flogger of his time, but there were, of course, others who rivalled him in this respect. Dr.Wooll, the immediate predecessor of Dr.Arnold at Rugby, was a great believer in the rod. In stature he was small, but he "was powerful in stripes," so that the motto suggested for the room in which the rods were kept was "Great Cry and Little Wool." Flogging seems to have formed a necessary part of the teaching of all great schools in England during the eighteenth century, and this accounts partly for their failure (1).

Again, the curriculum of the Grammar Schools was purely classical, their aim being to produce classical scholars. Latin occupied the first place right from the beginning to the end of the course. Next to Latin came Greek, and occasionally Hebrew was also taught. All other subjects, like reading, writing, arithmetic and music, occupied a definitely subordinate place, so that if the classical teaching of these schools is left out, the Grammar Schools of the period under consideration may be regarded as primary schools (2). The schools which could cater to the needs of the wealthy and powerful middle classes of the reign of George III were those established as a result of private enterprise, usually called academies, which made provision for the teaching of modern subjects, useful for a business life. The curriculum in these schools included the three Rs, history, geography, English Grammar and composition, physics,chemistry,

(1) Holman, English National Education, 1898, p.16.
(2) Holman, opcit, p.15.

and land surveying or book-keeping. As the need for instruction in such subjects was very great among a large proportion of the business classes a great many private schools arose in the manufacturing districts, and the Grammar Schools - whose classical curriculum was fit only for those who were desirous of becoming scholars or clergymen - were reduced to a comparative insignificance. Even from the days of Anne the decline of the Grammar Schools began, and one great evidence of their unpopularity was that a large number of middle class families educated their children at home or at one of the private schools, and instead of sending them to a university sent them, at the termination of their private study, on a tour to the Continent, or as an alternative educated them for the Bar.

A foreign tour, or 'a sojourn' at one of the inns of Court, in the eighteenth century, was considered better than a university education, because the condition of the universities was as bad as that of the Grammar Schools. It is said that at Oxford two professors in three, and at Cambridge one professor in two, did not lecture. If any lectures were delivered at all the attendance was poor. The undergraduates were not taught by the specialist teachers, but were left to be taught by tutors, who did not possess the capacities of specialists. The result was that English universities in the eighteenth century performed merely the function of schools of an advanced type, where the education of boys leaving Grammar Schools was merely continued for a certain length of time. They were not places of advanced learning or research (1). The statement of Dr.Swift, that in his days one could learn nothing more, at Oxford and Cambridge, than to drink ale and smoke tobacco, seems to be sufficiently true, for the opinion of other eminent contemporary authorities in this matter, was very much the same as his. Gibbon, the great historian, who was a student

(1) Adamson, opcit, p.221.

at Magdalene College, tells us that he "was never once summoned to attend even the ceremony of a lecture, and in the course of winter, one might make, unreproved, in the midst of term, a tour to Bath, a visit into Buckinghamshire, and a few excursions to London" (1).

When the teaching in the universities was so deplorable, and the control exercised on the students so feeble as to permit such a state of affairs as pupils leaving the universities on excursions during term, it was but natural that the examinations for the degrees should also be very easy. The following account, given by Lord Eldon, of the examination for the B.A. degree, at which he appeared in 1770, is very interesting. "An examination for a degree at Oxford", said Eldon, "was in my time a farce. I was examined in Hebrew and History. 'What is the Hebrew for the place of a skull? '. I replied, 'Golgotha'. 'Who founded University College? ' I replied (though, by the way, the point is sometimes doubted) that King Alfred founded it. 'Very well, Sir', said the examiner, 'you are competent for your degree." (2).

Such was the general condition of the Grammar Schools and the Universities, in the eighteenth century, and if irreligion and immorality were common features of the period they were due more to the low intellectual state of the people, resulting from an almost worthless education than to the general increase of prosperity.

The next point to consider, regarding these institutions, is whether they were accessible to the poor. There is no doubt that in the Grammar Schools and in the Universities the recipients of education were, in the main, the children of the well-to-do; nevertheless, care was taken to make some sort of provision for the children of the poor.

(1) W.H.Watson, The First Fifty years of the Sunday School, pp 8,9.
(2) Ibid, p. 9.

In 1541 the Commissioners proposed to restrict admissions to the Canterbury Grammar School to the sons and younger brothers of the gentry. The reply of Archbishop Cranmer to this proposal is worth quoting here to show that opportunities for higher education were given to at least the deserving poor, from very early times. "Utterly to exclude a ploughman's son from the benefits of learning", replied Cranmer to the Commissioners, "is as much to say as that Almighty God should not be at liberty to bestow His great gifts of grace upon any person, nor nowhere else, but as we and other men shall appoint them to be employed, according to our fancy and not according to His most Godly will and pleasure, who giveth his gifts both of learning, and other perfections in all sciences, unto all kinds and states of people indifferently....Wherefore if the gentleman's son be apt to learning, let him be admitted; if not apt, let the poor man's child that is apt, enter his room" (1)

According to the Report of the Schools Inquiry Commission, the Grammar Schools were "a means of bringing together a higher culture within the reach of all, and raising from amongst the poorest, as well as the richest, those who should thereby be able to serve in larger measure the Church and Commonwealth" (2). There were instances of very poor men who rose to high positions in Church and State, like those of George Abott, who became Vice-Chancellor of Oxford University and Archbishop of Canterbury, his elder brother who became Bishop of Salisbury, and his younger brother who became a rich London Merchant, Lord Mayor and then member of Parliament. If such instances, of the very poor, who received a very high education and rose to very eminent positions were very rare, it was because there was no pressing demand from the masses for a universal education, so long as Latin occupied

(1) Strype, Cranmer, Quoted by Dobbs, opcit, p.83, Foot-note.
(2) Report, 1868, Quoted by Dobbs, opcit, p.82.

a chief place in the curricula of the Grammar Schools and the Universities. It was only with the gradual decline of the position of Latin as a language of learning, and with the reaction that began in favour of a vernacular education, that the aspirations of the poor for a universal education grew rapidly (1). These aspirations were further strengthened by the urgent need for a literary education, which was created by the Industrial Revolution. The demand for schools by the end of the eighteenth century became so great, that the Sunday Schools, free and plentiful as their numbers were, were no longer sufficient to cater to the requirements of the poor, notwithstanding the fact that the Dame Schools and the Charity Schools continued to exist side by side. We shall see in the next chapter what new devices were employed to meet this increasing demand, and to give the children of the poor some sort of daily instruction.

(1) Dobbs, p.88.

CHAPTER III

EDUCATION IN THE LATER YEARS OF THE INDUSTRIAL REVOLUTION - 1800-1840.

I

The period, 1800 to 1840 is the latter half of the long, dark transitional years of the Industrial Revolution in England. During this period, there was no marked improvement in the conditions of child-labour. The Factory Act of 1802 ended but gradually the employment of parish apprentices in factories; but in their place large numbers of 'free' children began to be appointed, who were exploited in just the same way as the apprentices. The Act of 1819, though it prohibited the employment of children under nine, and the working of children between nine and thirteen for over twelve hours a day, was constantly disregarded, with the result that up to 1833, the conditions of child-labour remained practically the same as before 1802. The Act of 1833, no doubt, improved matters considerably. It not only established by the 1st of March, 1836, an eight hour day for all children under thirteen, but appointed four whole-time inspectors, whose duty was to see that the provisions of the Act were adhered to. It was this step that made the Act of 1833 effective in its operation though the reports of the inspectors show that it was no easy matter to enforce the Act.

One other factor distinguishes the Act of 1833 from the previous Factory Acts. It was the education clause of the Act, which enacted that all factory workers under thirteen must attend some school for at least two hours a day, on each of the six days of the week and must present every Monday certificates of their having fulfilled this requirement during the preceding week. It is true that this education

clause was a dead letter in most areas. It was such in Manchester, as was pointed out by one of the witnesses before the Select Committee on Education in 1834; and it must surely have been so in the other manufacturing districts as well. We are told that even in places where no schools existed, certificates of attendance were produced, and that in some factories the employers got over the difficulty by making the engineman or some other adult operative the schoolmaster in his leisure hours, and getting the school attendance of their child workers certified by him, as required under the clauses of the Act (1). But ineffective as the education clause was, it shows that Government had just begun to concern itself with the educational problem of the poor, further evidence of which was the fact that the first State grant for education was also made in the year 1833.

Prior to 1833, however, the English poor had to depend mainly on philanthropy for their education, and it is gratifying to note that during the early decades of the nineteenth century the philanthropists made increased efforts to improve the facilities for the education of the poor. "To realise a need", writes Birchenough, "was sufficient warrant for private individuals to rush into alleviate it without pausing to examine too closely either the attendant circumstances or the extent of their resources. It was accordingly a time of cheapness, superficiality, and variety of endeavour, rather than of thoroughness. Nevertheless an impulse was given to popular education that has never died out" (2).

While the philanthropists, in general, carried on their work with religious motives, there was, however, one section of them which was radical in spirit and was actuated

(1) F.Smith, opcit, p.143.

(2) Birchenough, History of Elementary Education, 1914, pp. 28,29.

by political motives in its efforts to spread education among the masses. The former class of philanthropists was anxious to keep the poor in subordination to the higher ranks of society, and hence established institutions like Charity Schools, Sunday Schools and Monitorial Schools, which just fitted the poor for humble occupations, and gave them religious instruction according to the principles of the Established Church. The latter class, whose members were better known as the Benthamites, aimed at establishing "a universal brotherhood", in which, "selfish interest would give way before an all-sufficing conception of public good", and in which, "each man would have within his reach the elements that make for individual and general happiness" (1).

Of the work of the religiously motived philanthropists, notable among whom were the Evangelicals, enough has been said in the preceding chapters. Their schemes aimed at educating the masses in the principles of the Established Church, and at reducing the cost of poor relief by finding new fields of employment, and encouraging thrift and self help among the poor.

The Benthamites, prominent among whom were James Mill, Brougham and Francis Place, were very zealous advocates of popular education, and, indeed, there were few, more zealous than they both in and out of Parliament. This is evident from Bentham's dictum, that "the way to be comfortable is to make others comfortable, The way to make others comfortable is to appear to love them. The way to appear to love them is to love them in reality." Their aims in endeavouring to promote education among the masses were democratic. They maintained that education was necessary for all, whether poor or rich, because, it would fit every individual to "take his part in the life of a democratic community." Their views on life were highly optimistic

(1) Birchenough,opcit, pp. 31,32.

and mechanical. "Man was a rational animal : teach him to reason, give him, in other words, the power to read and write, and social ills would vanish before instructed intelligence". (1) Hence it was that the Benthamites were staunch supporters of the British and Foreign School Society, which was unsectarian in its objects, and were keenly interested in the cause of adult education, in the Society for the Diffusion of Useful Knowledge, and in the Infant School movement. Two names, those of Brougham and Roebuck, deserve special mention here, because of the prominent agitation for extension of educational facilities for the poor which they carried on in Parliament. We shall discuss Brougham's work in a separate section of this chapter.

II

We may now consider the circumstances that created the need for the tireless efforts of the philanthropists to increase the educational facilities for the poor. As noted earlier, the Sunday Schools, though numerous, were not sufficient to meet the rapidly increasing demand for instruction from the working classes. Moreover, in the non-factory towns the demand for child labour was not so great as to employ them on all the days of the week. The only means of saving them from corruption and preventing them from disturbing the tranquillity of their surroundings, was to send them to schools where they could be instructed on all the days of the week. Thus arose the necessity during this period of establishing a large number of monitorial schools where cheap instruction could be provided for all the children of the poor. Whether such instruction was efficient or not, the philanthropists that worked for the cause of pauper education deserve every credit, because the Government still continued its extreme 'laissez faire' policy, and

(1) Birchenough, opcit, p.32.

offered no aid at all till 1833. Two of the philanthropists who were chiefly responsible for the spread of the monitorial system in England, were Joseph Lancaster and Andrew Bell, who were themselves born of poor parents.

Lancaster was born in 1778 in Kent Street, Southwark. Having attended a school which, though humble, gave him a love of reading, he could, when he was eight years of age, read well; and as he says, his book became his "meat, drink and diversion". He must have derived his philanthropic disposition from reading, at the age of fourteen, one of Clarkson's writings on the slave trade which led him to decide upon going to Jamaica to teach the Negroes. Having failed in this attempt, he thought that the next best thing he could do was to live by teaching. After serving as an apprentice, first in a boarding school and then in a day school, Lancaster opened his own school at Southwark, London, on the 1st of January 1798. His great love for teaching, combined with some of his personal qualities like zeal, self-confidence and the capacity to manage large numbers of children, led to the rapid success of his new institution. Above all, he had an ardent love for children which made him offer instruction gratis to all those who could not afford to pay. Nor did his generosity end there. As Corston writes, "in their play hours, he was their companion and friend; whenever they had half-a-day's vacation, their teacher would accompany them, and walk two, three, or four miles in the environs of London. Sometimes he would take out two or three hundred together; and he always remembered with peculiar pleasure one excursion during which he had the company of five hundred in perfect order and peace....On Sunday evenings, he would have large companies of pupils to tea, and after mutually enjoying a very pleasant intercourse, would conclude with reading a portion of the sacred writings in a reverential manner" (1).

(1) William Corston, A Brief Sketch of the Life of Joseph Lancaster (1840), pp.10,11.

The strength of Lancaster's school grew, naturally, to such an extent, that he found it impossible to teach alone, and the idea occurred to him of making the brighter boys teach those who were less bright. This idea was not new, as in most of the English public schools the appointment of monitors was quite a common practice even as early as the sixteenth century. Lancaster's adoption of the term, 'monitor' appears, however, to be original, and above all, his great zeal and energy, and his rare inventive genius led to the development of this simple practice into a very complex organisation. "The very essence of the system", writes D.Salmon, "was the monitor. Little was left for the master to do, except to organise, to reward, to punish and to inspire. When a child was admitted, a monitor assigned him his class; while he remained, a monitor taught him; while he was absent one monitor ascertained the fact, and another found out the reason; a monitor examined him periodically, and when he made progress a monitor promoted him; a monitor ruled the writing paper; a monitor made or mended the pens; and a monitor-general looked after all the other monitors" (1). Thus the whole work of the school was carried on by monitors and as Lancaster himself observed, the master under his system was to be "a silent bystander and inspector". He stressed the point that the authority exercised in a school should be impersonal, because the boys would undoubtedly obey all the known commands of the school, no matter who gave them. He claimed that "in a school properly regulated and conducted on my plan, when the master leaves school, the business will go on as well in his absence, as in his presence, because the authority is not personal. This mode of insuring obedience is a novelty in the history of education " (2).

(1) D.Salmon, Joseph Lancaster, p.7.
(2) British System of Education. p.45.

The chief merit of Lancaster's plan was cheap instruction. He found that as the numbers of his students increased, the cost per head decreased, because the expenses were almost stationary. He estimated the cost of running a school for a thousand children at £300 per annum, so that the cost per head came to about 6 sh. per annum. While the Industrial Revolution made urgent the problem of education, the abject poverty of the people during the transitional years of the change, and the absence of any State aid for education upto 1833, made it difficult for the poorer classes to have any education unless it were offered at a very cheap cost. Herein we find the cause of Lancaster's fame and popularity. Six shillings per annum, per child, was a very low charge, indeed, and his scholars began to multiply by hundreds. He had over 200 students in 1802, 300 in 1803, 500 in 1804, and 800 in 1805. He tried his utmost to increase the strength to a thousand and appealed for funds (1).

There is very little of any importance to note about Lancaster's methods of teaching. Reading, writing and arithmetic were taught in a mechanical way by the monitors, who themselves possessed but an imperfect knowledge of what they taught. For purposes of teaching reading the scholars were grouped into classes, like the alphabet class, the two letter-word class, the three-letter work class and so on, and the entire process of teaching reading was rather long, laborious and dull. Those of them that passed successfully through these classes read the Testament in class six, the Bible in class seven, and "a selection of the Best Readers" in class eight (2).

In teaching arithmetic, the monitor first read out the sum to his class, and then read out, step by step, the full method of working it. As the monitor read, the boys

(1) F.Smith, opcit, p.72.
(2) F.Smith, opcit, p.73.

took down every step, including the answer. When, by constant repetition, they could do the sum correctly they were promoted to a new group, where a different kind of sum was taught. Boys were made to practise writing in sand (strewn in trays) - a device which Lancaster borrowed from Dr.Bell. To save the expenses involved in buying paper Lancaster introduced slates. While both these devices - writing in sand and the use of slates - were quite good, the order in which the letters were taught - first, letters formed of straight lines like, I.H.T., then letters made up of angular lines, like A.V.W., and lastly letters in circular lines like O.U.C., - was rather artificial, and the entire process of learning became very monotonous and laborious (1).

But however mechanical and crude the methods of the monitorial schools may have been, they were really better than the methods used in the Dame Schools, the private adventure schools and the Charity Schools; and in so far as Lancaster's plan solved the problem of keeping large numbers of pupils in perfect order it deserved credit. As F.Smith observes, the man (Lancaster) was better than his method, and if pupils after a laborious process of study, gained very little knowledge, they had other educational benefits. In the first place, Lancaster loved his pupils and as we have seen, he often took them out on excursions and even fed them sometimes. Secondly, he satisfied the child's love of activity and well established the motto, "Let every child at every moment have something to do and a motive for doing it". What was most worthy of admiration about Lancaster was his horror of the use of the rod, which was quite a common practice even in the best public schools of the time.

(1) F.Smith, opcit, p.73.

We shall leave Lancaster for the present, and enter upon a brief account of the work of Andrew Bell, another great promoter of the monitorial system in England. Lancaster was a Quaker, and his rapid success caused anxiety and alarm among the supporters of the Church, which led to their efforts to found schools in which religious instruction could be given according to the principles of the Established Church. Bell was the leader of this party, and was specially suited to this position, being a staunch supporter of the Establishment, and because of his experience as Superintendent of the Madras Male Asylum, which office he held between the years 1789 and 1796. Bell, "happening on one of his morning rides to pass by a Malabar School, he observed the children seated on the ground, and writing with their fingers in sand, which had for that purpose been strewn before them. He hastened home....and gave immediate orders to the usher of the lowest class to teach the alphabet in the same manner, with this difference only from the Malabar mode, that the sand was strewn upon a board" (1). But the ushers, who were mostly ignorant men and had no interest of any kind in teaching, bluntly refused to try any device used in the native schools, and Bell was thus compelled, by the disloyalty of his assistants, to appoint monitors to carry out his ideas. He found that the monitors discharged their duties much more to his satisfaction than the assistants; and in 1797, when he returned to England, he published "An Experiment in Education made at the Male Asylum at Madras, suggesting a system by which a School or Family may teach itself under the superintendence of the Master or the Parent". Bell got no more than 830 copies of this edition printed, because he thought that "such an humble publication will produce little attention, less credit, and far less profit" (2)

(1) Southey, Life of Bell, Vol I. p.173.
(2) Southey, Bell, Vol II, p.40.

Cheap instruction was the special need of the times, and Bell's publication of 1797, far from suggesting any devices for cutting down expenditure, showed that he retained the services of the assistants throughout the period he was superintendant of the Male Asylum, and that the monitors were only in addition to the teachers.

Bell was not directly responsible for founding schools, but his plan and his views on religious education according to the principles of the Established Church were very generally adopted by the supporters of that Church. In 1798 the headmaster of the parochial school of St.Botolph's, Aldgate, reported that Bell's plan "instructs the younger ones with more rapidity, because to the monitor they can read and spell twice or thrice in the morning and afternoon, when to the master, not more than once". The plan was also tried in one of the schools of Kendal, and in 1802, when Dr.Bell was Rector of Swanage, it was introduced there, and found to work "like magic", and "order and regularity started up all at once". Thus as we shall find were laid the beginnings, though not in name, of the two great societies for the promotion of popular learning, namely the British and Foreign School Society and the National Society for Promoting the Education of the Poor in the Principles of the Established Church, and though as yet no rivalry had begun between Bell and Lancaster, or between the supporters of the two systems of education, the ground for it was prepared, and it was very soon to begin.

We may continue now our account of Joseph Lancaster. His popularity reached its climax in 1805, when he obtained an interview with King George III who expressed his appreciation of his work by saying, "Lancaster, I highly approve of your system, and it is my wish that every poor child in my dominions should be taught to read the Bible". The King became an annual subscriber of £100 to Lancaster's school,

and even ordered the other members of the royal family to subscribe. The interview, while it created over-confidence in Lancaster, and made him very reckless, ostentatious and extravagant, was also the starting point of the jealousy between him and Bell. Lancaster's over-confidence led him to spend more and more money in the promulgation of his system without any consideration of his actual resources. He built two schools with a subscription amounting hardly to £600. He made himself responsible for the management of many other schools, and of a training college at Maiden Bradley in Somerset. This, however, was not the limit of his extravagance. He even made his best monitors live with him free of cost, in order to train them for the profession of teachers. He started a printing press and a manufactory for slates which, far from bringing in any profits, only increased the burden of his debts. His love of ostentation led him to keep sometimes one and sometimes two carriages. Francis Place says that "he seldom went from home but in a carriage, and generally had some of his lads in one or two post-chaises following him, and as if to waste his time, indulge his love of ostentation, and squander the money of other people, he used to take excursions...., dine sumptuously, and return in the evening. Sometimes these excursions occupied two or three days." (1) The result of such extravagance on the part of Lancaster was that in 1807 he had to leave London through fear of being arrested. During his exile, which extended over a period of about six months, he lectured in the country districts on the usefulness of the monitorial system and also established some schools. On his return to London in January, 1808, he was arrested, but his devoted friend, Joseph Fox, a surgeon dentist of Guy's Hospital, saved him. Fox sold his property worth £2000, and pledged himself for another two thousand.

(1) Quoted by D.Salmon, Joseph Lancaster, p.35.

Lancaster had another friend, William Corston, the hatter. In 1808 Lancaster, Fox and Corston constituted themselves "A Society for the purpose of affording education, procuring employment, and as far as possible to furnish clothing to the children of the poorer subjects of King George III; and also to diffuse the providential discovery of the vaccine inoculation, in order that at the same time they may be instrumental in the hands of Providence to preserve life from loathsome disease; and also by furnishing objects for the exercise of industry to render life useful." For three years from the date of its formation the Society was busy reducing Lancaster's finances to order, and Lancaster himself during this period went from place to place lecturing and establishing schools. But all attempts on the part of the Society to reduce Lancaster's debts ended in failure, for Lancaster persisted in his extravagance. The result was that he was reduced, in 1811, to the position of superintendent of the Borough Road School. Lancaster naturally resented such a treatment, but he was warned by the Duke of Kent that "if he persisted in the conduct he lately pursued, they were determined to maintain the cause without him." Lancaster, however, resigned in 1814, and henceforth the Society, which by now had come to possess a good many members who were zealous in the promotion of popular education, became known as the British and Foreign School Society.

Reference has already been made to the anxiety of the Church party to establish schools in which religious instruction could be given according to the principles of the Established Church. The "British Schools" were undenominational in character, and religious instruction in these schools was confined to Bible reading and the "General Christian Principles". This, however, was not satisfactory to the Church party, which was responsible for the foundation, in 1811, of the National Society for Promoting the Education

of the Poor in the Principles of the Established Church throughout England and Wales." Dr.Bell was elected an honorary member of the general committee of the Society in 1813. The schools established by the National Society, on Dr.Bell's plan, were more numerous than the "British Schools", and Bell's confidence naturally increased as his system spread.

It may perhaps not be out of place to mention here a few details about the Bell - Lancaster controversy. The idea of monitors occurred to Bell about the year 1792 (when he was superintendent of the Male Asylum at Madras), and to Lancaster about the year 1800. Each of them being unaware of the fact that the practice of appointing monitors was very old in England and of unknown origin, thought that he was solely responsible for the discovery, while actually they only reinvented or rediscovered the system. In this matter though Bell could claim priority (having appointed monitors in 1792, while Lancaster did it in 1800) greater credit goes to Lancaster, for he showed the practicability of cheap instruction by doing away with assistants and by various other economies like using a single textbook for the whole school, use of slates, etc., while Bell, throughout the period he was Superintendent of the Male Asylum, retained all the assistants in spite of appointing monitors. Again, though the idea of monitors occurred to Lancaster eight years after it did to Bell Lancaster was unaware of Bell's work in Madras until much later. It was in 1803 that a copy of Bell's "Experiment" fell into his hands. Lancaster, however, borrowed from Bell the idea of using the sand-tray for purposes of teaching writing, but Bell undoubtedly got considerable help from Lancaster. This is evident from the fourth edition of his 'Experiment', published in 1808, which grew from a little pamphlet of fortyeight pages (which it was when it was published first in 1797) to a fairly large volume of about 384 pages. Bell added many ideas he borrowed from Lancaster's "Improvements", chief of them being the idea of educating large

numbers of pupils at a small cost, by doing away with teachers.

The personal rivalry between Bell and Lancaster did not begin until after 1805, in which year Lancaster visited Bell at Swanage and was accorded the warmest reception. As noted earlier, it must have been the interview of Lancaster with the King in 1805 that provoked jealousy in Bell. The gulf between the two, thus created, was widened by Mrs.Trimmer who, in her "A comparative view of the New Plan of Education promulgated by Joseph Lancaster," maintained that while the mechanical parts of Lancaster's system were good they were stolen from Bell, and that the original parts were bad. She condemned especially the unsectarian principles on which Lancaster based religious instruction in his schools. Had Lancaster not received the royal favour, and had Mrs.Trimmer not intervened, it is probable that each of them would have continued to praise and acknowledge his indebtedness to the other. The importance of this rivalry lay in the fact that it later on developed into a general conflict between the Church and the Nonconformists which continued throughout the nineteenth century, and formed a stumbling block to the progress of English education. The gap between Church and Dissent and the spirit of competition between the two no doubt led to the rapid spread of monitorial schools all over England, but the result of the voluntary efforts was that "State control of a national service receded still further into the background."(1)

We may now give our final estimate of the worth of the monitorial schools in England. Their methods of instruction were crude and mechanical, and children gained but the mere beggarly elements of reading, writing, and arithmetic by attending them. "In fact the new school was not unlike the new factory both in appearance and in method, the definite rewards and punishments of one corresponding to the wages and fines of the other. It was mass production applied to instruction, and that it worked with mechanical

(1) M.G.Jones, opcit, p.339.

smoothness was regarded as an additional advantage."(1) But it would be unjust to judge the work of the philanthropists of the nineteenth century by present day standards. The need of the time was some sort of schooling for all which would enable every one to gain a knowledge of reading, and in so far as the Monitorial System satisfied this need it may be said to have made an important contribution to the education of the poor. The Monitorial School which applied the principle of mass production to instruction was the only type of institution that could become common all over England during the transitional years of the Industrial Revolution, when the State followed a policy of extreme non-intervention in matters relating to the labour and education of the working classes. If these institutions, defective though they were, were not established during the early decades of the nineteenth century a great majority of the English poor would have remained altogether ignorant. The establishment of Sunday Schools all over England marked her first advance towards a universal education. The establishment of Monitorial Schools was her second great stride towards this goal. The earlier and later foundations of elementary education in England, namely the Sunday Schools and the Monitorial Schools, were thus laid during the earlier and later years of the Industrial Revolution.

III

While the educational provision for the children of the working classes in England was rather deplorable during the early decades of the nineteenth century - notwithstanding the rapid spread of the Monitorial Schools - in Scotland conditions were much better. A system of parochial instruction was in existence there for over a century and a half, and though it was not without its own defects it

(1) F.Smith, opcit, p.75.

certainly made the Scottish workers much more enterprising and industrious than the English (1). Again, during the period in which Bell and Lancaster carried on their experiments in monitorial instruction, Robert Owen carried on his experiment in educating the factory children at New Lanark, and it is needless to say that Owen's experiment which showed a vivid contrast to the experiments of Bell and Lancaster, made the New Lanark child-operatives far superior in attainments to the child-workers in England. Before giving an account of Owen's experiment a brief account of his early life may be in order.

The Industrial Revolution provided opportunities to many ordinary workmen, who were thrifty and enterprising, of making large fortunes by a shrewd investment of their savings. One of those men who in a short period rose from the position of a shop servant to that of a millowner was Robert Owen. He was born in 1771 at New Town, Mid-Wales, of poor parents. He was so intelligent that at the age of seven his master considered him fit enough to be his usher. Owen left school when he was about nine years of age, but his craze for knowledge was so great that he made the very best use of the libraries of many clergymen, physicians and lawyers, which were all thrown open to him. When he was ten years of age Owen left his native town for London to begin his life there. He stayed for about six months with his brother William and then obtained a situation with a Mr.James McGuffog, a draper in Stamford, Lincolonshire. Owen worked at McGuffog's for about five years and then removed to Manchester where he obtained a situation with a Mr.Satterfield, also a draper. This was in 1787. In 1789 Owen left Satterfield's service and became a partner of Mr.Jones for the manufacture of Crompton's mules. His brother, William, lent him a hundred pounds for this purpose. In 1790, as Jones found another partner for

(1) Kay Shuttleworth, Four Periods, p.207.

himself Owen had to leave his partnership. He set up his own factory with three workmen to spin cotton. He was now nineteen years old and had risen by this age to the position of an independent manufacturer from the position of a draper's assistant. His profits for the first year amounted to no less than £300. Before long Owen was appointed manager of Mr.Drinkwater's mills. His management was so excellant that Mr.Drinkwater made Owen his partner. Owen had to leave Drinkwater's partnership also, as Drinkwater found another partner, Mr.Oldknow, who was also to marry Drinkwater's daughter. But Owen's fame had become so great that in 1794 he became partner and managing director of a new firm, the Chorlton Twist Co. During the period of his managing directorship Owen had to visit Glasgow often on business, and this brought him into touch with David Dale, the proprietor of the New Lanark mills. He also became a friend of Miss Dale. In 1799 Owen and his partners bought the New Lanark mills from David Dale and in the same year Owen also married his daughter. In 1800, as the managers originally appointed by Mr.Dale were found incompetent, Owen had to leave Manchester for New Lanark to take complete charge of the mills there.

Throughout the long interval of years from the time he left school when he was nine, to the time he became manager of the New Lanark mills in 1800 when he was about twentynine years of age, Owen devoted his spare moments to deep study and meditation. His long years at Manchester brought him into close acquaintance with such eminent men as the physician Dr.Thomas Percival who was a Fellow of the Royal Society, Erasmus Darwin, and Joseph Priestly. Owen became a member of the Manchester Literary and Philosophical Society, which was founded in 1781 by Dr.Percival, and read four very important papers at the Society's meetings. The subjects of the papers were, "Remarks on the Improvement of the Cotton trade", "An essay on the utility of learning",

"Thoughts on the connection between Universal Happiness and Practical Mechanics", and "on the origin of opinions with a view to the Improvement of the social virtues" (1). It is no surprise that the subjects he chose were of a highly philosophic nature. Even at the age of ten his voracious reading made him feel "that there must be something fundamentally wrong in all religions, as they had been taught upto that date". Shortly afterwards he said: "it was with the greatest reluctance, and after long contests in my mind that I was compelled to abandon my first and deep rooted impressions in favour of Christianity....But my religious feelings were immediately replaced by the spirit of universal charity - not for a sect or party, or for a country or a colour, but for the human race, and with a real and ardent desire to do them good". This "ardent desire" Owen could largely satisfy when he assumed charge of the government of the New Lanark mills.

In 1800 the New Lanark mills employed about 2000 operatives, of whom 500 were parish apprentices. David Dale was very well known for his humane treatment of the factory children, and under his management the apprentices were quite happy. The children worked from six in the morning to seven in the evening and they were allowed an interval of an hour and a half for meals. In the evenings they were taught by seven masters who were specially engaged for the purpose. But, benevolent as were the intentions of Mr.Dale, Owen thought that the children made no progress in studies, as their exhaustion in the evenings prevented them from paying active attention to the teaching in the classes.

Owen set himself immediately to the task of improving the physical and moral condition of the child, and adult operatives at New Lanark. About the condition of the adult operatives in 1800 Owen said that they "were generally

(1) Podmore, Robert Owen, p.58.

indolent and much addicted to theft, drunkenness, and falsehood with all their concomitant evils." By 1812 he effected such a vast improvement that the same operatives "had now become sober and orderly, and that an idle individual, one in liquor, or a thief, is scarcely to be seen from the beginning to the end of the year" (1).

In 1816 Owen reduced the hours of work to twelve per day with an interval of an hour and a quarter for meals. That is, the actual hours of work were ten and three fourths. This meant a slight relief for children who could now make better progress in learning.

For the education of children under five Owen established an infant school, the first of its kind in Great Britain, of which we shall give a full account in the next chapter. There was another school for the teaching of older children, of ages five to twelve. Education was practically free for all children and the parents had to contribute nothing more than about threepence a week per child (2). Yet Owen could state before Braugham's Committee of 1816 that the expenses of the schools were borne by the workers themselves. This was possible because Owen set up a store for the sale of food and clothing to workers at prices about 25% lower than the usual market prices. The profits of the store which amounted to about £700 a year were all spent on the maintenance of the schools.

After the shortening of the hours of work in 1816 the attendance at schools rose from below 100 to over 380 every evening. But it was not mere reduction in the hours of labour that was responsible for this rapid increase in attendance. Owen had effected fundamental changes in the methods of teaching and dealing with children. The first principle which he put into operation was the principle of exclusion of rewards and punishments. He maintained that

(1) Podmore, opcit, pp, 81,82.
(2) Podmore, opcit, p.135.

any artificial stimulus to action was bound to produce harm and the absence of the stimulus would weaken the character of the individual. It was this principle which made his experiment differ totally from the systems of Bell and Lancaster. While learning by rote was the common feature of their systems, and emulation and rivalry were the only means by which any interest, if any, could be created, Owen's system aimed at making the subjects themselves quite interesting to study. With this object he introduced the conversational method in teaching, and also the use of maps and pictures. Again, he took care that no period exceeded three quarters of an hour. By these means Owen solved the problem of keeping the attention of the pupils ever fresh.

Reading, writing and arithmetic were the main subjects taught in the New Lanark schools also, but in a more interesting manner than in the Monitorial Schools. As for reading, Owen, like Rousseau, was of opinion that it should not begin until "the children should have learnt to value the artificial signs of language not for themselves, but as a means of wider knowledge" (1). But to satisfy the wishes of parents it had to be begun at a very early age. For the same reason Bible reading and the catechism of the Scotch Church were also begun early. In teaching writing, children were made to write those sentences which had some reference to their previous learning, thus making it possible for them to have some interest in what they wrote. Arithmetic was at first taught on the plan usually followed in Scotland, but very soon Owen introduced Pestalozzi's system of teaching this subject.

Natural science, geography and history were also taught in the New Lanark schools. The lessons on these subjects formed "the characteristic feature of the system of education at New Lanark!' Maps, pictures and diagrams

(1) Podmore, opcit, p.137.

were used in the teaching of these subjects. The lessons, as in the case of those in reading and writing, were short, so that children attended them with interest. And lastly, as a further means of keeping their attention lively the children were questioned in the course of the lesson by the teacher, and they themselves were encouraged to put questions in turn.

There was one other point in which the system of education at New Lanark differed fundamentally from the Monitorial System. While the curriculum of the Monitorial Schools was purely a literary one, that of the New Lanark schools included in addition such entertaining subjects as singing and dancing. Children were taught to sing and dance from their earliest years and this instruction while it made the New Lanark schools attractive to pupils, highly impressed visitors who were drawn not only from different parts of Britain but from the different Continental countries as well.

Owen was very particular that the children should be tidy both in person and in dress. The dress of both boys and girls was made of white cotton cloth of the best quality. It resembled a Roman tunic, reaching in the case of boys down to the knees, and in the case of girls down to the ankles. The dresses were changed thrice every week and this ensured the cleanliness of the children (1).

While everything about the system of education at New Lanark was worthy of commendation there was, however, one defect in it. Rousseau and Pestalozzi emphasised the necessity of providing some manual exercises for the children. Owen did not pay any attention to this great need. "The claims of the eye and ear were abundantly satisfied; the voice found employment in singing and speaking; the bodies of the children were exercised in drilling and dancing. But no provision

(1) R.D.Owen, Outline of the System of Education at New Lanark, p.33.

seems to have been made for drawing, modelling or constructive work of any kind" (1). Nevertheless Owen's achievements in the world of education were far in advance of his times, and at a time when the English experiments in education were influenced least by the ideas of Continental reformers Owen's views on education and his éxperiment at New Lanark were influenced a good deal by the views of writers like Rousseau and Pestalozzi. There is, however, no reference in his writings to the names of these reformers, and this is probably because "he drank of their ideas at secondhand". He visited Fellenburg at Hofwyl and Pestalozzi at Yverdum in 1818, and these visits were also responsible a good deal for the continental ideals which Owen imbibed.

Owen's educational work did not end with his experiment at New Lanark. He was a socialist, and being naturally interested in the welfare of all, he argued that the best means of securing this welfare was to instruct the people at large. This was the thesis of his essays "on the formation of human character", the first and second of which were published about 1813 under the title of "A New View of Society," and the third and fourth about 1816. "Any general character", he wrote, "from the best to the worst, from the most ignorant to the most enlightened, may be given to any community, even to the world at large, by the application of proper means; which means are to a great extent at the command and under the control of those who have influence in the affairs of men". Owen thus felt that it was quite an easy matter to remedy the social evils of the age, even if these evils were the result of poverty. He thought that education of the right sort from the early years of childhood would so change men's characters that they would live "without idleness, without poverty, without crime and without punishment." He therefore advocated a national scheme of

(1) Podmore, Robert Owen, p.152.

education which would educate one and all on unsectarian principles; but as there was no hope of such a system being established by the State during his life-time, Owen did all he could for the cause of education by subscribing liberally to Lancaster's school which was unsectarian in principles, and even offered help to the National Society. Owen, however, was fully aware of the limitations of the monitorial method; yet he supported the systems of Bell and Lancaster because they provided the only means of education for the poorer classes.

Owen's fame as an educator would have been far greater had it not been for his open denunciation, in 1817, of all the religions of the world. Even before the declaration was made there was a feeling among the higher classes that his ideas were dangerous; the declaration only confirmed their suspicions. Owen's period of glory ended completely in 1824, when the direction of the New Lanark Schools was taken out of his hands. Owen withdrew from New Lanark altogether in 1829 and went to America to try in a new field his experiment in character building. The schools at New Lanark lost their original charm after Owen's departure; yet Owen left behind an impression which lasted for long and inspired later educational reformers.

IV

Another great champion of popular education during the later years of the Industrial Revolution was Henry Brougham. His predecessor in this field was Whitbread who, in 1807, introduced a "Parochial Schools Bill" for the establishment of parochial schools for which the overseers were to be authorised to raise money with the consent of the vestry. The Bill was passed by the Commons with some modifications, but was rejected by the Lords. Whitbread's attempts thus ended in failure, and it was left to Brougham to agitate for state intervention in educational matters.

He was the first statesman to make any real progress in this direction.

Brougham began his work in 1816, when he got appointed a "Committee to Inquire into the Education of the Lower Orders of the Metropolis," of which he became chairman. The Committee reported that "a very large number of poor children are wholly without the means of Instruction, although their parents appear to be generally very desirous of obtaining that advantage for them" (1). The Committee's minute enquiries reveal that the number of schools for the education of the poor in most parts of London was very inadequate, and that a great majority of children attended only the Sunday Schools, thus getting no instruction on six days of the week. In Spitalfields, for example, the number of children at school was as low as 2100, and out of these as many as 1650 attended the Sunday Schools (2). Again, in Shoreditch while only about 160 children attended the day schools, about 2000 were in Sunday Schools.

In Brougham's opinion the inadequate supply of schools for the children of the poor was due to the abuse of charitable endowments. He therefore recommended in 1818 the appointment of a Commission to inquire into the administration of charities. His bill was passed by Parliament, but it was limited in scope by the amendments of the Lords. The powers of the Commissioners were restricted a good deal. Their inquiries were to be confined to educational charities, and of these charities such as were under the supervision of any special "visitors, governors or overseers" were excluded. This limitation in the powers of the Commissioners was perhaps due to the fact that Brougham's Committee compelled even "some of the dons of Oxford" and the heads of

(1) Select Committee, 1st Report, 1816.
(2) Select Committee, 1st Report, 1816, pp,11-12.

the public schools like those of Winchester and Eton to give evidence about the sources of income and the expenditure of their institutions. But the Commission carried on its work, and its investigations embodied in the reports which were submitted between 1819 and 1837, though restricted to a narrow field, were of inestimable value to later educational reformers.

Brougham's Committee was reappointed in 1817 and again in 1818, when it presented a report showing a steady increase since 1816 in the number of schools in London and the other large manufacturing towns. But it pointed out that the exertions of benevolent individuals to provide the necessary means of education for the poor were confined mostly to populous districts, and that in the thinly populated rural districts a very great deficiency existed in the means of educating the poor (1). Again it stated that in districts where both National and British schools existed the education of the poor was not checked by the exclusive principle adopted in the National schools; but where there was only one school - a National one - the Dissenters were deprived of their means of education (2). The Committee recommended that the State should provide funds for the erection of school buildings wherever funds were lacking; but the expenses of maintaining a school were to be borne by the parish (3).

The submission of its report in 1818 by the Select Committee was a preliminary to Brougham's Parish Schools Bill which he introduced on June 28th, 1820. It was called a "Bill for better promoting the means of education for his Majesty's subjects in England and Wales." The Bill proposed to throw the cost of building schools on the local manufacturers and the cost of maintenance on the local rates.

(1) Select Committee on the Education of the Lower Orders, Third Report, 1818, p.56.
(2) Ibid, p.56.
(3) Ibid, p.57.

All children except the very poor were to pay fees. The school masters were to be paid from about £20 to £30 per annum. The religious instruction in the schools was to be confined to mere Bible reading, and no form of worship was to be permitted in the schools except the Lord Is Prayer. All these proposals were no doubt very sound and agreeable both to Churchmen and Dissenters; but it was the requirement that the schoolmasters should be communicants of the Church of England, and that their appointments could be vetoed, or that the masters could even be dismissed by the parish clergyman, that created a strong resentment among the Dissenters as well as the Roman Catholics, and the Bill had to be withdrawn (1).

Brougham, however, was not the man to be discouraged by such failures. He continued his efforts to promote popular education, and if Parliament was lukewarm still in this matter he turned his attention to the "Gentiles," those poor members of the artisan class, whose knowledge of reading acquired in the Sunday Schools, meagre as it was, made them anxious to improve their facilities for further education. He was extremely anxious to create a taste for reading among adults of the working class. Hence the interest he took and the part he played in the opening, in 1824, of the London Mechanics' Institute and the founding, in 1827, of the University of London which, on account of its freedom from all religious tests was called by its opponents "the godless institution in Gower Street." Brougham's interest in the education of the working classes could be guaged best by a perusual of his pamphlet, "Practical observations upon the education of the People" which he published in 1825. The pamphlet ran through twenty editions in one year, and this shows how enthusiastic the working classes were in matters relating to their self-education. And they eagerly responded to Brougham's suggestions in the pamphlet.

(1) Holman, opcit, p.57.

Brougham's efforts for the progress of popular education were indeed very great. But he was somewhat vain and his sympathies did not extend to the lowest sections of the poor. He was interested in the intellectual uplift of only the artisan class, and his appeals in his "Practical observations, etc"., were exclusively to this class,not to the starving hand loom weavers or to the ruined agrarian labourers who, far from being in a position to buy cheap pamphlets, could not even provide for themselves the bare necessaries of life. Nevertheless, even these very poor classes owe a debt of gratitude to Brougham; for the beginnings of State intervention in educational matters, at least from 1833, was due almost entirely to the agitation which Brougham carried on in Parliament.

The account of the efforts of philanthropists to improve the facilities for the education of the poor by a system of Monitorial Schools, and by agitation for Parliamentary interference, has been given at length. Notwithstanding the rapid spread of "British" and "National" schools during the early decades of the nineteenth century, there was a great deficiency in the means of educating the poor. The Select Committee on the education of the poor, over which Mr.Slaney presided, reported in 1838 that "the kind of education given to the children of the working classes is lamentably deficient, that it extends (bad as it is) to but a small portion of those who ought to receive it, that without some strenuous and persevering efforts be made on the part of the Government, the greatest evils to all classes may follow from this neglect" (1). Nevertheless the year 1833 marks the beginning of a change for the better. In this year Parliament, on the motion of Lord Althrop, voted a sum of £20,000 for the erection of 'Schoolhouses' in England, and another sum of £10,000 for similar purposes in Scotland. The administration of these funds was entrusted

(1) Select Committee on Education of the Poor, 1838. Report, Quoted by Shuttleworth Pour Periods, p.191.

to the Lords of the Treasury who distributed the amount between the British and Foreign School Society and the National Society. It was not, however, until 1839, when a Committee of the Privy Council on Education was formed, that Government took any direct part in matters relating to popular education. It was this slowness on the part of the Government to intervene that lengthened the transitional period of the Industrial Revolution. By 1840 we may consider the period as having ended, though the writings of Dickens remind us that some of the industrial evils existed even after this date.

V

We have so far made no reference to the work of the Continental reformers in education. During the period when Bell and Lancaster were busy in England, promulgating their systems of mutual instruction, on the Continent Pestalozzi was preaching his new doctrine of 'intuition' which required that the mind should be trained for its proper function, namely that of thinking. The English educationists of the period were, however, utterly indifferent to the new ideas which Pestalozzi spread in countries like Switzerland, Germany and France. To Bell and Lancaster education never meant,as it meant to Pestalozzi, the training of the mind to think. To them it simply meant instruction. Even Owen, whose educational ideas and work were far in advance of other British reformers, failed to realise the importance of Pestalozzi's work. He as well as Bell visited Pestalozzi, but their visits instead of broadening their views filled them with a selfish admiration for their own systems.

Indifference to foreign ideals and achievements in any field of activity - whether in politics, in social life or in education - has always been a marked characteristic of the English race. The educational ideas of the

Continental reformers would not have reached the shores of England for a very long period, but for the far sightedness of Brougham who, however, was not impressed so much by Rousseau and Pestalozzi as by Fellenberg; hence the detailed account of Fellenberg's work which Brougham gave to the Committee of 1818.

We shall now describe briefly the influence of some of these Continental writers on English education. Rousseau's theories were not of any direct importance to the question of popular education. His "Emile" was no doubt very widely read, but his ideas were too strange to the public to be acceptable in their original form. Only a few enthusiastic persons like Thomas Day and R.L.Edgeworth attempted experiments on lines suggested by Rousseau, but even they were dissatisfied with the results. R.L.Edgeworth brought up his eldest son for a few years after the manner of Emile, but he was disappointed with the results. The boy, we are told, was "bold, free, fearless and generous; he had a ready and keen use of all his senses, and of his judgment. But he was not disposed to obey....he had too little deference for others, and he showed an invincible dislike of control."

Rousseau's teaching therefore did not produce any immediate effect on English education; but it was surely the starting point of the new educational psychology which emphasised the study of child nature and the determination of the curriculum purely on the basis of such a study. It is Rousseau that was responsible for the active theorising and discussion on educational aims and methods which were the chief characteristics of the eighteenth century in England and on the Continent. The effect of his doctrines on English educational practice was indeed negligible, but as F.Smith observes, his ideas were flowing through many channels.

Pestalozzi's teaching was of more direct

importance to English education than the teaching of Rousseau. He was a friend of the poor, and in his "Leonard and Gertrude" he explained how all social ills could be cured by an ideal home, school and church. Gertrude was the peasant mother who set the example of a private life full of humility and virtue, and such an example, combined with the teachings of the schoolmaster and the priest, furnished the children of the village with all the means of an ideal education. Pestalozzi proved the practicability of his teaching by living it out himself. "I lived the year through," he wrote, "surrounded by more than fifty beggar children, shared my bread with them in poverty, and lived myself as a beggar, to teach beggars to live like men" (1). The reference he makes here is to the days he spent on his farm at Neuhof soon after his marriage (between the years 1774 and 1780) trying to educate destitute children by combining labour on the farms with elementary schooling. His life at Stanz, which was full of labours for the war orphans entrusted to his charge, is another instance of his generosity and love for the poor. Pestalozzi's teaching and example were thus of more direct importance to the solution of the social and educational problems which the Industrial Revolution created in England. But as noted earlier, the English educationists of the period were never anxious to give the children of the poor a really cultural education. They were quite satisfied with giving them a meagre knowledge of the three Rs. The result was that Pestalozzi's ideas also reached England at a much later period.

The third great educational reformer in Europe during the early nineteenth century was Fellenberg whose experiments at Hofwyl influenced the English educational enthusiasts to a very great extent. Brougham especially

(1) Quoted by Adamson, English Education, 1789-1902, p.112.

was highly impressed by Fellenberg's system of education, and his description of Fellenberg's schools at Hofwyl to his Committee in 1818 was most elaborate. Fellenberg's interest in agriculture and his ownership of a vast estate were great assets to him in carrying out his educational experiments. His institutions were of three types: the first was a school for the poor, the second an academy for the rich, and the third an agricultural college. The influence of the second and third types on English education was indeed very slight; but the school for the poor furnished a model for experimenters in English popular education. Bell, who visited Hofwyl in the summer of 1816, observes that it "consists of 32 boys who work about ten hours a day and study two. They are chiefly employed in agricultural labour, sometimes in mechanical work. They learn to read, write, cipher, draw, music and the elements of geometry" (1). About seventeen years later the school contained a hundred boys and a hundred girls who were all engaged in cultivating 250 acres of arable land, and were taught the elements of reading, writing and accounts. Of course, the time devoted to literary work was very short - about two hours or even less; but the children got a sound practical training and their lessons, which were from direct observation of their natural surroundings including the flora and fauna, were of greater value than what they learnt from books.

The children who were taken into the school were, as Brougham described them, of the poorest and most degraded classes in Berne and other Swiss towns, and they were slaves to the most "vicious and idle habits". Yet Fellenberg, with his only assistant, Johann Jakob Wehrli, whom Bell described as a schoolmaster of "distinguished merit," effected such a fundamental change in their characters that even Robert Owen thought very highly of Fellenberg's plan, and Brougham was

(1) Quoted by Adamson, opcit, p.117.

convinced that its adoption in England would bring about a great improvement in the lives of the English poor. The chief point about Fellenberg's school was that the children were treated with great kindness. They were regarded as "rational creatures" and great stress was laid on the cultivation of virtues. Everything was taught by example rather than precept, and it was this which accounted for the splendid success of the institution. Thus, the influence of Fellenberg's work on the educational problem of the poor in England was very great. His doctrines were not embodied in any special publication like that of Rousseau's "Emile"; but his ideas were spread all over England, chiefly through accounts of travellers, and they made a stronger appeal to the generality of the English public than the teachings of Rousseau. Brougham, the great admirer of Fellenberg, was responsible not a little for the spread of his ideas among English educationists, and at his instigation B.F.Duppa published several articles on the system of education at Hofwyl in the "Penny Magazine" and Knight's "Journal of Education".

In closing we may briefly compare the early and later years of the Industrial Revolution in England. The early period - 1760 to 1800 - is the darkest part of the period of transition from a rural to an industrial civilisation. Poverty and crime reached their highest limits during this period. The condition of labourers, especially of the child workers, was worse than that of the negro slaves, but the State did nothing at all to improve the lot of the poor. It was so late as 1802 that the first Factory Act was passed, and the entire period was therefore one of complete misery to the poor. The only new provision for the education of the poor during this period was that of the Sunday Schools.

The later period - 1800 to 1840 - is also dark, and there was no great reduction in the sufferings of the

poor. The Factory Act of 1819 did little to better the condition of the child operatives, and the full operation of the Factory Act of 1833 did not begin until 1836. But the gloom of the later years is relieved by the ceaseless efforts of philanthropists to provide means of education for the majority of the poorer class children and by the agitation for State intervention in education which a few far seeing Statesmen like Whitbread and Brougham carried on in Parliament. Again, the foreign influences on English education described above, though they came slowly, made the period 1800 to 1840 better in its outlook for the poor than the previous period. From 1840, however, the beneficial effects of the Industrial Revolution began to operate, and a new phase commenced in the history of English education during which fundamental changes were wrought in all grades of learning. We shall deal in the subsequent chapters with the developments that took place in English education during the latter half of the nineteenth and the commencement of the present century.

CHAPTER IV

THE INDUSTRIAL REVOLUTION AND THE RISE AND PROGRESS OF INFANT SCHOOLS.

The last decades of the eighteenth century and the beginning of the nineteenth, we have noted, were a period of intense suffering for the English poor; but it is interesting to note that the seeds of all later developments in English education were sown during this period. The purpose of the present chapter is to show how the Industrial Revolution created circumstances which neccessitated the establishment of Infant Schools all over the country, and how such a system of schools contributed largely to that refinement in the lives and manners of the poorer classes in England which became noticeable by the end of the last century.

The chief educational agencies for the children of the poor, during the early eighteenth century, were the "home and the occupation". The Industrial Revolution completely changed the old order. The system of enclosures which brought into existence the big landlords reduced the English farmer to the condition of a mere wage-earner. He was no longer satisfied with his new position both on account of his servitude to the big landlord and on account of his reduced income. The mechanical inventions of the century and the growth of the new factory towns offered to the discontented agrarian worker a new means of livelihood. The wages offered by the factories were very tempting, and hence the rush of the population from the country districts into the new towns, a migration which frequently resulted in the break up of the home and the family. In the words of Florence Kelly, "industry affords in greater measure than the race has ever known before, all those goods which form the material basis of family life - food, clothing, shelter

and material for subsistence for husband, wife and children - while at the same time it disintegrates the family. This is the paradox of modern industry" (1).

Under the changed conditions created by the Industrial Revolution the father, the mother, and the older children - all went to the factory to work, leaving the younger children often to themselves - to play in the streets exposed to the danger of accidents - or sometimes in charge of some neighbouring dame, who did nothing more than just keep them indoors. The natural consequence of such neglect of the young children was a high rate of infant mortality during the transitional years of the Industrial Revolution. The infants died either owing to street accidents, or owing to diseases resulting from bad care and malnutrition. "It is not uncommon ..... in the Highlands of Scotland," wrote Adam Smith, "for a mother who bore twenty children to have two alive ..... In some places one half the children die before they are four years of age; in many places before they are seven; and in most places before they are nine or ten. This great mortality will be found chiefly among the children of the common people, who cannot afford to tend them with the same care as those of better station" (2). But the Highlands were only a non-industrial area, and the rate of infant mortality in the manufacturing districts was indeed much higher. It seems clear from Smith's statement that the increase of poverty did not diminish the birth rate, though it definitely raised the rate of infant mortality, owing to the neglected state of the poor infants.

It was philanthropy again that saved the poor infants from further misery and neglect. "Surely those persons who disapprove of educating the poor at all",

(1) Florence Kelly, Modern Industry in relation to the family, Longmans, N.Y., 1914.
(2) Adam Smith, Wealth of Nations, BK 1, P.80, 1776, George Bell, London.

observed Wilderspin, in advocating the cause of infant schools, "will see the propriety of keeping, if possible, their children safe from accidents, and preserving the lives of many little ones who would otherwise be lost to their country, from thus falling a prey to surrounding dangers. Poor parents frequently return from their labours and find, to their mortification, that one or probably two of their children are gone to an hospital; which of course makes them unhappy and unfit for their work" (1).

Brougham, whose efforts for the promotion of elementary instruction among the masses have been noted at length in the preceding chapter, took the greatest interest in the establishment of infant schools also. To him, as Frank Smith observes, the support of the infant school movement was a passion. Brougham considered the establishment of infant schools, "one of the most important improvements in education," or - for the matter of that - "in the civil polity of this country." "Whoever knows the habits of children," he observed, "at an earlier age than six or seven ..... is well aware of their capacity to receive instruction long before the age of six .... The truth is that he (the child) can and does learn a great deal more before that age than all he ever learns or can learn in all his after life." (2) . He argued that the child's attention could be more easily aroused at an early age, that his memory would be more retentive, and that before he had formed any bad habits good habits could be more easily formed. In short, he thought that the establishment of infant schools, in the areas where crime was rife, would be the best remedial measure for the prevention of crime. "If at a very early age", he said, "a system of education is pursued by which a

(1) Wilderspin, The Infant System (1840), p.46.

(2) Speech in the House of Lords, on the "Education of the People", May 21, 1835, No.20 in Volume of Pamphlets, "Education in England.

degree of independent feeling is created in the child's mind ....if this system be followed by constant instruction in the principles of virtue .... it will become impossible that he should afterwards take to vicious courses, because those will be utterly alien to the nature of his being" (1).

Thus at the beginning of the nineteenth century the cause of infant education was advocated not only by philanthropists, but by political economists and some radical statesmen like Brougham. Adam Smith drew attention to the high death rate among children of the poorer classes, and showed that it was due to lack of care; Brougham defended the cause of infant education on the ground that the most effective means of preventing crime was to educate children from a very early age. The view, that the home is not always an adequate institution for the education of the young children was well established, and it was thought necessary that community effort should supplement the attempts of the family to educate the younger ones.

II

We shall now narrate briefly the early history of the infant schools in England. The first infant school in Britain was established by Robert Owen at New Lanark on January 2, 1816. But on the Continent J.F.Oberlin had established an infant school about forty years earlier, at Bau de la Rouche, of which he was pastor from 1767 to 1826. Being highly interested in the physical, intellectual and moral welfare of his flock, Oberlin established separate schools for infants, for older children, and for adults. He attached the greatest importance to infant schools because of his great faith in the training of the young as an effective means of rooting out the social evils of a community. Oberlin's plans bore early fruit, and when his

(1) Brougham, opcit, p.13.

fame reached far and wide in Europe many eminent persons visited his 'mountain home' to make a first-hand study of his system.

The infant school at New Lanark, however, owes none of its characteristics to Oberlin's school, for Owen had not even the faintest knowledge of Oberlin's work. As manager of the New Lanark mills Owen was confronted with the problem of reforming the morals of both the child and adult operatives who, on account of their extreme poverty and lack of early home training, were slaves to the most depraved vices. Owen's infant school was, therefore, a means to the realisation of his wider aim, namely, the 'formation of a new society,' and the circumstances that gave birth to it were the demoralising influences and the neglect of young children, which were the common characteristics of the early years of the Industrial Revolution.

Owen's educational ideas, it has been pointed out, were far superior to those of his contemporaries. To him education never meant mere instruction, as it did to Bell and Lancaster. Hence in Owen's infant school the children, whose ages varied from three to six, "were not to be annoyed with books, but were to be taught the uses and nature or qualities of the common things around them, by familiar conversation, when the children's curiosity was excited so as to induce them to ask questions respecting them" (1) The infants' class room was therefore furnished with paintings, mostly of animals, with maps, and with natural objects from gardens and fields. Children were free to handle and examine all the objects placed in their class-room and this naturally roused their curiosity, and encouraged them to start lively discussions with their teachers.

The progress of the children in the infant school at New Lanark was therefore very rapid, and Owen pointed out

(1) Autobiography, Vol.I, p.140.

that after a very short period of training the infant pupils "were unlike all children of such situated parents, and indeed unlike the children of any class in society. Those at two years of age and above had commenced dancing lessons, and those of four years of age and upwards singing lessons - both under a good teacher. Both sexes were also drilled, and became efficient in the military exercises, being formed into divisions, led by young drummers and fifers, and they became very expert and perfect in these exercises" (1).

Owen laid great stress on the right selection of teachers for the infants' department, for he feared "that if the foundation was not truly laid it would be vain to expect a satisfactory structure." It was not quite an easy matter for Owen to secure proper teachers for his infant school. He at last found among the people of the village "a poor simple hearted weaver named James Buchanan, who had been previously trained by his wife to perfect submission to her will." This training which Buchanan received from his wife and his strong love for children were his only qualifications for his appointment as an infant schoolmaster. Young infants needed a female nurse also who could assist the master, and such a person, Owen found, in Motty Young, a girl of seventeen, also an inhabitant of the village.

Owen trained Buchanan in the duties of infant schoolmaster, and under his training, Buchanan, who, in the beginning, could hardly read, write or spell, became so efficient that Brougham, John Smith and Henry Hase asked Robert Owen for the loan of his services for the infant school which they were planning to open at Brewer's Green, Westminster. Their request was granted, for Owen had pupils who were trained to take Buchanan's place at New Lanark. Buchanan left New Lanark for London; but the New Lanark infant school continued to flourish under the personal care

(1) Autobiography, Vol I, pp 140-141.

and supervision of Robert Owen. In 1824, however, the direction of the schools at New Lanark was taken away from Robert Owen, because his declaration against all the religions of the world made his partners - who were, most of them, orthodox Christians - fear that they would be suspected of agreeing with him in unpopular beliefs, even if they joined him in any good work. Above all it was feared that the teaching in the schools would be biassed by Owen's views, and that through such teaching Owen's ideas would take root among the people at New Lanark. The infant school, as well as the other schools at New Lanark, lost its original fame after Owen's withdrawal from the place.

In the meanwhile Buchanan, who was appointed master of the first infant school in England, with full powers, did not get on very well in his new appointment. The infant school at Westminster which, it was thought, would be a replica of Owens, proved to be a failure. When Owen visited the school he saw Mrs.Buchanan, whom he never saw in the New Lanark School, "brandishing a whip and terrifying the children with it! " (1) Buchanan was found in another part of the room "without authority or influence, and as much subject to his wife as the children" (2). Buchanan did not stay long in London. His sons settled down in South Africa, and he left London for the Cape of Good Hope to join them.

The next great promoter of infant schools in England was Samuel Wilderspin. His acquaintance with Buchanan during his stay in London led to his appointment as Superintendent of the second English infant school in England, which was opened in 1820 at Spitalfields. Wilderspin got his first ideas about infant education from Owen and Buchanan, to both of whom he acknowledged his indebtedness in the beginning. Later on, however, when his work at Spitalfields brought him

(1) Autobiography, Vol I, p.152.
(2) Autobiography, Vol I, p.152.

to public notice, he was overpowered by his vanity, and he claimed that he was the founder of the first rational infant school, ignoring the pioneer services of Robert Owen whose school at New Lanark he considered to be a mere 'asylum' for poor children. Again, he expressed pride in having formulated his scheme of infant education before reading a single work on the subject by Pestalozzi or any other great writer. But however vain Wilderspin may have been, his zeal for the promotion of infant schools was unquestionable, and their rapid spread during the first half of the nineteenth century was due not a little to his missionary labours. He travelled throughout the United Kingdom lecturing on the usefulness of the new institution, and helping persons interested in the movement in establishing and organising infant schools.

During the period 1820-1824, when he was Superintendent of the infant school at Spitalfields, Wilderspin made some important discoveries which accounted for the success of his efforts as promoter of infant schools. His first day's experience at the school taught him that "the senses of the children must be engaged; that the great secret of training them was to descend to their level and become a child, and that the error had been to expect in infancy what is only the product of after years" (1). Wilderspin insisted that the children should be treated with kindness and sympathy. He laid great emphasis on the formation of character, and used the playground as an agency for this purpose. The master and mistress were to remain with the children on the play ground, not merely to prevent accidents, but to attend to their moral and physical training. They were to see that children through play acquired the habits of honesty and kindness to each other.

Wilderspin realised the value of healthy

(1) Early Discipline, p.3.

surroundings for the children, of adequate ventilation in the school buildings and, above all, of satisfying the child's love of activity through healthy amusements and frequent change and variety of occupation. His suggestion to the teachers as to the course they should adopt when they felt dull is most interesting. "If you are dull yourself, let the other teacher take them in hand, if you are both out of tune, let the children alone, until you are in another mood; if the weather permits send them out, and in half an hour you will find a difference in yourself and the pupils." (1)

Wilderspin's school resembled the New Lanark School in many respects, especially in the use of the playground as an educational agency. But in the matter of instruction his system displayed some very serious defects. He attached too much importance to "books, lessons and apparatus", and could not differentiate between instruction and education. He attempted to teach the children much more than what they should be taught during the infant school stage. In his evidence before the Select Committee of 1834, he stated that a child "ought to know the first four rules of arithmetic and a good deal of the elements of Geography; it ought to know how to read well enough any book in simple language; it would have a tolerable knowledge of the quality of such things as immediately come under its notice; it would have a slight knowledge of the elements of Natural History, of the habits and manners of different animals, taught by pictures; it would have a tolerable knowledge of the leading facts of the New Testament, which are communicated by pictures in the same way; it would have a knowledge of form; the child would be able to distinguish a triangle from a square, and an octagon pillar from any other pillar." (2)

(1) Education of the Young, p.44.
(2) Report, Vol II, p.120.

Better than the type of infant school which Wilderspin popularised all over England, was the school which was established by the Rev.William Wilson at Walthamstow. William Wilson was the brother of Joseph Wilson who, as a member of the Committee of the infant school at Spitalfields, was responsible for making Wilderspin the superintendent of that school. At first William Wilson was not in favour of the Infant School Movement. This was perhaps because he was not impressed with Wilderspin's labours at Spitalfields. Later, however, he became a convert to the movement and the Walthamstow school became, as Brougham pointed out to the Select Committee in 1834, "the best anywhere to be seen". This school was more rational than the Spitalfields type, and approximated more closely to the modern type of infant school that developed about the end of the nineteenth century. But at the commencement of the movement it was the Spitalfields type that, in spite of its palpable defects, was popular, and was copied throughout England for about twenty years or more. This was due to Wilderspin's great zeal for spreading the schools all over the country, and had it not been for his labours the movement would not have gained strength for many more years. In Wilderspin's time the employment of women in the factories was so excessive that a defective infant school was considered better than no infant school at all, and its absence really meant a high rate of infant mortality. In a cotton factory consisting of 500 operatives the number of women employed was 251, or about 50.2% of the total number of operatives; and the number of girls was 121, or 24.2% of the total number employed. The average wage of a woman was 10/2d per week, and that of a girl 5/-. The boys, who were paid 7/- per week, numbered 33 or 6.6%, and the men, who were paid 18/6d per week, numbered 95, or 19% of the total (1). When the wages of women and girls were so

(1) David Chadwick, Rate of wages, p.5.
Quoted by Kay-Shuttleworth, Four Periods,p.130.

low compared to those of men and boys, and about 75% of the total number of workers in a mill were women and girls, it was hardly possible for the home to be any longer a suitable place for the training of the young. The provision of infant schools therefore became an urgent necessity, both as a means of training the young and as a preventive measure against infant mortality. Sir James Kay-Shuttleworth urged the establishment of infant schools on the grounds that children are kept "in a well ventilated room, they are in healthful exercise in various forms of amusement and drill; their manners, temper, tone of thought, and habits of application are under intelligent training"(1). If Shuttleworth as Secretary of the Education Department could do little more than suggest a remedy against infant mortality, Wilderspin was responsible for supplying it. His type of infant school, though defective on the side of instruction, gave the poor infants all the amenities which Shuttleworth described, and contributed to their healthy physical growth.

Wilderspin's propaganda work for the spread of infant schools began in 1824, when the Infant School Society was formed, and he was released for this purpose from his duties as Superintendent of the Spitalfields Infant School. The Society did not exist long, but during its short period of life infant schools were opened in most of the large manufacturing towns. In 1825 two schools were opened in Manchester and one at Stockport, and in 1826 one more at Manchester. During the first twelve months of the Society's existence the total number of infant schools opened was thirtyfour (2). The break up of the Society did not much hinder the progress of the movement. Wilderspin, "the Missionary of the Infant School Movement," continued his

(1) Kay-Shuttleworth, opcit, p.132.
(2) F.Smith, opcit, p.97.

labours single handed, and sometimes even took the children with him on tours for the purpose of demonstrating his methods.

The third enthusiastic promoter of infant schools in the early nineteenth century was David Stow who was the originator of a new species of infant schools in Great Britain. Though Scottish by birth, Stow was English by descent; his grandfather was a landed proprietor in the County of Durham, and his father a respectable merchant of Paisley. Stow also was a merchant in Glasgow where the transitional evils of the Industrial Revolution were to be seen at their worst. The children of the poor were utterly neglected, and the existing institutions made no provision at all for their education. Stow describes the Salt market in Glasgow - through which he had to pass every day to go to the counting house - as the abode of "shameless profanity, indecency and filth." So low indeed was the morality of the poor that Stow was convinced that the idea of reforming the grown up was futile. He thought it would be wiser to start with the child. He therefore opened, about 1816, a Sunday evening school. At first he collected his pupils from all quarters of the city. "Each night brought pupils from various quarters.... Their homes were widely scattered; they in consequence could not be visited, and the plan thus proved comparatively ineffective" (1). Stow therefore began drawing his pupils from two selected lanes in the Salt market which were the very worst localities. He could now very easily visit the children's parents about twice a week as their houses were not scattered apart. These visits helped Stow soon to learn the disposition of every child and the circumstances of its family. Stow's Sunday evening school proved a great success, and it was copied in other parts of the city; but Stow was not satisfied with giving mere Sunday instruction to the poorer class children. By

(1) Quoted by Salmon & Hindshaw, Infant Schools, their History and Theory, P.68.

1824 he was convinced of the view that the effect of one day's schooling in a week would be more than counteracted by the evil influences of the remaining six days. He was eager to change "the street training into school training", and to bring "the power of habit during the whole week to the side of religion." The street training began as soon as a child could walk, and Stow thought that the school training should begin exactly then.

To start day schools Stow needed financial support, and this he could not get so easily. He had to encounter serious opposition to his school in the slums of the city, and to his new ideas in teaching. In 1826 he founded the Glasgow Infant Society, but the people were so slow in subscribing to it that the first school was opened the next year in a rented cottage. The cottage"consisted of two storeys at the head of a back garden entering through one of the front houses in Drygate Street. The garden was turned into a playground, and the understorey formed a dwelling house for the teacher....The upper floor was cleared out, and a gallery erected." Stow visited Wilderspin's school at Spitalfields, and secured his aid in organising his school at Glasgow. There were many points of similarity in the methods of the two, and it is likely that they derived mutual benefit by their contact with each other.

We may now briefly describe some of Stow's achievements in the field of infant education. Almost simultaneous with the opening of his infant school began his training of teachers for the infants' department. In 1832 he opened a juvenile school for the education of children over six. In 1835 the management of both schools was taken over by the Glasgow Educational Society which raised funds for the construction of a new building to accommodate a thousand children in four separate departments, - the Initiatory, Junior, Senior and the Industrial. The last

named was meant exclusively for girls. The Society also provided a regular training course for teachers. The new schools were opened in 1837, and the teachers trained in these schools, under Stow's "Training System", were in great demand not only in Scotland, but also in England and in other parts of the Empire (1).

Stow laid great emphasis on the distinction between instruction and training. Mere instruction, he thought, was inadequate for a child's healthy development. It was right training, in addition to instruction, that would ensure the formation of right physical and moral habits, and like Wilderspin he thought that the right place for such a training was the playground. "Children cannot be idle", he wrote, "and they cannot always be employed in intellectual exercises, nor for too long in one particular mental exercise without any injury. Variety is necessary, and variety does not dissipate or fatigue. The 'steam' in fact must be let off, and nowhere so well or so fully as in a playground, as well as by physical exercises in the gallery (2). Thus Stow considered play necessary not only for healthy physical growth, but even for healthy intellectual and moral development.

Stow was very religious himself, and hence considered religious education a very important duty of the school. Religious instruction in his schools differed totally from the instruction given in the British or National schools. It did not consist in mere Bible reading, as in the case of British Schools, or in memorising the catechism as in the case of the National Schools. Stow made the Bible lessons interesting to his pupils by the use of his "picturing out" method. This method made the stories more vivid and picturesque by the use of familar mental images,

(1) F.Smith, opcit, pp 99,100.
(2) Quoted by F.Smith, opcit, p.100.

and the children were "made to perceive as vividly by the mental eye as they would real objects by the bodily eye." Above all, Stow insisted that all religious precepts should be "reduced to practice in the real life of the children at play " (1).

The "picturing out" method was also used in the teaching of other subjects like history and science. It gave the children delight in attending the classes, and, as Stow thought, made teaching a noble profession, "awakening thought, stimulating and directing enquiry, and evolving the energies of intellect." To ensure proper attention to every child Stow thought that an infant school should not contain more than 140 children who were to be in charge of a master and a mistress. The Junior School for children between six and twelve was to consist of 80 children in charge of a master and a trained assistant. For every additional forty scholars one extra assistant was to be appointed. Stow attempted to classify children according to age and attainments. Children of about the same age and of equal capacities were grouped together for purposes of teaching. By this means and by the free opportunities he gave for mixing of boys and girls, he introduced into his schools what was called the principle of "Sympathy of numbers" (2). Stow condemned the Monitorial schools on account of their unwieldy strength and their mechanical methods of teaching. His methods of teaching, however, meant an enormous expenditure; but Stow thought that when large sums of money were being spent on the emancipation of slaves, there was no reason why an equal amount should not be spent on the emancipation of "the mass of population of Great Britain from the operative causes of their present and progressive moral degradation" (3).

(1) Quoted by F.Smith, opcit, p.100.
(2) F.Smith, opcit, p.101.
(3) Stow, The Training System, The Moral Training School and the Normal Seminary, 1850, p.69.

III

So far an account has been given of the early Infant School Movement in England for the progress of which Owen, Wilderspin and Stow were mainly responsible. Among others who took a great interest in the spread of the movement were Greaves and Mayo, the importance of whose activities lay in introducing Pestalozzi's ideals into infant education. Pestalozzi no doubt believed in the training of children from the early years of infancy; but he thought that it was the mother that was best fitted to give such a training. The home, according to Pestalozzi, was the best institution for the early education of the child, and the mother the best teacher. Thus he had no special message to give to the Infant School teacher, and he did not advocate the establishment of infant schools. Nevertheless, when Pestalozzi's ideas first became known in England they were regarded as specially applicable to the education of the young. This was because Greaves and Mayo, the earliest messengers of the Pestalozzian faith in England, "saw in the Infant Schools a means of propagating the methods of Pestalozzi, and in the methods of Pestalozzi a means of fertilising Infant Schools " (1).

Greaves visited Pestalozzi at Yverdun in 1817. He was given the warmest welcome, and during his stay he grew very intimate with Pestalozzi who later wrote him a series of thirty-four letters describing one aspect of his system of education. These were translated into English by Dr.Worms, and published by Greaves under the title, "Pestalozzi on infant education". The following motto which Greaves prefixed to the letters clearly illustrated Pestalozzi's views on the education of the young:-

"Then why resign into a stranger's hand
"A task as much within your own command
"That God and Nature and your feelings too
"Seem with one voice to delegate to you (Mothers)?"

(1) Salmon and Hindshaw, Infant Schools, their history and theory (1904), p.76.

On his return to England Greaves was made secretary of the Infant School Society. It has been noted that the Society did not exist long, but Greaves resigned even before it ceased to exist, as he would not hold a subordinate office. He was a strange personality, and his friends thought of him as "a moral phenomenon, as a unique specimen of human character, as a study, as a curiosity, as an absolute undefinable." (1) His interest in the Infant School Movement was indeed very deep; but notwithstanding his zeal he thought that "as being is before knowing and doing education can never repair the defects of birth" (2).

The Rev. Dr. Mayo, Headmaster of Bridgenorth Grammar School, also visited Pestalozzi, in July, 1819. He took with him fifteen English students who formed the British section of Pestalozzi's institution, and were entrusted to the care of Greaves, Mayo, and Rev.Brown of Worcester College. Dr.Mayo was not much impressed by Pestalozzi's teaching in the beginning, but later on "he saw the real value of his ideas, and hoped that by transplanting the system to his own country he might bestow upon it an invaluable boon. With this conviction.....he returned to England determined to give a practical exhibition of the system of Pestalozzi, modified, however, and adapted to the English mind and character" (3).

When Dr.Mayo returned to England in 1822, he started a school at Epsom for the children of the higher classes. He was assisted in the management of the school by his sister, Miss Elizabeth Mayo. The school proved a great success, and as the numbers grew it had to be removed to a larger building at the neighbouring village of Cheam, where it continued until Dr.Mayo's death in 1846.

Dr.Mayo's attempts to diffuse Pestalozzi's principles were confined solely to his practical application

(1) Quoted, Salmon and Hindshaw, opcit, p.79.
(2) Quoted, Ibid, p.79.
(3) Elizabeth Mayo, Pestalozzi and his Principles, 3rd ed, p.105.

of them in his own school. He did not carry on any propaganda work as Wilderspin did to promote infant schools all over Great Britain. The only lecture which Dr.Mayo delivered on the principles of Pestalozzi was at the Royal Institution in 1826. Nevertheless, his contribution to the cause of infant education was great. To extend the principles of Pestalozzi to the education of the poor, he founded, in February 1836, the Home and Colonial Infant School Society, which trained infant school teachers in Pestalozzi's principles. He was assisted in this by Miss Mayo, John Stucky Reynolds, and some other public spirited men. The first annual report of the Society was read before a public meeting which was held in Hanover Square on February 23, 1837. The report expressed its appreciation of the attempts of the British and Foreign School Society, and of the National Society, to spread education among the masses, and then expressed its regret that "amidst this onward movement .... Infant Schools have been so lamentably neglected" (1). It accordingly proposed "to begin at the beginning, to purify, as it were, the flowing stream at its source - to lay hold of the rising generation, and to provide them with an education essentially moral and religious, upto the period of their entering into other schools or commencing a life of daily labour in our manufactories and fields" (2).

The labours of Wilderspin and of the Home and Colonial Infant School Society made infant schools common all over England. In addition to schools exclusively for infants, infants departments were also started in most schools for older children, where the younger children were in sufficient numbers to form a class. But many of the early infant schools were full of defects, and their work was of little or no value; the teachers were mostly

(1) Quoted, Salmon & Hindshaw, opcit, p.83.
(2) Quoted, Salmon and Hindshaw, opcit, p.83.

incompetent, and knew practically nothing about the aims or the methods of training the younger children. Some of these early schools, except for their better discipline, were no more than mere Sunday schools. They laid too great a stress on religious teaching, and every lesson that was taught had a direct or indirect reference to the Bible. The promoters of these "Scriptural Infant Schools" forgot that there were other aims also in training the young, in addition to the religious aim. They failed to distinguish between religious teaching and moral teaching. To them the two were synonymous, and religious or moral teaching meant to them mere repetition of passages from the Bible.

Those infant schools that were free from the defects of a purely religious curriculum had another great defect - that of emphasising book learning. In these schools "there was too often a disposition to stimulate the infant prodigy" (1). James R.Wood who made a close study of educational conditions in the manufacturing towns of Lancashire, when asked by the Select Committee of 1838, what the defect of the then existing system of infant schools was, said: "One of the defects of the present system is the assembling so many children together and the constant appeal that is made to their emulation; it brings them out into publicity, and there are certain children who are brought prominently forward; of course the natural disposition of the teacher would induce him to put those who are apt and quick before the others, and these frequent exhibitions to strangers visiting the schools have all an injurious effect upon the minds of other children, discouraging and disheartening them, and the great mass are generally of the latter kind" (2). Wood, however, thought that infant schools were the best means of educating the younger children of the

(1) Salmon & Hindshaw, opcit, p.87.
(2) Report, p.118.

poorer classes, and that the schools should be improved, but not abolished (1).

IV

The creation of the Committee of Council on Education in 1839 is an epoch making event in the history of English education in general, and more particularly in the history of the English infant schools. The Minutes of 1839-40, the first issued by the Committee of Council, show that Government fully appreciated the need of establishing separate infant departments, or even separate infant schools, wherever possible. In 1845 the Committee of Council instructed Joseph Fletcher, H.M.Inspector of Schools, to examine the "British" schools, and to submit a report on their condition. Fletcher devoted the greater part of his report to a description of infant schools and justified his doing so by his witty remark that "although infant schools come last in the history of schooling they come first in the history of the scholar" (2). He pointed out that the mothers in working class families who were themselves often employed in some branch of industry, and had at the same time to perform all household work themselves, found their children "very much 'in the way' during a great part of the day." This was, as Fletcher pointed out, the chief cause of the rapid development of infant schools in England. "No evidence of the growth of enlarged views on the subject of education", he wrote, "is more gratifying or conclusive than the extent to which this want of the parents has, in recent years, been perceived and supplied; no germ of moral strength in our uneasy social state is more hopeful than the promptness with which the parents have availed themselves of the advantages of infant education thrown open to them" (3). He then went on to point out that the infant

(1)Report, p.119.
(2) Minutes of the Committee of Council, (1845).
(3) Minutes of the Committee of Council on Education, 1845.

schools that were founded during later years under trained teachers were in a better condition than those founded earlier, where the teachers used older methods of teaching. "The theory of all the modern infant schools which I have visited," said he, "appears to contemplate an education at once physical, intellectual, industrial, moral and religious" (1). The report of Mr.Fletcher shows how great was the demand for infant schools in the middle of the last century, and how earnest the State was in its attempts to satisfy such demands.

The Committee of Council encouraged the training of mistresses for infant schools by its offer of special grants to the training colleges for this purpose. In a Minute of 1854 the Committee resolved: "that no training school be admitted to the benefit of this Minute until Her Majesty's Inspector shall have reported and their Lordships shall be satisfied, that it provides a separate course of training for females intended to take charge of infant schools" (2).

The appointment of the New Castle Commission, in 1858, "to inquire into the state of public education in England," "and to consider and report what measures, if any, are required for the extension of sound and cheap elementary education to all classes of the people," marks the beginning of a new stage in the history of infant education in England. It shows the ever increasing enthusiasm of the State in providing proper means of education for the young, by increasing the number of infant schools, as well as by improving the quality of the training given in them. The Commissioners divided the then existing infant schools into two classes, namely, the private or Dame schools, and the public infant schools. The dame schools were, more or less, nurseries in which "the nurse collected the children of many

(1) Minutes of the Committee of Council, (1845).
(2) Minutes of the Committee of Council (1854-55).

families into her own house instead of attending upon the children of some one family." About the public infant schools the Commissioners thought that they were well-organised, and that in the best of them much was done and taught. They expressed the view "that infant schools form a most important part of the machinery required for a national system of education, inasmuch as they lay the foundation, in some degree, of knowledge, and in a still greater degree of habits which are essential to education, while without them, a child may contract habits and sustain injuries which the best school will afterwards be unable to correct and remedy" (1). By 1870 the infant schools did form part of the "core of English primary education," though upto that date their development was rather "uneven and irregular" (2). The Education Act of 1870 empowered School Boards to frame byelaws making attendance at school compulsory for children between the ages of five and thirteen. The London School Board appointed, in 1871, a Committee under the chairmanship of Prof.T.H.Huxley to draw up a scheme of school organisation to suit the new conditions. The Committee divided public elementary schools into three classes, namely, infant schools for children below the age of seven, junior schools for children between the ages seven and ten, and senior schools for older children. They emphasised the importance of schools of the first category, since in a properly managed infant school children were guarded from corrupt influences and bad habits, and at the same time were given a certain amount of useful instruction which enabled them to make a quicker progress in their later school period. They thought that infant schools should be mixed, and that as a rule women only should be appointed as teachers in them. The London School Board, and later on the other School Boards as well, adopted

(1) Report of the Commissioners appointed to inquire into the State of Popular Education in England, 1861, Vol.I, p.31.
(2) Hadow Report, Infant and Nursery Schools (1933), P.19

the recommendations of Huxley's Committee, and during the seventies infant departments and schools became an integral part of the system of English Elementary Schools both in town and country. The result was that the dame schools, which hitherto existed in large numbers, soon disappeared.

In the meanwhile the influence of Froebel and his ideas began to be felt in England. Frederick Froebel (1782-1852) established his famous school at Blackenburg in Thuringia in 1837. His ideas were mostly imbibed from Rousseau and Pestalozzi, and he was the first educationist to devise a plan of infant education based on the nature of the child. His Kindergarten System which trained the senses of the children through organised play was to be a supplement to the home-training of the child. It was not, however, to be a substitute for home-training.

Froebel's apparatus for children's play was exhibited, and a lecture on his system was delivered by Frau Ronge of Hamburg at an educational exhibition held in London in 1854 under the auspices of the Royal Society of Arts. From this date onwards there began in England the propaganda work for the spread of the Kindergarten System in all the infant schools; but for nearly twenty years the spread of the system was mainly in private schools for the wealthy. After 1871, however, Kindergarten methods were introduced in most of the infant schools in England. "Thus in 1871 the first London School Board included in its regulations for infant schools a provision that instruction should be given in object lessons of a simple character, with some such exercise of the hands and eyes as is given in the 'Kindergarten' System" (1). The other school boards followed suit; but during the seventies and eighties the methods of Froebel were applied in the English infant schools in a mechanical way, without any understanding of

(1) Hadow Report, Infant and Nursery Schools, 1933, p.25.

the true spirit of Froebel's teaching. The instructions of the Education Department to H.M.Inspectors in 1832 say that "it is of little service to adopt the gifts and mechanical occupations of Kindergarten, unless they are so used as to furnish real training in accuracy of hand and eye, in intelligence and in obedience" (1). It was not until the beginning of the present century that Froebel's ideas were well understood, and some private enthusiasts started "free Kindergartens" in Scotland and in England.

The appreciation of Froebel's ideas and methods was indeed of very slow growth in England. In fact, as shown in the preceding chapter, all foreign influences on English education were long delayed. But notwithstanding this fact the progress of English education, especially the progress of the English infant school, during the latter half of the nineteenth century has been remarkable. It is true that while in England during the years when industrial evils were rife children were neglected altogether, and given no education, in Germany, France, Switzerland and Holland State supervision, if not State control, of education was established much earlier. But it is also true that the very extremes of suffering which the English poor had to undergo during the last decades of the eighteenth and the beginning of the nineteenth century brought to them later the great blessings of a high standard of life, and of a National System of education far superior to that of any of the countries on the Continent or even in America. During the seventies in England the three-year-old could attend school wherever there was sufficient accommodation. Again, children who attained the age of five were in most areas compelled to attend school. In America, on the other hand, the obligatory age for attendance at school was six or

(1) Hadow Report, Infant and Nursery Schools, 1933, p.26.

sometimes even seven. In Germany the infant school system did not form part of the system of public education, and compulsory attendance began not from the age of five, but much later (1).

The opening of the present century brought further improvements in the education of children in infant-schools. The environmental conditions necessary to the healthy physical and mental growth of children below the age of five were better understood at thé beginning of this century than before, and the educational problem of the young began to be discussed by educationists in co-operation with medical men. The medical inspection of school children was introduced gradually, and special care was taken in examining the children in infant schools. The system of infant training tended to become so very scientific, during the past few decades, as to lead to the present attitude: "it is on the open air activities and interests of the children that we would base the training and teaching of the infant school, because it is there that the child's interests first emerge" (2).

We may now briefly describe the last two and most recent foreign influences on infant education in England, namely, those of John Dewey and Dr.Montessori. Dewey, who was appointed professor of philosophy and pedagogy in the university of Chicago in 1894, published, in 1899, his well known educational work, 'The School and Society' which was very widely read in England. He was a careful student of child behaviour, and being impressed by the child's direct outlook on life stressed the importance of training young children in habits of direct observation, and of making them learn from experience. Handwork, with primitive materials and under primitive conditions, formed, according to Dewey, a very important

(1) Hadow Report, Infant and Nursery Schools, 1933, p.22.
(2) Ibid, p.124.

part of the curriculum. In short, Dewey has established for modern education the great principle of 'learning by doing'. This was the main trend of Dr.Findlay's publication, "The Child and the Curriculum (1906)", a collection of Dewey's essays. The Project Method, which emphasises the principle of 'learning by doing', and which has been widely adopted in America, is founded on the teaching of Dewey. His works have been very widely read in England also, and his teaching has had a very great influence in the evolution of modern ideas in infant education in that country (1).

Dr.Maria Montessori's influence began to be felt in England from about 1910. Her theories, like those of Dewey, are based largely on biological principles, but her knowledge of medical science has made her emphasise the training of children in a specially prepared environment, rather than through learning from unorganised experience. Her didactic apparatus (the wooden insets, etc.) for sense training, and for developing elementary notions of number and form, was largely modelled on the apparatus devised by Edouard Seguin for defective children. In fact, Dr.Montessori first began with the training of mentally defective children with Seguin's apparatus, and her success with these children led her to try similar methods on normal children with the expectation of getting better results. Montessori insists that the apparatus should be used by the children themselves, and that the teacher should do nothing more than merely guide when necessary. There is no doubt that the Montessori Method could be used with advantage in training the senses of children, but its one very obvious defect is that it does not make suitable provision for the free development of the child's imagination. Hence in England the method has not been adopted in its entirety. Nevertheless the influence of

(1) Hadow Report, Infant and Nursery Schools, 1933, P.40.

Montessori's ideas on the infant school curriculum in England has been considerable. It has created in the English infant school the tendency to engage children in individual occupations with the minimum of intervention on the part of the teacher; it has emphasised the provision in the school, of small basins, brooms, low cupboards, etc., which could all be used by the children with independence and initiative; it has introduced the didactic apparatus, mention of which has been made above; and lastly it has created a scientific attitude towards children's physical and mental development (1).

V

We have traced the growth of the English Infant School from the beginning of the nineteenth century to the present day. To review our account, its origins are to be traced back once again to the years of stress and national demoralisation which accompanied the Industrial Revolution. The philanthropists who realised the urgent need of rescuing the poor from immorality and crime by a system of Charity and Sunday schools, considered the rescuing of the very young ones from disease and accident still more urgent, and hence widened the scope of their activities to found infant schools. During the first three or four decades of their history the infant schools lacked State support altogether; yet the movement became national, and the labours of Wilderspin and Stow, as we have noted, resulted in the establishment of infant schools all over Great Britain. The passing of the Reform Bill of 1832 marks a change in the attitude of the Government to popular education. It was immediately followed by the Factory Act and the Education Grant of 1833. It is gratifying to note that infant schools were amongst the first of the schools to participate in the grant of £20,000 voted by Parliament for popular education

(1) Hadow Report, Infant and Nursery Schools, 1933, pp.40-41.

in England. With the appointment of the Committee of Council on Education in 1839 the State's interest in infant education increased still further. Add to this the introduction of foreign ideas like those of Pestalozzi, Froebel, Dewey and Montessori, and the net result is the unique position which the infant school occupies to-day. The influence of foreign educationists on infant education in England during the past eighty years or more has been considerable, but the English Infant School, like any other English institution - political social or educational - developed along its own lines, and attained a unique pattern. No foreign system of infant education was transplanted in England in its entirety; but the English pattern has been modified in its development by the incorporation within it of such elements borrowed from foreign institutions as suited the peculiar characteristics of the English race.

The establishment of infant schools, of a pattern so rare and rich, all over England, naturally proved a great blessing to the poorer classes. Infant mortality, quite common in the early nineteenth century, was considerably reduced; there was a marked improvement in the physical and moral condition of the young children; and above all the instruction which the children in infant schools received enabled them to make better progress in their later school years. The vast improvement in the social and moral condition of the poorer classes during the closing years of the Victorian Era was due to the wide extension of facilities for elementary education made possible by the Education Act of 1870; but it was due much more to the spread of infant schools which trained young children in personal and social behaviour, thus paving the way for their becoming useful members of the community in their later lives. But this was not all. Even the parents were

influenced for good by the improved behaviour of children, and the efforts for self-instruction which the workers made during the first half of the nineteenth century were due, at least partly, to a sense of shame which was created in the minds of the parents, when they saw their children acquire in the infant schools habits of behaviour and morals far superior to their own. Thus, it was not in vain that the philanthropists of the early nineteenth century tried to cure the social evils created by the Industrial Revolution by establishing schools for the very young. The plans of Owen, Wilderspin, and Stow, of reforming the poor by beginning with the child, proved immensely successful, and much of the credit for the progress of infant education in England goes to them; for had they not begun their work early in the last century, the English infant school could not perhaps have come to be the unique institution that it is to-day.

CHAPTER V

ELEMENTARY EDUCATION IN ENGLAND - A CONSEQUENCE OF THE INDUSTRIAL REVOLUTION.

In the second chapter it was noted that the educational provision for the poor in England during the first half of the eighteenth century was very meagre, but that they clamoured for no extension because they were mostly country dwellers engaged in agriculture, and were in a prosperous condition. It was also noted that the prosperity of the people was accompanied by a religious stagnation which continued almost to the end of the century, when attempts were made by the Methodists and the Evangelicals to revive religion. On the Continent and in Scotland, however, conditions were quite different. While in England the Reformation was mainly political in its origin, and did not produce any immediate change in the lives of the people, in the Protestant countries of the Continent and in Scotland it resulted in very important changes, chief of them being the provision by the State of increased facilities for elementary instruction.

In Scotland a system of parochial instruction was established as early as 1696 by an Act of the Scottish Parliament (1). The Scottish people during the early nineteenth century, when England was just drifting towards a system of universal education, were more industrious and enterprising than their English neighbours. Their healthy domestic life, their earnest patriotism, their reverence for public institutions and religious observances - all these were the results of their system of national education which,

(1) The origin of the Scottish system of Parochial Instruction could in fact be traced to a still earlier date. "During the Great Civil War, an Act was passed (1646,c.46) which, though rescinded at the Restoration, was adopted almost verbatim in the subsequent statute of 1696, the foundation of our present system" - Alexander Dunlop, Parochial Law (1841) M.DCCC.XL1, P.489.

despite its many shortcomings and defects, was very well suited to their special characteristics (1).

In Prussia state intervention in educational matters began during the early decades of the eighteenth century. In 1736 the State placed the responsibility for the erection and repair of school buildings on the Communes. Teachers were clearly informed as to what their duties and privileges were; a portion of the Church revenues was set apart for payment of their salaries; and the contingent expenses of the school were met from the public funds. Many improvements were effected between the years 1763 and 1765, chief of them being the appointment of a body of inspectors to inspect the schools and arrangements for transmission of their reports to the Government (2).

But Prussia's most remarkable educational progress was during the early nineteenth century, following the defeat of the Prussians by Napoleon at Jena in 1806 and their complete humiliation by their acceptance of the terms of the Treaty of Tilsit in 1807. The downfall of Prussia, the strongest of the German States, seemed to forebode the total extinction of Germany by a process of absorption in the rapidly extending French empire. But the national renaissance which began in Prussia immediately after her humiliation restored her former greatness and raised the prestige of Germany as a whole. Prussia's leading men realising the dangerous plight of their country applied themselves whole-heartedly to the difficult task of reorganising the Government, the army and the system of education. This national revival began with the educational revival for which Johann Gottlieb Fitche and Friederich Wilhelm Von Humboldt were responsible. Fitche was originally a cosmopolitan in his outlook and he hoped to see the various European nationalities unite into a single state.

(1) Kay Shuttleworth, Four Periods, P.207.
(2) Ibid, p.p.207, 208.

But the Prussian defeat at Jena made him a convert to Pan-Germanism, and, in the "Addresses to the German People" he delivered in Berlin, he stressed the urgent need of an education for his countrymen that would prepare them for real life by forming their characters. The work of organising a new scheme of education was entrusted to Von Humboldt who, in 1808, was appointed director of Public Instruction. During the eighteen months he held this office Von Humboldt effected vast improvements in every grade of education. The extension of educational facilities thus revived by the state in Prussia was continued steadily until, in 1838, Prussia, with a population of 14,000,000, had about 22,910 public schools with a strength of about 2,171,745. The teachers numbered 27,575. About 117,982 children were educated at Middle and Burgher Schools. The proportion of children at school to the total population was as 1 : 6, and it was the highest among all the Protestant states of Europe.

A similar extension of educational facilities went on even in the other German States. In Wirtemburg, Baden, Bavaria and in a majority of the States which were known as the Confederation of the Rhine, the common people were provided with a fairly sufficient means of education from the early years of the eighteenth century, and during the first decades of the nineteenth century their educational provision was very greatly increased. In Wirtenburg, Baden, Hesse etc., every parish, and in some cases every hamlet, had a public school. In Bavaria, in 1828, the number of public or national schools numbered 5394, and the normal schools 7. The number of teachers was 7114, the number of inspectors 286, and the number of pupils 498,000. The population of Bavaria in 1828 was about four million and not less than one-eighth of the entire population was at school(1). The proportion was greater than in Scotland where only one-tenth of the entire population attended school.

In England, however, the Reformation produced no changes in the moral condition of the working classes. It

(1) Kay-Shuttleworth, op cit P.213

was not until the middle of the nineteenth century that any serious attempts were made by the State to introduce a system of elementary education, and the circumstances that pressed for such intervention were the intense suffering, poverty and demoralisation of the poor which accompanied the Industrial Revolution, and reached their limit during the years 1780 and 1815. Throughout the latter half of the eighteenth century and the beginning of the nineteenth the State, as noted already, followed an extreme laissez faire policy, and all attempts to educate the poor during this period were made mainly by philanthropic and religious bodies. Such attempts bore early fruit. The Sunday Schools created a passion among the poorer classes for reading, which led to the establishment of monitorial schools. By the year 1833 the demand for instruction became so great that the State was compelled to aid voluntary efforts for the education of the poor by issuing grants. But it was not merely a matter of insufficiency of voluntary efforts that led to State intervention. Though by 1840 the transitional period of the Industrial Revolution may be considered to have terminated, some of the industrial evils still existed, and the State now realised - as a consequence of the Reform Bill of 1832 which brought in a reformed House of Commons - that it was its duty to put an end to them by regulating the conditions of work, and by taking a more active part in educational matters.

Factory legislation upto the year 1833 had only touched the cotton trade, and right up to the early forties the evils in other branches of industry continued unchecked. In 1840, largely owing to the persuasion of Lord Ashley, the Whig Government appointed a Committee to inquire into the operation of the Factory Act, and a Commission to inquire into the condition of children engaged in mines and other occupations. The Committee's report, published in 1841,

revealed the fact that the sufferings of the child workers in the lace industry were far worse than those of children in the cotton factories prior to 1832; but its findings were followed by no immediate legislation owing to the fall of the Whig Government.

The Report of the Commissioners on mines was published in 1842, and it exposed all the evils to which the child workers in mines were subjected. Children were employed from the very early years of their age and for very long hours. Some of the children employed were mere infants, and the employment of children of six and seven years of age was quite common. The children started work along with the adults at 4 o'clock in the morning, and they remained in the pit for about eleven or twelve hours. Most of them were left in charge of the doors which regulated ventilation in the mines. They were to sit in the dark, each of them in solitary confinement, throughout their long hours of duty. Some of them were engaged in pushing wagons of coal along narrow passages, and the cruel employers considered their small size an additional advantage which specially suited them for this kind of work. In some mines the children were employed in looking after the machinery for raising and lowering the operatives, and the unrealiability of the machinery often resulted in very serious accidents. Such hard labour, coupled with the extreme cruelty shown them, made the plight of the child-workers in mines far more miserable than that of their predecessors in the cotton factories. A boy aged seven years and six months who had worked in a mine for about three years said: "When I first went down I could'nt keep my eyes open; I don't fall asleep now; I smokes my pipe; smokes half a quartern a week" (1). Even women and girls were subjected to these cruel conditions of work.

(1) Quoted by F.Smith, op cit, P.189.

Ashley's attempts to better the conditions of child-labour in the mines did not meet with any great success, for his Bill to exclude all women and girls, all boys under thirteen and all parish apprentices from work in the mines was unfavourably amended by the Lords. The first Mines Act (5 and 6 Victoria. C.99) which was passed in 1842 prohibited the employment of women and girls under-ground, but the minimum age for employing boys in mines was fixed at ten, instead of at thirteen, and boys of fifteen could still be appointed as enginemen. No reduction was made in the hours of work, so that children of ten were still exposed to the various evils which the Commissioners brought to light. It was not till 1872 that the minimum age for boys was increased to twelve, and as late as 1900 to thirteen (1).

It should be clear from this account of some of the industrial evils that existed in England during the early 'forties that the education of the child workers was still neglected (though not to the same extent as during the closing years of the eighteenth century), while in most of the Protestant Countries of Europe State systems of education were established, and the beneficial effects of the Reformation were to be seen in general operation. When as late as 1839 the Government in England began to take a more direct part in educational matters, it was because the industrial evils described above emphasised the demand for a universal education. But, although state intervention in education was so long delayed in England, the progress of English education during the last decades of the nineteenth century was remarkable. And if the educational system of England to-day is one without a parallel, and the means of popular education in England are far superior to those of any European country, it is because the delayed

(1) F.Smith, op cit, p.190.

intervention of the State led religious and private bodies to establish educational institutions for the poor, the continuance of which even after State intervention led to the preservation in England of a greater variety of schools than in those countries of the Continent where State systems were established earlier.

II

We may now proceed to a brief consideration of the circumstances that led to the creation of the Committee of Council in 1839, and the progress which England made towards a State system of education during the years that followed its creation. The Reform Bill of 1832 may be considered the starting point of England's slow but steady advance towards a universal education. This was the first of a series of Reform Acts - including those of 1867,1884 and 1918 - which, by gradual extension of the franchise, made England a de facto democracy. Parallel to this series of Reform Acts we have the Education grant of 1833, the appointment of the Committee of Council in 1839, and the Education Acts of 1870, 1902 and 1918, the net result of all of which has been to make England "an instructed democracy" (1). But the years intervening between the adoption of the first two measures, namely, the grant of 1833 and the appointment of the Committee of Council in 1839, were years of much storm and struggle between the advocates and opponents of State intervention in education. On July 30, 1833, J.A.Roebuck, the member for Bath, moved a resolution in the House of Commons, expressing the educational opinion of the Benthamite party of which he was a member. The resolution ran thus: "That this House, deeply impressed with the necessity of providing for a due education of the people at large, and believing that to this end the aid and care of

(1) Adamson, J.W: English Education (1789-1902), P.32.

the State are absolutely needed, will early during the next session of Parliament proceed to devise a means for the universal and national education of the whole people" (1). In the long speech which he delivered before moving his resolution, Roebuck drew the attention of the House to the examples of France, Prussia and America, where the provision for the education of the masses was far superior to the provision in England. He maintained that the duty of the State was not merely to check crime: it had a still greater duty to perform, namely, to promote good; and the best means of performing this task was to educate the masses. According to Roebuck's scheme there was to be in every parish at least one infant school for children below six, one school of industry for children between the ages of six and twelve, and an evening and a Sunday school for children above fourteen. It was so elaborate that it was naturally opposed both by the Whigs and the Tories, and Roebuck had to withdraw his motion. But his agitation was not altogether fruitless; it was followed a month later by the Parliamentary grant of £20,000 "for the erection of school houses for the education of the poorer classes in Great Britain."

It is rather surprising that Lord Brougham, who championed the cause of popular education so vehemently, was one of the opponents of Roebuck's resolution of 1833. In 1834 Brougham pointed out to the Government that the voluntary system had proved itself to be quite successful, and that during the period 1818 to 1828 the number of schools had doubled. He therefore argued that compulsory education was unnecessary, and that the parliamentary grants for erection of school buildings were quite sufficient to meet the popular demand for education. Brougham, however, insisted on the training of teachers, and for the establishment of a normal seminary he asked

(1) Hansard, 3rd series, XX.

Parliament for an extra grant of £10,000 (1).

In the same year (1834) Roebuck again moved a resolution to the effect that a Select Committee "be appointed to inquire into the means of establishing a system of national education" (2). Though the Government appointed the Committee, it was called the Committee to inquire into the state of the education of the people in England and Wales. The Committee of 1834 collected much evidence, but it was not of much use, as, like the Committee of 1816 (on the education of the lower orders in the Metropolis), it did not make any report to the House.

In 1838 the Select Committee on the education of the poorer classes, under the Chairmanship of Slaney, submitted its report which stated that "throughout this vast metropolis, the means of useful daily instruction are lamentably deficient". Yet the Committee thought that the difficulties in the way of providing a satisfactory system of education for the poor were so great and many, that it would recommend the mere continuance of, and an increase in the parliamentary grants for education through the National Society and the British and Foreign School Society.

Such was the hesitancy which characterised the educational policy of the Government between the years 1833 and 1839. Yet, the next great step towards a State system of education, namely, the establishment of the Committee of Council on Education, was taken during the latter year, and to understand this sudden change of Govermental policy we shall have to consider at length the rapid changes in the attitude of the poor towards education that were taking place during the early decades of the nineteenth century. Concerning the moral and intellectual condition of the English working classes about the year 1760 Engels remarks

(1) F.Smith, op cit, P.148.
(2) Ibid, P.148.

that "they could rarely read and could far more rarely write; went regularly to Church, never talked politics, never conspired, never thought, delighted in physical exercises, listened with inherited reverence when the Bible was read, and were, in their unquestioning humility, exceedingly well-disposed toward the 'superior classes.' But intellectually, they were dead.....They were comfortable in their silent vegetation" (1). But such a state of affairs could not long continue. All the industrial changes of the latter half of the eighteenth century resulted, as we have seen, in the enrichment of the employers and in the economic slavery and demoralisation of the working classes. The State during this period and even during the early decades of the nineteenth century followed an extreme laissez faire policy and did little to save the poor from moral degradation; but there were many philanthropic and religious bodies that attempted to educate them by opening Charity and Sunday Schools where reading and writing were taught free of cost or sometimes on payment of a very small fee. The Sunday Schools, especially, educated large numbers of poorer class children and adults, and created in them a thirst for reading, which was at the bottom of all their later efforts for self-education. Engels thus found a striking contrast between the intellectual state of the poor at the beginning and at the end of the period of the Industrial Revolution. "I have often heard workingmen, whose fustian jackets scarcely held together," he wrote, "speak upon geological, astronomical, and other subjects, with more knowledge than most 'cultivated' bourgeois in Germany possess. And in how great a measure the English proletariat has succeeded in attaining independent education is shown especially by the fact that the epoch-making products of modern philosophical,

(1) Engels, Friederich : Condition of the Working Classes in England in 1844, London, 1892, P.3.

political, and poetical literature are read by working men almost exclusively" (1).

There is much additional evidence of the vast improvement in the intellectual state of the working classes at the close of the transitional period of the Industrial Revolution. The literature of biography furnishes us with innumerable instances of working men whose love of knowledge was so great that they resorted to self-instruction, which alone satisfied their special needs. Charity Schools, Adult Schools and Mechanics Institutes no doubt offered them instruction; but these institutions, which were started by religious and philanthropic bodies, were governed by class motives, and the workers were not satisfied with the quality of the instruction given in them. We may now consider but two instances of self-educated working men who later became the most prominent leaders of the British Working Class movement. The first of these was Francis Place who, upto the twelfth year of his age, attended only dame and private adventure schools. At the age of fourteen he became apprentice to a breeches maker. He married while he was quite young and suffered all the hardships that arose out of low wages and unemployment. Yet, at the age of twenty-two when he was unemployed and was almost in a state of starvation he read voraciously books on history, voyages, politics and philosophy. His love for mathematics made him learn, all by himself, decimals, equations, the square, the cube and biquadrate roots, logarithms and algebra. He mastered six books of Euclid, and the difficulties in his way were so many and great that few could get over them. "I knew no one," said he, "of whom I could ask a question or receive any kind of instruction, and the subject was therefore at times very painful" (2).

(1) Engels, op cit, P.239.
(2) Graham Wallas, The Life of Francis Place, 1898, P.19.

The second was Thomas Cooper, the leader of the Chartists. By profession he was a shoe-maker. His attempts at self-teaching, his success in this direction and the hardships he had to encounter in the course of his endeavours were all similar to those of Place. "Historical reading, or the grammar of some language, or translation," he wrote, "was my first employment on week-day mornings, whether I rose at three or four, until seven o'clock, when I sat down to the stall. A book or a periodical in my hand while I breakfasted, gave me another half-hour's reading.... I was seldom later in bed than three or four in the morning; and when, in the coldness of winter, we could not afford to have a fire till my mother rose, I used to put a lamp on a stool, which I placed on a little round table, and, standing before it, wrapped up in my mother's old red cloak, I read on till seven.....I said to myself, daily - 'I am educating my ear and my mind, and I shall be ripe for my true work in time.'" (1).

The examples of self-educated working men considered above, of Francis Place and Thomas Cooper, are of leaders. But there is no lack of evidence to show that even collectively the working classes were educationally minded. As Fay observes, it was in "the Trade clubs and the Trade Unions, in the Committee Room of the Co-operative Store and the Lodge of the Friendly Society, in the Chartist Churches, in the Halls of Social Science and at the feet of social missionaries" that "the people of England struggled from darkness into light. Their schoolroom was a life lived in common, the medium of instruction was the informal clash of mind and mind, and the lessons of the unwritten syllabus were self-discipline, business fellowship and the pursuit of a clearly-planned objective" (2). When the Government made its first proposals for a grant of £30,000 for educational purposes there was great opposition

(1) Life of Thomas Cooper, Written by Himself. 4th Edition MDCCCLXXIII(1873) PP.59-64.
(2) C.R.Fay: Life and Labour in the Nineteenth Century, Cambridge, 1933, P.263.

from the side of the Established Church. A section of the Church party in Manchester arranged a meeting to oppose the proposals of Government. A number of workmen who were greatly interested in the cause of national education thought that their views should be represented at the meeting. Each of them went to one of the shops where the tickets for the meeting could be had, and got nearly half the tickets. These were "quietly distributed amongst safe men in certain large workshops with instructions to attend in their 'go-to-meeting' clothes. They did so, and to the astonishment of the Chairman and the speakers, decorously and quietly, without speech-making or amendment-moving, negatived all the resolutions except the vote of thanks to the Chairman, and then dispersed and went to their homes as quietly as if nothing particular had happened." (1).

The incident narrated above shows the great anxiety of the workers as a class, during the 'thirties of the last century, to possess suitable means of education. Such an anxiety found expression in the Chartist movement which was the first sustained effort of the English working classes to raise their political and economic status, and thereby improve their intellectual condition. Their disappointment in the Mechanics' Institutes and their distrust of the Society for the Diffusion of Useful Knowledge, both of which were organised by the upper classes, led the Knowledge Chartists to believe that it was political franchise alone that would secure for the workers better educational facilities. The growing distrust of the masses in the governing classes and their desire to exercise political power were, in part, also due to the rapid influx of French Revoluntionary ideas, and though the Government through a policy of repression tried to prevent their spread,

(1) Ludlow and Jones: The Progress of the Working Classes in "Questions for a Reformed Parliament", London, Macmillan, 1867, P.284.

the wisdom of English Statesmen made them yield eventually to the demands of the people. The appointment of the Committee of Council on Education in 1839 was no doubt a very reluctant step taken by the Government after a prolonged agitation, but it is nevertheless a proof of the State's realisation that parliamentary reform and the extension of franchise to the working classes were inevitable, and that education was an indispensable need if the workers were to make a proper exercise of their political rights.

We may turn for a moment, for purposes of comparison, to consider educational progress in England's sister isle. The early decades of the nineteenth century were a period of agitation for State provision of educational facilities in Ireland also. The pioneer of educational reform was Sir Thomas Wyse whose efforts to secure State support for education in Ireland could be fittingly compared to those of the great English Statesman, Lord Brougham. A brief reference to Wyse's work will be in order here, for Wyse was interested in the promotion of English education also.

The real sufferers from want of adequate educational provision in Ireland were the middle classes as "the lower classes proportionately to their position are better educated than the middle and upper." (1) Wyse and Dr.James Doyle, the Roman Catholic Bishop of Kildare and Leighlin, who were great friends, and strove for a common cause, were unanimous on this point, and they accordingly aimed at the establishment of educational institutions to suit every grade of society. "We should have, for the higher departments of art and science," wrote Wyse in a letter to Dr.Doyle, "a well arranged system of University Education. Subordinate to this for the great

(1) W.M. Wyse: NOTES ON Education Reform. P.16

body of the middle classes, the Provincial Colleges to which you refer. Then would come Secondary, Normal or Elementary schools in the parishes for the education of the people" (1).

Wyse's first efforts were directed to the provision of adequate facilities for primary education; for, according to him, the needs of the poorer classes that formed the bulk of the population were to be provided for first. He conducted a lengthy inquiry as to the existing provision for primary instruction throughout Ireland, and submitted on December 9, 1830 his detailed plan for Irish National Education to the Irish Chief Secretary (Stanley). Stanley did nothing in this matter for almost a year, and when Wyse had decided to introduce a bill closely following the lines of his own proposals, Stanley, on September 9, 1831, announced in the Commons that as the various denominational attempts to provide an educational system had ended in failure the Government decided to take the matter into its own hands. The Government's plan outlined in Stanley's Bill, was based entirely on the proposals of Wyse, and though Wyse's name did not find a place in the Statute book the National Board of Education, which was the outcome of Stanley's Bill, was undoubtedly the product of Wyse's labours. It was solely to Wyse's credit that Ireland possessed a governmental body to supervise educational matters nearly a decade before England could have one.

As pointed out above, Wyse's educational work was not confined to Ireland only. He was in full sympathy with the aspirations of the English working classes to secure for themselves adequate educational facilities, and he voiced their opinion when he said: "It is impossible, in this great industrial community, with mind at work in all

(1) Wyse, W.M: Notes on Education Reform, P.17.

its modifications around us, that sooner or later every class should not require supply for its own especial necessities in education; and, having felt the desire, should not seek and soon find the best means which civilisation can furnish for its gratification." (1). Wyse took part in several debates on English education in the House of Commons, and on the 14th of June, 1838, he moved an address to the Queen praying for the appointment of a Board of Commissioners of Education in England. In the course of his speech Wyse remarked that England was one of the most backward of the civilised states of the world so far as the education of the poor was concerned. He pointed out that while in the States of New York and Massachusetts the proportion of educated persons to the total population was as 1 : 3 and 1 : 4 respectively, and in the cantons of Switzerland generally as 1 : 7; in England it was as 1 : 12 (2). In spite of his convincing arguments Wyse lost his motion by a narrow margin of four votes. But as he had pointed out earlier, once the people "felt the desire" for increased educational facilities, it was bound to be gratified, and indeed his prophesy came to be true when, on April 10, 1839, Lord Melbourne's Government established by Order in Council, a Committee of the Privy Council, consisting of the Lord Privy Seal, the Home Secretary and the Chancellor of the Exchequer, "to superintend the application of any sums voted by Parliament for the purpose of promoting Public Education."

III

The first secretary of the Committee of Council was Dr.James Philips Kay (1804-77), better known as Sir James Kay-Shuttleworth, the name he adopted after his

(1) Central Society of Education, First Publication, 1837, P.62.
(2) J.J. Auchmuty, Irish Education, P.105.

marriage in 1842. Before he was appointed to this new post he served as secretary to the Manchester Board of Health, and as Assistant Poor-Law Commissioner. In the latter capacity he worked first in East Anglia (1835-38) and then in London (1838-39). He made a close study of the educational institutions for the poor in European countries, and was convinced that the methods used there were really better than the Monitorial method. He was eager to make the education of the pauper children in the workhouses of East Anglia as useful as the education given in the workhouses in Europe, and with this object in view he paid, in 1837, a visit to Glasgow where, he knew, he could get better teachers trained under Stow's 'Training System'. Kay-Shuttleworth appointed one of these men as organising master of the workhouses, and the result was that many beneficial changes were effected in the workhouse schools of East Anglia (1).

In 1838 when he was in charge of the London area Kay-Shuttleworth got an opportunity of trying, at Norwood, an experiment on the lines of the Continental (especially the Dutch) workhouse schools. It was a usual practice with some of the London unions to entrust the pauper children to contractors, and at Norwood there was an institution with about 1100 children, the head of which (Mr.Aubin) was philanthropic in spirit, and was keen on improving the education of the children even if it meant an increased cost to himself. Kay-Shuttleworth procured for this institution a special grant of £500 per annum from the Home Office, and a greater part of the amount was spent on the salaries of teachers who were brought from Scotland. Kay-Shuttleworth began to put into practice at Norwood the methods of education which he had been advocating for long.

(1) F.Smith, op cit, P.166.

The schoolroom was divided into a number of class rooms by means of curtains; a gallery was erected in the Boys', as well as in the Girls' school; workshops were built where children could work and get some kind of industrial training; and various other kinds of apparatus were provided (1). With the exception of gardening, provision was made for training in almost all kinds of industrial occupations, and the school at Norwood could therefore claim to be one of the earliest schools established in England on the lines suggested by Pestalozzi and Fellenberg.

The efforts as Assistant Poor-Law Commissioner to promote the education of pauper children were indeed so noteworthy that he was considered the fittest person to be appointed Secretary of the Committee of Council. During the ten years of his period of office the work of the Committee of Council was carried on under his sole guidance, and he spared no efforts to increase the means of education for the poor. Within three days of the appointment of the Committee of Council he drew up a Minute (April 13, 1839) which proposed the establishment of a National Normal School "in which candidates for the office of teacher in schools for the poorer classes may acquire the knowledge necessary to the exercise of their future profession...."(2). Two model schools, a boarding and a day school were also to be established, where children were to be taught on the "simultaneous" plan. According to this plan children were to be separated into classes, each class in charge of a separate teacher. Religious teaching in the model schools was to be of two kinds, 'general' and 'special'. The 'general' instruction was on those aspects of the Christian religion which were common to all denominations, and the 'special' instruction was to be given, during certain fixed

(1) F.Smith, op cit, P.167.
(2) Minutes, 1839, Extract in Kay-Shuttleworth, op cit, P.179.

periods, by an Anglican Chaplain and by Dissenting ministers (1). The proposals of the Minute were agreeable neither to the Church party nor to the Dissenters. Churchmen considered the division of religious instruction into 'general' and 'special' as a Whig plot to reduce them to the same position as members of other denominations. The Dissenters, on the other hand, considered the appointment of a special Anglican Chaplain as an extra privilege to the Church. Kay-Shuttleworth, no doubt, expected this opposition, but he under-estimated its intensity. So fierce, indeed, was the storm that raged that Lord John Russell had to announce that the Minute was withdrawn, and that the sum of £10,000 which Parliament voted in 1835 for the erection of Normal Schools would be distributed equally between the National Society and the British and Foreign School Society.

But this surrender of the Committee of Council did not end the controversy. The opponents of a State system of education were alarmed at the attempts of the Government to evade Parliament by getting all important matters settled by Orders in Council. The Archbishop of Canterbury (Howley) therefore moved a series of resolutions with an address to the Queen praying that the Committee might take no steps to establish any plan of education without giving the Lords a full opportunity of considering its proposals. The address was carried by a large majority (229 to 118) and the Lords took it in person to Buckingham Palace where the Queen gave them "a non-provocative and non-committal reply" (2).

The attempts of the Committee of Council to establish a National Normal School ended in failure; but Kay-Shuttleworth was not the man to give up the idea of having a corps of qualified and trained teachers. In the autumn of 1839 he made an educational tour round the

(1) Minutes, 1839, Extract in Kay-Shuttleworth, op cit
(2) F.Smith, op cit, P.176. P.180

Continent which greatly influenced his work as Secretary of the Committee of Council. He was specially impressed by the schools for the poor in the cantons of Switzerland where the influence of Pestalozzi and Fellenberg was great, and where the chief aim of education was considered to be the formation of character. But above all, Kay-Shuttleworth's greatest admiration was for the Normal School conducted by Wehrli (Fellenberg's assistant at Hofwyl) in the canton of Thurgovia. In this school intellectual training was combined with gardening and all kinds of household work. "We were greatly charmed", wrote Kay-Shuttleworth, "by the union of comparatively high intellectual attainments among the scholars with the utmost simplicity of life, and cheerfulness in the humblest menial labour. Their food was of the coarsest character, consisting chiefly of vegetables, soups, and very brown bread. They rose between four and five, took three meals in the day, the last about six, and retired to rest at nine. They seemed happy in their lot" (1). England's great need, for the right education of the poor, was, according to Kay-Shuttleworth, a large supply of teachers as well disciplined and instructed as those at Wehrli's Normal School.

To supply this need, Kay-Shuttleworth and his friend Mr.E.C.Tufnell decided to open a private normal school at their own risk. In February 1840 the manor-house at Battersea was secured for this purpose, and the vicar, the Hon.and Rev.Robert Eden, who was deeply interested in the cause of popular education, placed at the disposal of the founders his village school where pupil-teachers could be trained in the art of teaching. Rev.Eden even undertook to superintend the religious teaching given in the Normal School (2). The first batch of students at the Battersea Training School consisted of

(1) Kay-Shuttleworth, op cit, PP. 307, 308.
(2) Ibid, P. 309.

some of the brighter boys from Norwood who were about thirteen years of age, some "pupil teachers" who were sent by private individuals to be trained for work in particular schools, and some young men aged about twenty-five to thirty, who were also sent by private persons for a year's training.(1).

The course of training at Battersea was modelled on the lines of Wehrli's school. All domestic work was performed by the students themselves, with the exception of cooking, for which a matron was appointed (2). Gardening was a very important part of the curriculum. Four hours a day were spent in garden work, and seven hours in study (3). Such a combination of outdoor and intellectual work made the pupil-teachers of Battersea most suitable for positions as teachers in schools for the poor. The greatest inspiration to the tutors and pupils at Battersea was from Dr.Kay himself who lived at Battersea and shared the common life with students.

Religious training at the Battersea Normal School consisted in Bible instruction, reading of prayers and attendance at Church twice on Sundays. The school was open to members of all religious denominations, though it was cautiously pointed out that it was better for a person not to join the institution if he could not take part in the general form of worship.

The Battersea Normal School flourished very well under the able direction of Kay-Shuttleworth and Tufnell; but by 1843 it was realised that it was no longer possible to run the institution with the support of private individuals like Kay-Shuttleworth, Tufnell and a few others. The finances were inadequate, and hence at the close of 1843 the management of the school was transferred with the

(1) Kay-Shuttleworth, Four Periods, P.311.
(2) Ibid, P.312.
(3) Ibid, P.314.

consent of the Committee of Council to the National Society. But by this time various other training colleges had arisen, and the courses of training varied in length at different colleges, from about three years at Battersea to two in some and a year and a half in others.

If the Committee of Council failed miserably in its attempts to establish a State Normal School, it was successful in carrying out its second great object, namely, the establishment of the right of inspection of schools. In June 1839, the Committee announced that no further grants would be sanctioned "for the establishment or support of normal schools or any other schools, unless the right of inspection be retained in order to secure a conformity to the regulations and discipline established in the several schools, with such improvements as may from time to time be suggested by the Committee" (1). The announcement evoked a vehement protest from the Church party which held that no layman could inquire into the religious instruction of Church schools. The National Society contended for the appointment of its own inspectors under its own jurisdiction. The Committee of Council would not allow this privilege to the Society, but it accepted the principle of nomination of inspectors by the Church and their appointment by the State. The British and Foreign School Society was not in favour of inspection at all, but in 1843 it reluctantly accepted the principle. Gradually it became a practice to appoint clergymen as inspectors of Church schools and laymen as inspectors of Dissenting schools (2).

It is interesting to go through Kay-Shuttleworth's "Instructions to Inspectors" contained in the Minutes of the Committee of Council for 1839-40, and to cast a glance at the accompanying 174 questions for their guidance.

(1) Minutes, 1839, Extract in Kay-Shuttleworth, op cit, P.183.
(2) F.Smith, op cit, P.182.

They reveal his great zeal for the promotion of education of the right kind for the poorer classes, and the earnestness with which he carried out the highly responsible duties of Secretary of the Committee of Council. "The inspection of schools aided by public grants", explained Kay-Shuttleworth in his instructions, "is.....a means of co-operation between the Government and the Committees and superintendents of schools, by which information respecting all remarkable improvements may be diffused whenever it is sought. You will therefore be careful at visits of inspection to communicate with the parochial clergyman or other minister of religion connected with the school, and with the school Committee, or in the absence of a school Committee, with the chief promoters of the school, and will explain to them that one main object of your visit is to afford them your assistance in all efforts for improvement in which they may desire your aid; but that you are in no respect to interfere with the instruction, management, or discipline of the school, or to press upon them any suggestions which they may be disinclined to receive." (1). Again and again he drew the attention of the inspectors to the point that they should not unnecessarily interfere with the internal management and discipline of the school, but that they should on the other hand be responsible for promoting useful knowledge about school management and methods of teaching, etc., which promoters of schools might require from them. Kay-Shuttleworth thus established right from the very beginning the true conception of an inspector's duty - that it lay in his being a friend of the teachers and school managers, and in assisting them in performing their task on rational lines.

In addition to the instructions to inspectors

(1) Quoted, Kay-Shuttleworth, op cit, P.459.

Kay-Shuttleworth issued, in the Minutes for 1839 and for subsequent years, detailed instructions regarding school and class organisation and methods of teaching. Later on the Committee of Council published special manuals on the teaching of various school subjects, and also started at Exeter Hall, London, a school of method in which lectures were delivered during evenings by experts on the teaching of various subjects for the benefit of those teachers who were already in practice (1).

Under Kay-Shuttleworth's able direction the Committee of Council's interest in the extension of popular education increased every year. The Committee, by its Minute of November 22, 1843, offered grants for the construction of houses for masters and mistresses, for building training schools, and for the purchase of necessary school furniture and apparatus. It proposed to increase the inspecting staff; there were to be five inspectors of Church of England schools for the five districts into which England and Wales were to be divided; two other inspectors were to be appointed, one of whom was to inspect Normal Schools, and the other the British Schools. The number of inspectors had increased from two to six by the year 1844, and Kay-Shuttleworth did all he could to instruct them in the right performance of their duties (2).

The inspector's reports, contained in the Minutes of the Committee of Council from 1840-60, are useful sources of information about the state of popular education during the middle of the last century. Even a cursory perusal of the reports would reveal the fact that the schools, even as late as during the 'forties, were badly constructed, that in most schools the wasteful monitorial plan was still followed, that the attendance of children

(1) F.Smith, op cit, P.184.
(2) Ibid, P. 197.

was irregular, and that the children got even such indifferent schooling for a very short period, since they were withdrawn from school at a very early age. To improve the efficiency of schools, and to give the children of the poor the advantage of a sound elementary schooling, Kay-Shuttleworth proposed a new system of grants. His proposals were rejected by the Committee of Council in 1843; but in 1844 he placed before the Committee of Council a fresh scheme by which the Committee was to pay the salaries of pupil-teachers who were apprenticed and the allowances of teachers who trained them (1). The Committee approved the scheme, but it could not be put into operation until the advent of the Whig ministry in 1846.

By the general Minute of August 25, 1846, the Committee offered grants to pupil-teachers under apprenticeship and to teachers who gave them training; it also offered retiring pensions to teachers and annual grants to teachers who fulfilled certain conditions (2). The details of the scheme were given in the Minute of December, 1846. The period of apprenticeship was fixed at five years. It was to be in schools which were considered fit for such purposes by the inspectors. Subject to passing an annual examination at the end of each year of their apprenticeship the pupil-teachers were to receive a stipend of £10 per annum to begin with, which rose by annual increments to £20. The pupil-teachers were to receive separate instruction for at least an hour and a half each day from the master or mistress who was to get an allowance of £5 for one, £9 for two, and £3 for each additional pupil-teacher. On completion of the full period of apprenticeship the pupil-teachers were to be awarded competitive scholarships called Queen's Scholarships, of the value of £20 or £25 for purposes of training

(1) F.Smith, op cit, P.199.
(2) Ibid, P.203.

at a Normal School. Subject to satisfactory results in examinations and good reports from inspectors, the Normal School was to receive a grant of £20 per annum for every student under training, and this was to be increased to £25 during the second year, and to £30 during the third year of the student's training (1).

To make the teaching profession more attractive the scheme provided for special grants to the trained teacher. Retiring pensions were offered to teachers who served satisfactorily for at least 15 years, and who were no longer fit to continue their work.

The scheme was indeed very liberal and marks the beginning of a period of swift advance in popular education. The State's interest in the education of the poor grew so enormously that in April, 1847, the increased vote of £100,000 was carried in the Commons by a large majority (2). The entire progress was due to the wisdom and sagacity of Kay-Shuttleworth who in his pamphlet, "The School, in its Relation to the State, the Church and the Congregation", which he published anonymously but with the consent of the Committee of Council, emphasised the urgent necessity of State help which, he pointed out, was to be given through the several religious denominations (3). It was the adoption of such an attitude by Kay-Shuttleworth as Secretary of the Committee of Council that led to a remarkable increase in the means of popular education during the years 1839-49.

The work of the Committee of Council grew to an enormous extent, especially after 1846, when it began to exercise close supervision over the training of pupil-teachers. This increase of work meant really a greater strain to Kay-Shuttleworth who kept himself in personal

(1) F.Smith, op cit, P.204.
(2) Ibid, P.205.
(3) Ibid, PP. 205, 206.

touch with every detail of the work, and not only performed administrative duties, but through the Committe's Minutes carried on some educational legislation as well. Overwork and anxiety undermined Kay-Shuttleworth's health, and after a serious illness he retired in December, 1849. Mr.R.R.W.Lingen was appointed to succeed him as Secretary.

There is no doubt that the foundations of English Elementary Education were laid by Kay-Shuttleworth during the ten years of his office. "To him more than to anyone else", observed Sir Michael Sadler, "we owe it that England is supplied with schools for the children of her people, and that this costly work has been accomplished without a breach between Church and State" (1). Still, however, there were scores of schools which were uninspected and were in a deplorable state; but the inspected schools were improving in their standard of efficiency, and set the example of a teaching based on rational methods. Kay-Shuttleworth, however, was not satisfied with his achievements. His disappointments during the ten years of his office were many: Yet there was some consolation in the fact that he was engaged in a great national concern, and that success, though slow, was bound to be sure if he only won public opinion to his side. "England was fortunate", writes F.Smith, "in that the Committee of Council was guided in the critical years by a man of so wide a vision and so wise a method of application" (2).

IV

The enormous increase in the means of popular education during the period 1839-49 shews how great was the demand for learning which the Industrial Revolution created, and how earnest Kay-Shuttleworth was in his efforts to meet the demand. But the years which followed

(1) Quoted by F.Smith, op cit, P.211.
(2) Ibid, P.212.

Kay-Shuttleworth's retirement were again years of conflict and controversy in the history of English education. Over a greater part of the nineteenth century there was, as noted earlier, a bitter strife between Churchmen and Dissenters, which was a great hindrance to the progress of English popular education. Both parties were agreed that the voluntary system was insufficient to meet the public demand for instruction, and that the schools provided by voluntary effort were inefficient. Nevertheless all State proposals for providing means of education for the poor were opposed vehemently by leaders of all religious denominations because they thought that such schemes curtailed religious liberty. "It was 'the religious difficulty'", writes J.W.Adamson, "which made attempts at educational legislation from 1853 - 1868 abortive; a compromise was effected in 1870, only to break down a generation later" (1).

'The religious difficulty' did not, however, lessen the enthusiasm of the State in educational matters. On the contrary, it grew steadily; this is evident from the fact that the education grant which was just £20,000 in 1833, had risen to £663,000 by 1858 (2). In 1853 Lord John Russell placed before the House of Commons a very elaborate scheme of national education, which proposed reforms in all grades of learning - elementary, secondary, and university; but Parliament did not approve of the proposals regarding elementary education. Again, a number of Bills introduced by Government as well as by private members between the years 1853 and 1868 were rejected by Parliament. Such failures, however, were not evidence of the State's lack of interest in popular education; they were stepping stones to success, and led to the Education Act of 1870 (3). A further evidence of the increased activity of the State in

(1) A Short History of Education, P.301.
(2) Ibid, P.301.
(3) Ibid, P. 301.

relation to education was the creation, in 1856, of the Department of Education. This was done by an Order in Council. The official head of the department was still the Lord President, but a new officer, designated Vice-President, was appointed, who was directly responsible for the administration of the department, was a member of the Commons, was chosen by the Prime Minister, and changed with the change of the ministry (1).

The appointment of the Newcastle Commission in 1858 "to inquire into the present state of popular education in England and to consider and report what measures, if any, are required for the extension of sound and cheap elementary instruction to all classes of the people" was the consequence of a feeling among all sections of the people that the means of popular education were defective as well as insufficient, and marks another important stage in the growth of English public education. The Commissioners made the most elaborate survey of the means of education for the poor; indeed, no parliamentary Committee or Commission had ever attempted such a minute inquiry before. The Commissioners' special field of inquiry was the education of the "independent poor"; but they collected information even about the education of paupers, vagrants and criminals, about army and navy schools, and about some Grammar schools which had no longer a classical, but a purely English curriculum. Information was also collected about the systems of education prevalent in foreign countries. Mathew Arnold toured round France, French Switzerland and Holland; Mark Pattison went to Germany, and some of the other Commissioners visited Canada and the U.S.A.

The report of the Commissioners, published in 1861, showed that the voluntary system worked fairly

(1) F.Smith, op cit, pp.224, 225.

satisfactorily; its results "were not on the whole discouraging." The total amount of money spent by the Government on popular education was £4,400,000; (1) but about twice this sum was contributed through voluntary subscriptions for the same purpose. At the beginning of the century the only voluntary societies for promoting the education of the poor were the National Society and the British and Foreign School Society; by the middle of the century, however, a number of other organisations came into existence; notable among them were the Home and Colonial School Society, the Wesleyan Education Committee, the London Ragged School Union, the Catholic Poor School Committee, the Church Education Society, etc., etc.

The population of England in 1858, as estimated by the Registrar General, was 19,523,103. The number of children estimated by the Commissioners as in attendance at school was 2,535,462. Thus in England and Wales one in every 7.7 persons was at school; in Prussia the proportion was one in 6.27, in Holland one in 8.11, and in France one in 9 (2). But the estimates seem to have been far from reliable; in about a decade it was proved that the number of children destitute of all means of education, which was fixed by the Commissioners at 120,305 was quite incorrect, and that the actual number not at school was much higher than the estimated number (3). The Commissioners expressed the view that "the means of obtaining education are diffused pretty generally, and pretty equally over the whole face of the country (that is, England and Wales) and the great mass of the population recognises its importance sufficiently to take advantage to some extent of the opportunities thus afforded to their children." (4) The opinion no doubt shows that the Commissioners were

(1) Report, Vol.I, p.309.
(2) J.W.Adamson, English Education, P.205.
(3) J.W.Adamson, A Short History of Education, P.304.
(4) Report, Vol I, Quoted by J.W.Adamson, English Education, P.205.

optimistic in their outlook; but they also expressed their dissatisfaction at the then existing state of affairs when they said that the Committee of Council entirely "left unassisted 15,750 denominational schools and about 317 Birkbeck, Ragged and Factory schools containing altogether 671,393 scholars, while the whole of the private schools, in which 573,536 children attended, were entirely passed over" (1). Again, they thought that though the proportion of the total population at school was much higher in England and Wales, as compared with countries like Holland and France, "the average attendance is far shorter than it ought to be; and it is perfectly consistent with the incompetency of a large proportion of the schools in the country to give really useful instruction, or to have considerable influence in forming the character of those who attend them " (2).

But notwithstanding the anxiety expressed by the Commissioners regarding the inadequacy of State grants and the inefficiency of schools, they were prejudicial in their attitude towards the attempts of the Committee of Council to secure proper means of education for the poor during Kay-Shuttleworth's period of secretaryship. They were doubtless anxious to improve the quality of instruction in schools; but they criticised Kay-Shuttleworth's measures to procure a body of trained teachers. They maintained that 'a sort of academical education', including, as it did, Latin grammar, mathematics, English Literature, etc., was quite unnecessary for teachers of "the independent poor" (3). Again, while Kay-Shuttleworth did all he could to make a State system of elementary education possible, the Commissioners expressed the opinion that "any universal compulsory system was neither attainable nor desirable" (4). They shifted the

(1) Report, Vol.I, P.295.
(2) Ibid, P.88.
(3) J.W.Adamson, A Short History of Education, P.305, 306.
(4) Ibid, P.306.

bulk of the responsibility of educating the children of the poor from the Government and the parents to the teachers who were charged with the duty of giving to children below the age of eleven a satisfactory primary instruction. To achieve this object they recommended that the grants to schools should be made on the basis of children's attainments, which the inspectors were to guage by a close examination.

This view was expressed eight years earlier by W.J.Fox, M.P. for Oldham, and the recommendation of the Newcastle Commissioners was only an elaboration of this view. "To make the application of national grants most conducive to the improvement of education", observed Fox, "remuneration should be given, not in reference to the number of children or the mere amount of attendance, but in reference to the attainment; that it should be the result of something like an inquiry by the inspectors into what was actually taught. Let all the schools retain their present denominational character if they would, but if they were always rewarded in this way, if the amount were proportioned to the amount of education actually realised in the school, that would be a stimulus which would operate very strongly indeed towards raising the character of education." (1) The Newcastle Commissioners were obliged to adopt this view, for one of the main tasks with which they were charged was the framing of 'a sound and cheap elementary instruction'. "It is necessary", said they, "to institute a searching examination by competent authority of every child in every school to which grants are to be paid, with the view of ascertaining whether these indispensable elements of knowledge (reading, writing and arithmetic) are thoroughly acquired, and to make the prospects and position of the teacher dependent to a considerable extent on the results of the examination". The principle was put into operation later in issuing grants to

(1) Special Report on Educational Subjects, Vol.II, P.477.

schools, and became known as the system of "Payment by results".

Kay-Shuttleworth, who was no longer Secretary of The Committee of Council, but who retained his interest in popular education throughout his life, foresaw the dangers that would result from the adoption of the principle, and drew the attention of the Commissioners and the Government to these. He pointed out that the quality of instruction in the schools would be greatly diminished, and that nothing more would be taught except the three Rs. Again, no attention would be paid to the cultivation of morals, without which there could be no education worth the name. Lastly, consequent on the receipt of smaller grants the salaries of teachers would be reduced, which in turn would lead to the appointment of under qualified masters. Kay-Shuttleworth's advice was disregarded, and his forecasts all happened to come true.

After the issue of the report of the Newcastle Commissioners in 1861 Robert Lowe, Vice-President of the Committee of Council, gave effect to the recommendations of the Commissioners, especially to their principle of "payment by results". He did this by making several alterations in the Code of 1860, which was a digest of the Minutes of the Committee of Council from 1846-60. The Provisions of the new code, which became known as the Revised Code, were enforced from June 30, 1862. According to the Revised Code, State grants to schools were divided into grants for attendance and grants for attainment of scholars. A grant of four shillings could be claimed by a day school and two shillings and sixpence by an evening school in respect of every scholar attending the school, "according to the average number in attendance throughout the year." Again, every day school could claim eight shillings per scholar, and an evening school five shillings per scholar for individual attainments which were determined by the inspectors.

"Every scholar attending more than 200 times for whom 8/- is claimed, forfeits 2/8 for failure to satisfy the inspector in reading, 2/8 in writing and 2/8 in arithmetic". In the case of the evening schools the qualifying number of attendances was 24, and 1/8d was deducted for failure of a boy to satisfy in reading, 1/8d in writing and 1/8d in arithmetic. Deductions could also be made in the shape of fines for unhealthy premises, inefficient staff and bad management (1).

This principle of making grants enforced by the Revised Code retarded the progress of popular education in England for about thirty years for during this period the only business of the inspectors was "to find out whether little boys and girls could get three sums right out of four, and whether they could write ten dictated lines with no more than three mistakes in spelling" (2). The Revised Code thus encouraged "cramming", and restricted the teaching in schools to imparting a knowledge of merely the three Rs. The practical and moral aspects of school training were utterly neglected, and as Kay-Shuttleworth remarked, the Revised Code showed "signs of a deliberate intention to put the education of the poor.....into the hands of teachers whose knowledge, experience, aptitude and skill are all of a much lower order than those of the present certificated teachers and their assistants" (3).

The period 1849-70, beginning with the retirement of Kay-Shuttleworth and ending with the Education Act of the latter years, was gloomy in outlook, just as the transitional years of the Industrial Revolution down to about 1840 were dark. During the former period absence of State intervention in education, owing to adherence to an extreme laissez faire policy, hindered the progress of popular education. During

(1) J.W.Adamson, A Short History of Education, P.308.
(2) Raymont, Modern Education, p.332.
(3) Kay-Shuttleworth, Four Periods, P.622.

the ten years (1839-49) when Kay-Shuttleworth was secretary of the Committee of Council he firmly established the principle of State control and financing of popular education. Nevertheless, from the time of his retirement to the passing of the Education Act of 1870 English education suffered, and the causes are to be found in the mischief that was wrought by Lowe's Revised Code and by the religious question. But just as the evils of child labour and the total neglect of the education of child workers led to the education grant of 1833 and the appointment of the Committee of Council in 1839, the evils that crept into the schools on account of the operation of the Revised Code and the existence of religious differences led to the Education Acts of 1870 and 1891. The Revised Code did not merely lead to deterioration in the quality of instruction; it failed to make provision for the education of nearly two and a quarter million children who had no schools to attend. Such neglect of the education of the poor, especially after the passing of the second Reform Bill (1867) which effected a further extension of the franchise, meant a serious danger to the country at large. It became necessary in the interests of the nation as a whole to make education more general. In 1870 W.E.Forster, Vice-President of the Committee of Council, and H.A.Bruce, the Home Secretary, introduced a Bill in the Commons to make possible the provision of efficient schools throughout England and Wales, and to diffuse education among as large a number of the poor as possible by empowering local authorities to compel the attendance of children wherever possible. Forster and Bruce regretted that "notwithstanding the large sums of money we have voted, we find a vast number of children badly taught or utterly untaught, because there are too few schools and too many bad schools, and because there are large numbers of parents in this country who cannot or will not send their children to school." (1)

(1) Quoted by J.W.Adamson, A Short History of Education, P.309.

The Bill was passed, but not without a long debate and a serious controversy regarding religious instruction. The Act made provision for an adequate supply of schools, and set up School Boards wherever there was a deficiency. The Boards were empowered to raise school funds from rates, Government grants and school fees. They were also authorised to compel the attendance at school of children between the ages of five and thirteen, subject to certain conditions. The Conscience Clause, 74(2), granted the right of exemption from religious instruction, while the Cowper-Temple Clause, 14(2), enacted that "no religious catechism or religious formulary distinctive of any particular denomination shall be taught in the School," that is the board-school (1). These clauses regarding religious instruction would not have been passed but for the confidence which prevailed among members of opposing religious faiths that other agencies would supply the omission made by the Act. The Act also stipulated that government inspection of schools should be on an undenominational basis, and this, more than any religious clause of the Act, relieved the State of all responsibility for religious instruction.

The Act of 1870 did not by any means establish a complete system of national education; but the passing of the Act marked a very great advance towards the establishment of a State system. The next important step in this direction was taken in 1891, when the Elementary Education Act of that year established free education in the public elementary school. By the end of the century the Board Schools had greatly increased in numbers while the Voluntary Schools had declined both in numbers and importance (2).

The status of public education was still further

(1) J.W.Adamson, A Short History of Education, P.310.
(2) Ibid, P.312.

enhanced in 1899 when, on the recommendation of the Bryce Commission, Parliament created a Board of Education by an amalgamation of the Education Department and the Science and Art Department. "The Board of Education is not a Committee of Council, but an independent body of Ministers of the Crown under their own president who is virtually the English Minister of Public Instruction". The Board actually came into existence in 1900 (1).

The measure that completed the establishment of a National System of Education in England was the Act of 1902. This was also a consequence of the publication of the Bryce Report which, according to J.W.Adamson, was "the wet nurse of the Education Act of 1902" (2). It was passed during the ministry of Mr.Balfour, and it established not merely a State system of elementary education, but a complete system of elementary, secondary and technical education. School Boards and School Attendance Committees were abolished and the Act vested the County Councils and County Borough Councils with full powers in matters concerning elementary and higher education in their respective areas. Thus came into existence the Local Education Authorities (the L.E.A) which got powers of issuing grants and providing scholarships, etc., and whose authority, in fact, extends over the whole field of popular education. Their control over educational finance has given them an indirect control even over universities, but other than those of Oxford and Cambridge.

V

We have attempted to give in brief outline the history of English elementary education down to the passing of the Education Act of 1902. Its beginnings, as noted at the commencement of the chapter, are to be traced to a much later date than in Scotland and in most Protestant Countries

(1) J.W.Adamson, English Education, P.467.
(2) Ibid, P.468.

of the Continent. "The ideal of universal elementary instruction", Dobbs rightly observes, "is at least as old as the Reformation, but the first organised effort to provide schools for the poor of England came at the close of the seventeenth century, when the religious conscience awoke to the problems of social degradation and urban poverty; and the movement which led to the modern system of elementary schools commenced a hundred years later, when society was in the throes of the Industrial Revolution" (1). The purely political Character of the English Reformation produced no changes in the character and outlook of the English masses. They continued to live in ignorance right up to the latter half of the eighteenth century; but the consequences of this ignorance were not serious so long as the people were prosperous, and were engaged in rural occupations. The Industrial Revolution, however, changed the entire state of affairs. During its transitional years it created poverty among the masses, and introduced a number of other social evils which were specially characteristic of town life. The sufferings of the English poor during the period 1760-1840, which we have noted in detail in the earlier chapters, together with the policy of extreme laissez faire which the Government adopted during this period, made the gap between the governing classes and the governed wider and wider. The working classes began to feel that a change in political institutions would greatly improve their condition. It was this feeling among the workers that led to the Chartist movement which prepared the way to the movement for reform of Parliament. Every Reform Act which increased the political power of the workers was followed by an Act for the better education of the people. The State's enthusiasm in educational matters increased steadily until at the opening of the present

(1) Dobbs, Education and Social Movements, Preface, P.VIII.

century England came to possess the complete machinery necessary for a national system which included all forms of learning, elementary, secondary and technical.

But the difficulties in the way of the establishment of a State system did not disappear with the beginning of State intervention and activity. If prior to 1839 English education suffered owing to the insufficiency of voluntary efforts and lack of State support, it suffered during the next four or five decades owing to lack of harmony between the various religious denominations, as well as between the Established Church and the State.

But, "if the politics of education were injured afresh by the renewed conflict between State and Church", the Education Act of 1902 "brought about the developments which the preceding thirty years had shown to be most desirable and necessary" (1). There is no doubt that owing to economic and religious reasons the education of the poor did not receive proper attention from the State even after the Industrial Revolution had proved its urgent necessity; but as Frank Smith points out "this neglect was not without its compensations" (2). "The inactivity of the State in educational matters led to popular support of the elementary school throughout the eighteenth and over a greater part of the nineteenth century, and this naturally created in the minds of the people a great love for the institution which could to a very great extent be considered the product of their own labours. Again, if on the Continent the Reformation led to national control of education at a very early date, the schools of the protestant countries of the Continent were all restricted to a few types. In England, however, the later intervention of the State in educational matters and the long struggle involving economic,religious and political issues which preceded the establishment of a State system led

(1) F.Smith, op cit, P.351.
(2) Ibid, P.352.

(as pointed out earlier) to the preservation of a greater variety of schools than in the Continental Countries (1). The richness of the present national provision of education may undoubtedly be considered to be the consequence of a revolution which, though primarily industrial, assumed, later on, a religious, political and intellectual character.

We have so far only shown that the Industrial Revolution made the problem of mass education urgent, and resulted in a State system of compulsory elementary education; but the revolution was not without its profound effects on secondary and university education. Again, it was the Industrial Revolution which created the need for systematic technical education. In the next two chapters we shall consider the changes which were wrought in the systems of secondary and university education and trace the development of technical instruction.

(1) See page 131 above.

CHAPTER VI

SECONDARY AND UNIVERSITY EDUCATION - HOW FAR AFFECTED BY THE INDUSTRIAL REVOLUTION.

I

In the second chapter we made a brief survey of secondary and higher education in England during the eighteenth century, and noted that in both grades of education there was a marked decadence, though active discussions and theorising about education were very common during the period. The Grammar Schools, including the nine public schools of Winchester, Eton, Shrewsbury, Westminster, Rugby, Harrow, Charterhouse, St.Peter's and Merchant Taylor's, were unpopular, throughout the century, both on account of their harsh discipline and their exclusively classical curriculum. Consequently the number of pupils entering these schools was very low. The Universities, which mainly depended fortheir supply of students on the Grammar Schools, were also affected by the decayed state of these schools. As the attainments of pupils leaving the Grammar Schools were meagre the standards of the Universities naturally became low, and this reduced them from the status of institutions of research to that of schools of an advanced type.

The quality of the instruction given in the Public Schools and in the Universities may be judged well from the account of Thomas Sheridan who was himself educated at Westminster and at Trinity College, Dublin. "When a boy can read English with tolerable fluency, which is generally about the age of 7 or 8 years, he is put to school to learn Latin and Greek; where 7 years are employed in acquiring but a moderate skill in those languages. At the age of 15 or thereabouts, he is removed to one of the Universities, where he passes four years more in procuring a more

competent knowledge of Greek and Latin, in learning the rudiments of logic, natural philosophy, astronomy, metaphysics, and the heathen morality. At the age of 19 or 20 a degree in the arts is taken and here ends the education of a gentleman" (1).

Another great contemporary authority on Public School organisation, aims and methods was Dr.Thomas James (1748-1804) who was a student at Eton, and became later (1778-94) headmaster of Rugby. James tells us that the strictly classical curriculum of the schools was, in the school slang of the day, called the boys' "business", and it formed the essential part of their education, though, however, they found opportunities of learning, after school hours or on holidays, some "accomplishments", and they were also expected to do, during spare hours, a lot of miscellaneous reading in consultation with their tutors. But the "accomplishments" and the miscellaneous reading, by no means formed a part of the school "business". The school "business" for form I, for example, consisted in memorising the Latin Grammar. In form III the boys did Greek Grammar, and wrote Latin elegiacs. Sometimes the latter "business" was set aside to be begun in the Upper School. In form V they did "three Latin exercises every week, viz., an original theme of not less than twenty lines, a copy of verses of not less than ten elegiac couplets, and five or six stanzas of lyrics on the same subject as the other verses. In the sixth form the theme and verses were rather larger, and Greek iambics took the place of Latin lyrics" (2).

The "accomplishments" were usually learnt on half-holidays. "Saturday is a half-holiday", said Dr. James, "and of course (like other half-holidays) is for

(1) British Education, P.17.
(2) H.C.Maxwell Lyte, A History of Eton College, PP 311-12.

writing, dancing, French, drawing, or even fencing as it is now taught at Rugby". At Eton the practice was much the same as at Rugby. "All the boys had to repair to the school from 10 to 11 o'clock and from 2 to 3 on holidays, and from 2 to 3 on half-holidays. During these hours the younger boys were exercised in writing and arithmetic, while some of the Fifth Form were learning Geography (chiefly ancient geography) or Algebra. Those who stayed at Eton long enough went through part of Euclid" (1). Mathematics did not form part of the regular school work until 1851, and even then the teachers of this subject did not possess the same status as teachers of classics.

Such was the narrow, meagre curriculum of the Grammar and Public Schools throughout the eighteenth century. The low intellectual state of the middle and higher classes during the period was undoubtedly a consequence of the harsh discipline and the narrow curriculum of these schools which in turn were responsible for the worthlessness of the education that was given in the universities. Yet the schools had their eulogists - men like Gibbon and Goldsmith - who thought that with all their defects the schools under consideration were best suited to the English nation. "I shall always be ready", wrote Gibbon, "to join in the common opinion that our public schools which have produced so many eminent characters, are the best adapted to the genius and constitution of the English people. A boy of spirit may acquire a previous and practical experience of the world; and his playfellows may be the future friends of his heart or his interest. In a free intercourse with his equals, the habits of truth, fortitude and prudence will be insensibly matured. Birth and riches are measured by the standard of personal merit; and the mimic scene of a rebellion has displayed in their

(1) Lyte, op cit, P.323.

true colours the ministers and patriots of the rising generation" (1).

Goldsmith's views about the public schools were very much the same as those of Gibbon. "A boy will learn", he observed, "more true wisdom in a public school in a year than by a private education in five. It is not from masters, but from equals, youth learn a knowledge of the world; the little tricks they play each other, the punishment that frequently attends the commission, is a just picture of the world, and all the ways of men are practised in a public school in miniature. It is true, a child is early made acquainted with some vices in a school, but it is better to know these when a boy, than be first taught them when a man for their novelty then may have irresistible charms" (2).

But the advocates of the Grammar and Public Schools only formed a small minority, and the general opinion of these schools was very unfavourable. From 1702 to 1760 only nineteen schools were founded, eight of which were established before 1714. This was because the instruction given in these schools had no bearing on the needs of practical life, and no attempts were made to widen the curriculum to meet the economic and social changes brought about by the Industrial Revolution.

II

At the opening of the nineteenth century, however, evidences of a revival became noticeable in some of the great English schools. The changes that were introduced were of course mild, but they were the inevitable consequences of the Industrial Revolution. The movement for reform began at the Shrewsbury school, the state of which in January, 1797, was most deplorable. The master at that time was Atcherley who did nothing, and there were

(1) Gibbon, E. Memoirs of My Life, edited by Hill, P.39.

(2) The Bee, No.VI, of Education.

not more than three or four boys on the foundation (1). But under Butler, Atcherley's successor, Shrewsbury regained its importance. Dr.Samuel Butler (1774-1839) became headmaster of the Shrewsbury school in October, 1798, when the number of scholars was as low as twenty. This number had risen during Butler's period of office (38 years) to 300.

Butler's success was due in part to his wide learning and exceptional ability to teach; but it was mostly due to his great administrative skill. The standard of the school was always kept sufficiently high by an effective scheme of supervising the daily work of the students, and by conducting examinations regularly every half-year. The curriculum was mostly classical still; but other subjects were not altogether neglected. English history, geography and mathematics formed part of the regular school work, at least of the fifth and sixth forms. Butler's close touch with the universities of Oxford and Cambridge and the remarkable successes of his pupils at these universities were other great causes that underlay the success of his institution. His influence soon extended to the other great public schools. Some of the headmasters, like Hawtrey of Eton and Longley and Drury of Harrow, sought his advice, while other headmasters like those of Repton, Uppingham, Durham, Stamford, etc., were his pupils, and they administered their schools on Butler's lines.

The next great reformer of the public schools in England was Thomas Arnold, headmaster of Rugby from 1828 to 1842. His measures to improve the condition of the Rugby school had all been tried much earlier by Butler at Shrewsbury. Yet Arnold is generally considered to be the greater of the two reformers. The truth of the matter, however, seems to be that Butler was the more practical

(1) Dr.James' letter to Samuel Butler, Life and Letters of Dr.Samuel Butler, Vol.I. P.20.

administrator, while Arnold's chief merits were his great personality and the "intense moral earnestness of his character", which made him, perhaps, "the greater educator and the greater man" (1).

When he was elected headmaster of Rugby, Arnold had no experience of school work; but his education at Winchester made him familiar with the vices and virtues of the public school system (2). Moreover he had read widely on the subject of education, and had formulated some theories and plans of his own which he was ready to put into practice when opportunity arose. The most serious defect of the public schools was their low moral tone, and Arnold's desire was to see "whether his notions of Christian education were really impracticable." (3).

Arnold did not, however, attach any importance to the policy of numerous services; what he aimed at was to infuse the true spirit of Christianity into the lives of the pupils, to teach them to apply the principles of the religion to their work and play (4). He aimed at making his pupils not mere scholars, but men of character. "First, religious and moral principle; secondly, gentlemanly conduct; and thirdly, intellectual ability" - these, in short, were, according to Dr.Arnold, the essentials of a good education.

The curriculum at Rugby during Arnold's time was still mainly classical, but mathematics and modern languages which had been for long considered unnecessary, and were to be studied, if at all, in out-of-school hours, were now made part of the regular programme of studies. The study of English, history, geography and other kindred subjects was encouraged. Arnold did all he could to broaden the curriculum, and to create in his pupils a real love for learning (5).

(1) Adamson, J.W: A Short History of Education, P.268.
(2) Rouse, W.H.D: History of Rugby School, P.221.
(3) Stanley, Life of Arnold, P.74.
(4) Rouse, op cit, P.222.
(5) Ibid, P.232.

From the accounts that have been given, of the work of Dr.Samuel Butler at Shrewsbury, and of Dr.Arnold at Rugby, it can be seen that from the beginning of the nineteenth century there was a tendency in the public schools to lessen, but only to a very slight extent, the importance of the classics. This tendency is to be attributed to the Industrial Revolution, which created a new powerful middle class, whose children needed an education that would fit them for business careers. It was noted earlier that throughout the latter half of the eighteenth century the Grammar and Public Schools continued their old traditions and their exclusively classical curriculum. The beginnings of the change for the better are undoubtedly connected with the two great men Butler and Arnold, though it must be noted that in 1818, there were about 120 Grammar Schools (with a strength of about 10,000) where many modern subjects were taught. In eighty of these schools the parents were given the option of deciding whether their children should or should not take the classical course (1). At St.Olave's Southwark, there were in all 260 boys, of whom 60 followed a purely classical course. The rest were taught only those subjects which fitted them for the professions they intended to follow (2).

But the broadening of the secondary school curriculum during the early nineteenth century was due more to the enormous number of private schools that were instituted during the last years of the eighteenth and the beginning of the nineteenth centuries, rather than to the Grammar or the Public Schools. As noted already, the wealthier men of the new middle class were not satisfied with the kind of education that was given in the Grammar and Public Schools: they were in need of institutions which

(1) A letter to Henry Brougham...on the best method of restoring grammar schools - By an M.A. of Queen's College, Oxford.
(2) Ibid.

trained their children for business careers. "The severe and proper discipline of a grammar school", wrote J.Priestly, "is become a common topic of ridicule; and few young gentlemen, except those who are designed for some of the learned professions are made to submit to the rigours of it" (1). It was this dissatisfaction of the new upper middle class that led to the establishment of private schools, often called "academies", in which - in addition to an elementary knowledge of Latin - mathematics and other commercial subjects were taught. When the demand for institutions of this type became greater the teaching of Latin was altogether dropped, and English, writing, commercial arithmetic, history and geography formed the staple of the curriculum.

Even girls' education underwent a rapid change. Those of them whose parents could afford the fees, learnt English, writing, arithmetic (chiefly keeping of domestic accounts), drawing, needlework, dancing and French. Some of the girls' schools had a still wider curriculum, and included music and Italian. "Dancing and a knowledge of the French and Italian languages," observed Mrs.Cartwright, "....now form part in the education of every female whose parents have the least pretensions to taste" (2).

The private schools, which were mostly boarding schools, were of all kinds "good, bad and indifferent", and the quality of instruction varied according to the fees charged. The fees ranged from 4d per week in the dames' schools to about 14 or 15 guineas per year charged by the country boarding schools. There were some schools which charged exorbitant fees that only the very rich could afford. The private schools were not without their defects. Vescesimus Knox expressed his distrust for these institutions by calling them "schools for the shop, the warehouse and the manufactory". "However

(1) J.Priestly : Essay on a Course of Liberal Education, 1760-4.
(2) Letters on Female Education, 1777.

superficial the attainments in classics at the scientific, mathematical and arithmetical academies", said Knox, "all defects are supplied, in the opinion of the money-making world, by the superior excellence of dancing, French, drawing, fencing and music masters, all of them far-fetched and richly remunerated. These instructors fill the academy with pupils and the grammar schools are comparatively deserted" (1).

But notwithstanding their defects the private schools supplied a great need during the last years of the eighteenth and the beginning of the nineteenth centuries. They not only offered instruction in modern subjects the demand for which was enhanced by the Industrial Revolution, but by their readiness to try new experiments they paved the way for all subsequent reforms in the secondary school curriculum. The grammar schools and the public schools, inspite of the changes in curriculum brought about by such outstanding personalities as Butler and Arnold, did not regain their popularity even during the 'thirties of the last century, and the criticisms levelled against them, chiefly by the Edinburgh Review, were not infrequent. The chief defect of these institutions, according to the Review, was the exclusively classical curriculum; it maintained that modern languages, modern history, experimental philosophy, geography and mathematics should be given equal attention. "In a plan of education we would give to all knowledge an equal chance for distinction; and would trust to the varieties of human disposition that every science worth cultivation would be cultivated" (2). A year later (1810) the Review attacked the system of fagging and the claims of the Public Schools that they were the only institutions that produced men of outstanding ability and fame (3). In 1830 an article appeared in the Review which

(1) The Pamphleteer, P.435.
(2) Edinburgh Review, Oct.1809, XV, P.40.
(3) Ibid, August 1810, XVI, PP.326f.

chiefly exposed the defects of education at Eton. "The most precious years are spent, not in filling the mind with solid knowledge, not in training it to habits of correct and patient thought, but in a course of half-studious idleness of which the only lasting trace is the recollection of mis-spent time" (1).

But all attempts made by the Edinburgh Review to reform the Public Schools ended in failure, and the overhauling of the secondary school curriculum was left entirely to the private schools. Of these institutions the Hazelwood School was the most efficient. It was a boarding school, and its founders were Thomas Wright Hill and his three sons, Rowland (the founder of penny postage), Mathew Davenport and Arthur. The father started a school at Hill Top, Birmingham, in 1802, and his teaching experience at this place led to the formulation, in 1818, of a definite plan, on which the Hazelwood school (1819-33) was conducted. The details of the plan were given in an anonymous publication entitled: "Public Education : Plans for the government and liberal instruction of boys in large numbers; as practised at Hazelwood School" (1822).

Great importance was attached, at Hazelwood, to training in self-government. "We endeavour to teach our pupils the arts of self-government and self-education.... The principle on which we have acted has been to leave as much as possible all power in the hands of the boys themselves" (2). The government of the school was carried on by the headmaster, the teachers and a committee of boys elected every month. The boys' committee met every week to frame laws concerning school discipline. A judge, a sheriff, a keeper of records, an attorney-general, a constable and a jury drawn by lot - these were the officers that discharged all important executive functions of the school.

(1) Edinburgh Review, April 1830, LI, P.65.
(2) Public Education : Plans for the government,etc.

The school consisted of about 120 boys, and had eight classes. The curriculum was very broad, and it included orthography, geography, history, parsing, shorthand, mathematics (arithmetic, trignometry, geometry, and Algebra), French, Latin and Greek. Gymnastics and swimming also formed part of the course of instruction. Provision was also made for the teaching of other modern languages, natural philosophy, fencing, dancing and music. Opportunities were given for voluntary labour, chiefly manual, and this enabled boys who were not studiously inclined to score marks. Printing was one such manual occupation. It was practised at the school press which published a school magazine. Corporal punishment was seldom used. Offences were usually punished by fines, and good actions were rewarded.

From this account of the discipline and curriculum at Hazelwood, it can be seen that the chief object of the school was to impart knowledge that was of real value to the boys in their everyday life. It provided the kind of education that suited the changed economic and social conditions that followed as a consequence of the Industrial Revolution, and naturally the school attracted wide-spread attention. An article in the London Magazine in 1824, by De Quincey, and another in the Edinburgh Review in 1825 by Jeffrey, expressed high approbation of the work that was done at the school. In 1826 another school on the same lines was opened by the Hills at Bruce Castle, Tottenham, and in 1833 the Hazelwood School was closed.

But private schools or "academies" of the type of Hazelwood were very rare. They were of all kinds, differing both in their resources and in their value. Their chief defects were the absence of any uniform standard among them, and the inclusion of far too many subjects in the curriculum. The general complaint about

Grammar Schools was that, in spite of the addition of some modern subjects to the regular course of studies, they still had a mainly classical curriculum, and retained most of their eighteenth century weaknesses. Taking into account these two facts - that the private schools, though all later reforms in curriculum are to be traced to them, were mostly inefficient, and that the Grammar Schools were still unpopular - we may safely conclude that at the beginning of the nineteenth century secondary education was very little affected by the Industrial Revolution, and that the most far-reaching changes belong to a much later period. Yet even the few changes that took place during the first quarter of the century are not insignificant, especially because the period was characterised by the extreme inactivity of the State not only in matters of secondary, but even elementary instruction.

III

While secondary education was very little affected by the Industrial Revolution during the early nineteenth century, great changes were taking place at the Universities. During the eighteenth century and earlier the government of the Universities was almost entirely in the hands of the heads of colleges, and the University teachers or professors enjoyed no status. The chief defects of education at Oxford and Cambridge were their clerical government (the colleges maintaining very close relations with the Church) and their exclusively classical curriculum. Such a condition of affairs could not continue unchallenged during the nineteenth century when great changes had taken place in English society as a consequence of the Industrial Revolution. The movement for reform which began both at Oxford and at Cambridge was an inevitable result of the social and economic changes through which the country was passing, and it

tended to remodel the English Universities on the lines of the Scottish and German Universities. The four Scottish Universities of Edinburgh, Glasgow, Aberdeen and St.Andrews, and the German Universities of Berlin (1810) and Bonn (1818), were all "professorial" Universities, and they had no colleges attached to them, as in the case of the English Universities. The professors of the Scottish and German Universities enjoyed an autonomy which professors at Oxford and Cambridge could not. But the reforms in examinations and curriculum, dating back in the case of Cambridge to 1780, and in the case of Oxford to 1800, improved to a great extent the standing of the professors at both Universities. At Cambridge the practice became established of holding public examinations, in the Senate House, by written papers. By the end of the century the farcical exercises leading to the first degree, quite common during the early and middle eighteenth century, were heard of no more. Similarly, at Oxford the Public Examination Statute of 1800 greatly improved the standard of the university examinations, making them very similar to those held by the most efficient colleges at Oxford. During the first three decades of the nineteenth century, there developed at Oxford two distinct types of examinations for the B.A. Degree, pass and honours, and they were conducted by paid examiners (1).

The reforms also aimed at widening the university curriculum to meet the social and economic changes caused by the Industrial Revolution. Encouragement was given to modern studies. Hitherto classics and mathematics only formed the staple of the curriculum. Cambridge, up to 1824, had only one tripos or honours examination; but during that year the Classical Tripos was added, and between 1848 and 1851 triposes in Moral

(1) Adamson, J.W: A Short History of Education, PP. 275-277.

Science and Natural Science were founded. By 1850 Oxford came to possess honours "Schools" in Mathematics, Natural Science, Law and Modern History, and Theology. During the latter half of the nineteenth century the development of "Schools" and "Triposes" became a marked feature in the history of Oxford and of Cambridge, and as a consequence a great many modern subjects came to be included in the curriculum (1).

But the early effects of the Industrial Revolution on English University education did not consist merely in the reform of the old Universities. The most far-reaching consequences of English industrial and commercial expansion are to be seen in the founding of new universities. The laws against Dissenters, passed in the days of Elizabeth, excluded them from admission to Oxford and Cambridge. Again the heavy expenses of education at these universities and the insistence on membership of a college made both universities difficult of access to the poor. Lastly, notwithstanding the many reforms in curriculum effected at both the universities the courses of studies were not so wide as to include all the modern subjects a study of which became an urgent necessity on account of the changes in English life which followed as a consequence of the Industrial Revolution.

The University of London, the founding of which was suggested by the poet Thomas Campbell, and the foundation stone of which was laid by the Duke of Sussex in Gower Street in 1827, was the outcome of an ever increasing demand from the Non-Conformists and the poor for a university education from which they were excluded for over two and a half centuries. To satisfy the new needs of life that were created as a consequence of the industrial and commercial expansion the curriculum of the new university was made broad enough to include not only

(1) Adamson, J.W: op cit, P.277.

languages and mathematics, but also physics, the mental and moral sciences, law, history and political economy, and medicine. In short, the aims of the new university were to provide general culture as well as professional training.

Campbell's supporters were Henry Brougham, Birkbeck, Francis Place and a good many other members of the "education-mad" party who were all greatly influenced by the example of the German Universities, especially of Bonn, and sought to model the University of London on similar lines. But, whatever their desires, they had to depart from the German model in respect of religious education for which, at Bonn, there were two separate chairs, Catholic and Protestant. The London University, however, solved the religious difficulty by cutting off religious instruction altogether from the curriculum; for the council "found it impossible to unite the principle of free admissions to persons of all religious denominations with any plan of theological instruction, or any form of religious discipline; and they were thus compelled by necessity to leave this great and primary object of education, which they deem far too important for compromise, to the direction and superintendence of the natural guardians of the pupils" (1). Such a policy was not acceptable to the supporters of the Established Church, who protested vehemently against the attempts that were made to secure a Royal Charter for the University, and sought to establish a college the chief object of which was to be the religious instruction of its pupils. A public meeting was held in June, 1828, which was presided over by the Duke of Wellington, then Prime Minister, and the outcome of this meeting was the foundation of King's College, London, which, according to the Royal Charter granted to it in August 1829, was to give "instruction in

(1) Quoted by J.W.Adamson, A Short History of Education, P.279.

the various branches of literature and science and the doctrines and duties of Christianity, as the same are inculcated by the United Church of England and Ireland". With the exception of religious teaching the course of studies was almost the same as that of Gower Street. In November, 1836, during the ministry of Sir Robert Peel, the Gower Street institution also received its charter and became known as University College, London. On the very same day the present University of London was founded by a Charter "granted to persons eminent in literature and science, to act as a Board of Examiners and to perform the functions of the Examiners in the Senate House of Cambridge; this body to be termed the University of London." By the middle of the nineteenth century affiliation to the University was granted to various institutions situated in the neighbourhood of London, and as a consequence the university which was originally intended to be essentially Scottish or German in character, with no colleges at all, became a purely examining body which left the teaching function mainly in the hands of the colleges.

The University of London was the first of those universities founded in England during the nineteenth century to provide a cultural as well as a professional education for all sections of the population. Later in the century every province came to possess a university of its own. The Victoria University of Manchester was created in 1880; in 1884 Liverpool, and in 1887 Leeds were federated in this university. In 1893 the University of Wales was created by a federation of the colleges at Aberystwyth, Cardiff and Bangor. In 1903, however, the federation of Manchester, Liverpool and Leeds broke up. Each of the universities was granted a separate charter, the Charters of Manchester and Liverpool dating to 1903, and that of Leeds to 1904. The colleges at Birmingham,

Sheffield and Bristol were made universities in 1900, 1905 and 1909, respectively.

The new universities encouraged a study of the sciences, which had made a rapid advance by the middle of the last century. But apart from these universities, the study of science was encouraged by other organisations (founded much earlier), like the Mechanics 'Institutes and Working Men's Colleges, a full account of which will follow in the next chapter. In 1800 the Royal Institution was founded which aroused an interest for science among the middle classes by arranging popular lectures on science by such eminent scientists as Humphrey Davy and Michael Faraday. From 1854 the Society of Arts (established in 1754) encouraged a study of scientific subjects by means of examinations. Thus, notwithstanding the fact that up to the middle of the nineteenth century very little was done by the secondary schools and the universities to provide a scientific education, the study of the sciences was greatly encouraged by institutions like the Royal Institution and the Society of Arts. The eagerness with which the institutions were attended shows the extent to which the Industrial Revolution affected the lives of all sections of the population, and the great need that arose, not only for a specialised training to qualify for the various professions, but also for an education that would fit an individual to spend his leisure usefully.

IV

State intervention in matters relating to secondary education did not begin in England until the sixties, although the Committee of Council on Education which concerned itself purely with elementary education was appointed so far back as 1839. In 1861 a Royal Commission was appointed under the presidency of the Earl of Clarendon to inquire into the finances, administration, management,

studies, religious teaching and general education of the nine public schools, Eton, Winchester, Westminster, Charterhouse, St.Paul's, Merchant Taylor's, Harrow, Rugby and Shrewsbury.

The Commission reported in 1864. Permission to examine the schools was refused by all the schools except two, and the Commissioners had, therefore, to rely chiefly on the information they obtained by means of questionaires addressed to headmasters, by examining witnesses and by inviting opinions from various authorities. The Commissioners were of opinion that the state of the public schools was far better than what it was about 25 years earlier. The curriculum had been widened, improved methods of teaching had been adopted, and the number of teachers had been increased. Moral and religious training received greater emphasis "during the last 30 or 40 years, partly by causes of a general kind, partly by the personal influence and exertions of Dr.Arnold and other great schoolmasters" (1).

About the courses of study at the public schools the Commissioners thought that though new subjects, such as mathematics, modern languages, history and geography, had been added, in most schools the classical literatures still formed the staple of the curriculum. This inferiority in the position of the modern subjects in the public school curriculum was due, in part, to the difficulty in securing properly qualified teachers of these subjects. For instance, about the teaching of history, Dr.Moberly, headmaster of Winchester, said: "I wish we could teach more history, but as to teaching it in set lessons I should not know how to do it" (2). Natural Science formed a part of the regular course of studies at Rugby, Charterhouse taught chemistry, and at Eton and Winchester

(1) Report of the Clarendon Commission, Vol I, P.44.

(2) Ibid, P.17.

some distinguished outsiders delivered lectures on science occasionally. Excepting these few instances, in most schools "natural science is practically excluded from the education of the higher classes in England..... a plain defect and a great evil" (1).

But while the Commissioners regretted that modern subjects were neglected, they did not recommend any great extension of the curriculum. They, in fact, thought that the Greek and Roman languages and literature were the best materials for the education of an Englishman. "From the regular structure of these languages, from their logical accuracy of expression, from the comparative ease with which their etymology is traced and reduced to general laws, from their severe canons of taste and style, from the very fact that they are "dead", and have been handed down to us directly from the periods of their highest perfection, comparatively untouched by the inevitable process of degeneration and decay, they are, beyond all doubt, the first and most serviceable models we have for the study of language. As literature they supply the most graceful and some of the noblest poetry, the finest eloquence, the deepest philosophy, the wisest historical writing; and these excellences are such as to be appreciated keenly, though inadequately, by young minds, and to leave, as in fact they do, a lasting impression. Beside this, it is at least a reasonable opinion that this literature had had a powerful effect in moulding and animating the statesmanship and political life of England" (2).

The Commissioners therefore recommended that "the classical languages and literature should continue to hold the principal place in the course of study". But to classics and religious instruction they suggested the

(1) Report of the Clarendon Commission, Vol I, P.32.
(2) Ibid, P.28

addition of mathematics, one modern language at least (French or German), one branch at least of natural science (Chemistry and physics or comparative physiology and natural history), and drawing or music. It was also desirable that boys educated in public schools should possess "a good general knowledge of geography and of ancient history, some acquaintance with modern history, and a command of pure grammatical English." In order to maintain a reasonable standard of attainments among the scholars the commissioners recommended that an entrance examination should be held in Greek, Latin, arithmetic and one modern language, and that no boy should be allowed to remain in school whose progress was unsatisfactory (1).

On the administrative side the recommendations of the Commission were as follows. New governing bodies were to be formed for the schools, and the powers of these bodies and those of the headmasters were to be clearly defined. School councils were to be organised which were to consist of either all assistant masters or representatives of assistant masters.

The publication of the Clarendon Report was followed by the Public Schools Act of 1868, which entrusted the business of giving effect to the recommendations of the Commissioners to a special commission consisting of six members. Each of the seven boarding schools (of the nine public schools two- St.Paul's and Merchant Taylor's - were day schools) was required to appoint a new governing body for its administration. The newly constituted governing bodies were given full powers in matters relating to fees, numbers of pupils, curriculum and religious instruction. The headmasters were to be appointed by the governing bodies and powers of appointing and dismissing assistant masters were in turn entrusted to the headmasters. The Public Schools Act limited State

(1) Report of the Clarendon Commission, Vol I, P.53f.

intervention to a very few matters, and the schools continued to enjoy complete independence, although they were controlled to some extent by the Charity Commissioners.

The publication of the Clarendon Report led to the realisation by the State of the need for a broader survey of secondary education in the country. It was as a consequence of this realisation that the Taunton (Schools Inquiry) Commission was appointed. The business of this Commission was to inquire into the education given in schools that did not fall within the scope of the Newcastle or Clarendon surveys. It was also "to consider and report what measures, if any, are required for the improvement of such education, having especial regard to all endowments applicable or which can rightly be made applicable thereto" (1). The twenty-one volumes of the Commission's Report were published in 1867 and during the two following years. The Report is invaluable both from the point of view of the breadth and completeness with which it handles the subject, and from the standpoint of its literary style.

The schools which came within the purview of the Commissioners were classified by them as endowed, private and proprietory. In a private school proprietor and principal were one and the same person. The proprietory schools, on the otherhand, were owned by joint stock companies, and the principal was a mere servant. The total numbers of these two groups of schools could only be vaguely estimated by the Commissioners. The endowed schools, according to an official digest prepared for Parliament, in 1842, numbered 2905, of which 705 taught Latin or Latin and Greek, and could be termed Grammar Schools. The remainder (2200) were non-classical schools which gave mere primary instruction to the children of the working classes. In the opinion of the Commissioners "the condition of school education above the primary

(1) Report of the Schools Inquiry Commission, Vol I, P.4.

was a chaos and the condition of the endowed schools is certainly not the least chaotic portion" (1). This chaos was attributed by the Commissioners to the fact that "there are few endowments applicable to secondary education which are put to the best use and very many which are working to little or bad use" (2).

The Commissioners were of opinion that three distinct grades of schools were required for the education of children above the primary level. "The wishes of the parents can best be defined in the first instance, by the length of time during which they are willing to keep their children under instruction. It is found that, viewed in this way, education, as distinct from direct preparation for employment, can at present be classified as that which is to stop at about fourteen, that which is to stop at about sixteen, and that which is to continue till eighteen or nineteen (3). Schools retaining pupils till the age of eighteen or nineteen were first grade schools, those retaining them till the age of sixteen were second grade schools, and those retaining them only till fourteen were third grade schools. In schools of the third grade the course of studies was to consist mainly of modern, particularly "English", subjects. These schools were compared by the Commissioners to the Sekundarschulen of Zurich and the Burgerschulen of Prussia, which were more advanced primary rather than secondary schools. The Realchulen of Germany was thought appropriate by the Commissioners for imitation by the second grade schools.

Of the three classes of schools - endowed, private and proprietory - the Commissioners found in the last class great hopes of future educational advancement both in organisation and curriculum. The

(1) Report of the Schools Inquiry Commission, Vol I, P.112.
(2) Ibid, P.106.
(3) Ibid, P.15.

private schools, in spite of the preference given in them to modern subjects, were, as noted earlier, inefficient in a majority of cases, the teaching in them being superficial rather than sound. This inefficiency of the private schools was due to the presence of assistant teachers not interested in their work. The headmasters of the private schools were often "men of first -rate ability and attainments..... more often alive to the needs of the time, better acquainted with the most approved methods of teaching, showing more skill and versatality in dealing with special cases.... The disadvantage under which the private schools labour in this regard is not the want of men of ability but the presence of pretenders (1). But the proprietory schools, though unsuccessful from the commercial point of view, were a great success educationally. Their reforms were in a majority of cases considered right (2).

For the better organisation of secondary education the Commissioners made some very important recommendations. A Central Authority was to be created for the control of all forms of secondary education over which, if possible, a Minister of Education was to preside. Secondly, Local Boards were to be set up by the Counties, the members of which were to be the chairmen of the Boards of Guardians together with half their number of nominees appointed by the Crown. Thirdly authoritative examinations of schools were to be conducted, and to supervise such examinations a Council of Examination was to be instituted. One half of the members of this Council was to consist of Crown nominees, and the other half was to consist of representatives of universities of Oxford, Cambridge and London. Lastly, a body of really efficient secondary teachers was to be

(1) Report of the Schools Inquiry Commission, Vol I, P.294.
(2) Ibid, P.314.

secured by the offer of certificates rather than by means of training colleges and the registration of teachers. In making these administrative recommendations the Commissioners were chiefly guided by the example of Prussia whose educational advance was greatest among the Protestant countries of Europe.

In 1869 Parliament passed the Endowed Schools Act which gave partial effect to the recommendations of the Taunton Commission. The Act appointed three Endowed School Commissioners who were to draft schemes for the better application of educational endowments; but the seven public schools, the endowed elementary schools, the newly endowed schools and schools connected with cathedrals were all exempted from their action. The Commissioners' schemes were to be approved by the Education Department before submission to the Queen in Council. Schemes that were so approved acquired the force of law. The Endowed Schools Act of 1874 transferred the powers of the Endowed Schools Commissioners to the Charity Commissioners. By this date 235 schemes had been approved and passed into law.

The work of the Schools Inquiry Commission gave a special impetus to the education of girls. To the Commissioners girls' education was a matter of no less national importance than the education of boys. They were of the opinion that mere accomplishments and the "gentler graces and winning qualities of character" were not all that the girls were to be expected to gain as a result of their education. "The most material service may be rendered to the husband, in the conduct of his business and the most serious branches of his domestic affairs, by a wife trained and habituated to a life altogether different from that of mere gentleness and amiability of which we have spoken; a life of no slight intellectual proficiency, and capacity for many

functions too commonly thought to be reserved for the male sex" (1). To gain such results there were to be no differences in the curricula of schools for boys and those for girls, except those which might be the outcome of practical necessity. The difference between the intellectual training of boys and that of girls was to consist in the methods of training rather than in the choice of subjects for study.

The condition of girls' education at the time of the Taunton Inquiry was very deplorable. "Want of thoroughness and foundation; want of system; slovenliness and showy superficiality; inattention to rudiments; undue time given to accomplishments, and those not taught intelligently or in any scientific manner; want of organisation - these may sufficiently indicate the character of the complaints we have received in their most general aspect. It is needless to observe that the same complaints apply to a great extent to boys' education. But on the whole the evidence is clear that, not as they might be but as they are, the Girls' Schools are inferior in this view to the Boys' Schools." (2).

Such a deplorable state of the education of girls was due to two main causes, and the Commissioners sought to remedy the condition by removing the causes. In the first place it was due to "the appropriation of almost all the endowments of the country to the education of boys" which "was felt by a large and increasing number, both of men and of women, to be a cruel injustice." The Commissioners were of opinion that in reorganising educational endowments a fair share of such endowments should be applied to the education of girls. The backwardness was, in the second place, due to inefficient

(1) Report of the Schools Inquiry Commission, on the Education of Girls, Reprinted with the Sanction of Her Majesty's Commissioners - By D.Beale, London, David Nutt, P.2.

(2) Ibid, P.3.

staffing which, in turn, was due to lack of opportunities for the teachers to receive higher education. To meet this deficiency the Commissioners recommended the establishment of colleges for women which would take the place of universities (1). Teachers in girls' schools were to have some examinations open to them by which their attainments could be judged. The pupils in girls' schools were also to have examinations similar to those for boys. As a final method of securing improvement the Commissioners suggested the inspection of schools (2).

The interest which the Commissioners took in investigating the state of girls' education and their attempts to get a fair share of the endowments for schools for girls brought about a great improvement in the number and condition of girls' schools. But the advance was due more to private efforts which began during the early years of the Victorian Era. Prominent women interested in the cause of feminine education were Francis Mary Buss, Dorothea Beale and Emily Davies.

The success of their attempts was largely due to the fact that the Industrial Revolution made the problem of girls' education, if not as urgent as that of boys, at least much more urgent than during the pre-industrial days. The economic changes of the early nineteenth century largely increased the leisure of women also, and it was necessary that they should be educated to make a right use of it. The rapid progress in the education of girls and of women during the years following 1870 was undoubtedly a consequence of the changed economic position of women which stimulated private efforts for promotion of their education, rather than a consequence of any governmental activity, although the increasing interest of the state in the education of

(1) Beale - Schools Inquiry Report on Girls' Education, P.14.
(2) Ibid, P.9.

girls cannot be denied. We shall see in a later chapter how the improvement in the education of girls and women led to their agitation for the University Extension lectures.

V

In spite of the elaborate survey of secondary education which the Taunton Commission undertook, its effects, as noted already, were mild and indirect, even as the effects of the Clarendon inquiry were mild. The main object of the Commissioners, namely, of organising secondary education on a national basis, was not fulfilled, and the cause of this failure, as Mathew Arnold saw it, was that "the upper class amongst us do not want to be disturbed in their preponderence, or the middle class in their vulgarity. Even though these prejudices are unconscious the result is just as hurtful" (1). Yet the last 25 years of the nineteenth century were a period of great advance in English secondary and university education. The English public had come to realise, more than ever before, that education was a great social need, and the state had no other course to adopt than to provide all possible means of giving the people a sound primary and secondary education. The Reform Acts of 1867 and 1884 effected a very remarkable extension of the franchise, and the right use of this increased political power meant "educating the masters" much more than what was thought to be necessary in 1870, at the time of the passing of the Elementary Education Act. "The work of Charles Booth on 'Life and Labour in London', the activities and manifestoes of the Fabian Society, the opening of social settlements among the poor, and a succession of serious strikes helped to concentrate

(1) Arnold, M. in Ward, T.H. - Reign of Queen Victoria, P.277.

attention on social evils and defects that needed to be corrected" (1).

The appointment of the Bryce Commission, in 1894, was the outcome of forces such as those mentioned above, and its mandate was "to consider what are the best methods of establishing a well-organised system of secondary education in England, taking into account existing deficiencies, and having regard to such local sources of revenue from endowments or otherwise as are available or may be made available for this purpose and to make recommendations accordingly." The Commission made exhaustive inquiries into the existing state of English secondary education, and also gathered vast information on secondary education in the Dominions, in the U.S.A., and in most countries of Europe.

The Commissioners attempted to define secondary education in the light of the changes that had taken place in public education since 1870. The earlier definitions were found to be unsatisfactory, especially when so many new types of school had come into existence, and the number of school studies and the duration of school-life had been so considerably increased. To the Bryce Commissioners secondary education was "the education of a boy or girl not simply as a human being who needs to be instructed in the mere rudiments of knowledge, but it is a process of intellectual training and personal discipline conducted with special regard to the profession or trade to be followed" (2).

The Commissioners were of opinion that a strict line of demarcation could not be drawn between 'secondary' and 'technical' education. The two were, however, not identical; they differed as genus and species. "Secondary education, therefore, as inclusive of technical, may be

(1) Kandel, History of Secondary Education, P.340.
(2) Report of the Bryce Commission, Vol.I, P.130f.

described as education conducted in view of the special life that has to be lived with the express purpose of forming a person fit to live it" (1).

The main task of the Commissioners was to suggest measures for the establishment of an efficient system of secondary education. They recommended the creation of a Ministry of Education, which was to have control over the various departments of government concerned with secondary education. An Educational Council consisting of twelve members - one third appointed by the Crown, one third by the universities of Oxford, Cambridge and London, and one third selected by the other members from amongst experienced members of the teaching profession - was to assist the Minister in matters of general policy. The Commission laid emphasis on the registration of teachers, a measure first advocated about 25 years earlier, but in regard to which no successful legislation had yet been established. The Educational Council was to maintain a register of teachers, and registration was to be subject to the possession of a degree or a certificate of attainments granted by a university or other recognised body.

The administrative policy which the government was to adopt for the proper conduct of elementary, secondary and technical education was a policy of decentralisation (2). The Central Authority was to have "little direct executive power", and its main business was to guide, encourage and furnish all necessary information to Local Education Authorities which were to be created in all the counties and county boroughs. All executive functions were to rest in the hands of the local authorities.

The publication of the Bryce Report was followed by the Education Act of 1902 which gave effect to its

(1) Report of the Bryce Commission, Vol I, P.130f.
(2) Ibid, P.276.

recommendations. It was impossible to confine legislation to any one particular grade of education, and the Act established a complete system of elementary, secondary and technical education. It would be superfluous to go into the details of its provisions, all of which have been given in the preceding chapter. All that is necessary to say is that the Act created, in the place of School Boards, School Attendance Committees and Technical Instruction Committees, Local Education Authorities which the Commission recommended, and all executive power was vested in them. The Central Authority which the Commission recommended was already in existence, though its functions did not exactly coincide with what the Commissioners wanted them to be.

So much for the progress of secondary education during the last quarter of the nineteenth century. But the advance which England made in the direction of higher education was greater still. Reference has already been made to the development of 'Schools' and 'Triposes' in various subjects in the universities of Oxford and Cambridge during the latter half of the last century, and to the formation of the seven new universities. But the most far-reaching consequences of the new industrial civilisation are to be seen in the further extension of university education among women and in the movement for extension of university teaching beyond the walls of the universities, known commonly as the University Extension movement. We shall enter into detailed accounts of these movements in a later chapter.

VI

An attempt has been made, throughout this chapter, to show the extent to which English Secondary and University education were affected by the Industrial

Revolution. We shall now summarise our views on the subject. As noted earlier, State intervention in secondary education did not begin until the sixties. Even in matters relating to primary education state activity began as late as during the thirties, although the Industrial Revolution had made the problem urgent much earlier. Laissez faire was the dominant creed of the government throughout the latter half of the eighteenth and the beginning of the nineteenth centuries. It was this attitude of the State that had to be combated by the philanthropists amd some far seeing statesmen like Brougham and Roebuck before any substantial state provision could be made for the education of the poorer classes. But more important than the efforts of philanthropists and statesmen was the desire of the working classes themselves to enjoy the benefits of a good education. Their steadily growing standard of living and the knowledge of reading which they acquired in the Sunday Schools led to their ambition for better educational facilities and to their dissatisfaction with the State's laissez faire policy. Such dissatisfaction led to the Chartist movement (an account of which has been given in the first chapter) which was a movement for the political and economic security of the working classes. It was Chartism that was at the bottom of the movement for reform of Parliament, and the Reform Acts which extended gradually the political power of the workers were all followed by Parliamentary measures for the better education of the poorer classes. The work of the Committee of Council during the first ten years of its appointment, under the able guidance of Kay-Shuttleworth resulted, as we saw, in the spread of elementary schools all over the country. But it was not until 1870, when the Education Act was passed, that literacy among the working classes increased to any

considerable extent, and it was not till then that any demand arose from the people for increased facilities for secondary education. It is this lack of demand that accounts for the long-delayed intervention of the State in matters relating to secondary and higher education. The causes of more effective state intervention during the latter half of the nineteenth century are not to be sought in the fact that laissez faire was no longer the dominant creed. Even the most liberal governments of the last century were more conservative than the most conservative governments of today, and if during the latter half of the last century a number of Royal Commissions were appointed to investigate the condition of secondary schools, and to advise on the organisation of an effective system of secondary education, it was because fundamental changes in society had taken place, and the demand arose from all sections of the population for a secondary education which alone, they realised, would fit them for professions and at the same time give them culture, primary education being regarded by them as merely furnishing the tools necessary for the acquirement of a secondary training.

But, if the need of secondary education for all was not felt till the last decades of the nineteenth century, the need of an education specially suitable for business careers became urgent much earlier among members of the rich merchant classes whose numbers had increased since 1760, and who formed the new aristocracy of wealth. It was this special need, which could not be satisfied by the Grammar and Public Schools, that led to the growth of a new type of schools, the academies, which, as we have seen earlier, gave instruction in a number of modern and commercial subjects. Thus the first and most important consequence of the Industrial Revolution in the sphere of secondary education was the rise of the

academies or private schools which were responsible for all later changes in the curriculum. The Grammar Schools, as noted already, were very little affected. The unpopularity into which they fell made some able headmasters, like Butler and Arnold, alive to the need of widening the curriculum in partial deference to the wishes of the business classes. Modern subjects were made part of the regular courses of studies by Butler at Shrewsbury and by Arnold at Rugby, and the practice became fairly general later; but the staple of the curriculum has continued, down to the present century, to be the classics.

The chief characteristic of all English institutions - whether political, social or educational - has been that resistance to change, that reluctance to change the old order, which has been true in the case of the Public Schools as well as in the case of the older Universities, those of Oxford and Cambridge. But it is a characteristic the presence of which is to be commended rather than condemned, for this alone was responsible for the growth of new institutions to suit the new changes that were wrought in society from time to time. As the Grammar Schools adhered to their classical curriculum, varieties of private schools came into existence; as Oxford and Cambridge also till very recently gave a predominance to the classics, and excluded the Dissenters and the poor from a university education (the former by religious tests and the latter by their prohibitive cost), the seven new universities were formed, which gave higher education in scientific and commercial subjects. The provincial universities were almost entirely a consequence of the complete industrialisation of England (their rise was partly due to the religious tests against the Non-conformists), even as the private schools, which trained the children

of the commercial classes for business careers, were a product of the Industrial Revolution.

The provision for secondary and higher education which existed in England about the middle of the nineteenth century consisted of the Grammar and Public Schools, the various types of private schools, the ancient universities and the seven new universities. All these institutions, secondary as well as university, were the products of private initiative and enterprise. While in the field of elementary instruction the result of ~~xxx~~ state intervention has been to make substantial provision for schools of the elementary grade, and to make elementary education compulsory, in the field of secondary learning the main business of the state has been not so much to provide schools, as to reform the existing schools to suit the changed social conditions created by the Industrial Revolution, and to establish a national organisation for secondary education.

The Schools Inquiry Commission and the Bryce Commission recommended - it has been noted earlier - the appointment of a Central Authority the main functions of which were to guide, encourage and supply information in all educational matters. The Bryce Commission recommended also the creation of Local Education Authorities in the Counties and County Boroughs, which were to exercise all executive functions. The Education Act of 1902 gave effect to these recommendations, and the result, as we have seen already, was the establishment of a national system of elementary, secondary and technical education.

From 1902 onwards the principle that public money is needed for secondary education became generally accepted, and the state during the last four decades has done its utmost to make the best provision for secondary education, and to place it within the means of

all those who could benefit by it. But even before 1902 the State aided secondary education, though indirectly, through the grants of the Science and Art Department, through the Technical Instruction Act (1889) which permitted county councils to spend money even on such general education as would fit pupils to attend technical courses, and lastly through the provision which School Boards in large towns were allowed to make for "higher grade" schools, in addition to the usual provision for elementary schools.

The increased interest of the state in secondary education since 1902 has led not only to the extension of facilities for secondary education to all those who are fit to receive it, but also to the provision of various types of secondary training to suit the varying capacities and tastes of the pupils. It is to England's great commercial and industrial expansion - which began at the close of the eighteenth century, has continued through the nineteenth, and is still going on - that all those developments in her secondary and higher education, which have been enumerated above, can be attributed.

CHAPTER VII

TECHNICAL EDUCATION - ITS BEGINNINGS AND PROGRESS.

I

In the second and third chapters and again in the fifth detailed accounts have been given of the miserable plight of the English child-workers in factories and mines during the transitional years of the Industrial Revolution, and of the efforts which the philanthropists and a few benevolent statesmen made to improve the conditions of their work, and to provide facilities for their education. While statesmen like Peel and Brougham agitated for state-intervention in matters concerning the health and education of child-workers, philanthropists like Bell and Lancaster had already begun the gigantic task of instructing them in the three Rs by using the Monitorial method. About the same time the idea gained ground that adult workmen should be provided with a knowledge of such scientific principles and facts as had a direct relation to the work in which they were engaged. If Malthus formulated the theory that population tended to increase more rapidly than the means of subsistence, the new scientific discoveries gave men the confidence that the world's resources would not fail if only they made full use of their inventive genius. Francis Place taught men that machinery could "beat population in the race", if the operatives that assisted in the work of production knew something of its processes, if scientific knowledge could be placed within access of all sections of the population, more especially within reach of the working classes.

It was the prevalence of such ideas among

scientists and philanthropists that led to the founding of Mechanics' Institutes in England, which give us the first traces of technical instruction in the country. Birmingham may claim to have had the first Mechanics' Institute; but the movement really began in Scotland, and its originator was Dr.George Birkbeck, Professor of Natural Philosophy at the Andersonian Institution of Glasgow. In the year 1800, when Birkbeck required some apparatus for his lectures, he went to a tinman's shop in Glasgow, and explained to the workmen the principles that underlay the working of the models he wanted. To his great surprise Birkbeck found the workmen so intelligent and eager to learn, that he decided to admit some of them to his lectures. A little later he arranged separate lectures in Physical Science on Saturday evenings to meet the special needs of the mechanics. Birkbeck very clearly expressed his aims in the Prospectus for the session: "I have become convinced", he wrote, "that much pleasure would be communicated to the mechanic in the exercise of his art, and that the mental vacancy which follows a cessation from bodily toil would often be agreeably occupied by a few systematic philosophical ideas, upon which at his leisure he might meditate. It must be acknowledged, too, that greater satisfaction in the execution of machinery must be experienced when the uses to which it may be applied and the principles upon which it operates are well understood, than where the manual part alone is known, the artist remaining entirely ignorant of everything besides; indeed I have lately had frequent opportunities of observing with how much additional alacrity a piece of work has been undertaken when the circumstances were such as I have now stated" (1).

(1) S.G.Goddard: George Birkbeck (1884).P.25.

His methods were also quite simple. "I shall deliver a series of lectures upon the mechanical properties of solid and fluid bodies, abounding with experiments and conducted with the greatest simplicity and familiarity of illustration, solely for persons engaged in the practical exercise of the mechanical arts" (1). Such lectures were very interesting as well as useful to mechanics who attended them in very large numbers. In 1804 Birkbeck left Glasgow, and settled down in London to practise as a physician, but the Mechanics' classes were continued by Dr.Ure. A few years later, however, the managers of the Andersonian Institution became indifferent to the interests of the workmen, and arranged lectures for them at wider intervals. This led to the withdrawal of the mechanics from the institution, and to the consequent founding, in July, 1823, of the Glasgow Mechanics' Institution, of which Dr.Birkbeck became patron. This was followed, in November, 1823, by the founding of the London Mechanics' Institute at Southampton Buildings, in Chancery Lane. Two years later the Institute was shifted to a new building which contained a spacious lecture hall, a lending library of two thousand volumes, a reading room and a newsroom. There was accommodation also for classes and an elementary school. During the first year 800 artisans attended a lecture on Chemistry, and the number of artisans on the books was 1300. (2)

The years 1815 to 1825 saw the opening of Mechanics' Institutes in all parts of England. In almost every industrial town efforts were made to establish institutes on the London model. The movement extended even to Dublin and Cork, to Aberdeen, Hawick

(1) S.G.Goddard, op cit, P.24.
(2) Dobbs: Education and Social Movements, P.74.

and Ayr. In 1850, there were in England 610 Mechanics' Institutes with a membership of 102,050 (1). But very soon the Mechanics' Institutes began to lose their popularity. This was because the majority of workers, owing to lack of even the ordinary rudiments of learning, were unable to follow the lectures that were delivered at the institutes, simple and specially designed for workers as they were. As the workmen, due to diffidence and shyness arising from want of education, dropped away from membership, the institutes were soon filled with a large number of members "nineteen twentieths" of whom were "not of the class of mechanics", but were "clerks in offices, and in many cases young men connected with the liberal professions" (2).

This decline had set in as early as during the 'forties, and especially from 1848 a great majority of the Institutes became reading clubs and places of literary entertainment. A few of the Mechanics' Institutes, however, like those in Birmingham, Edinburgh, Glasgow, Liverpool, Manchester and London were "more or less successful in their original aims," and they continued until, with the financial aid they received from the Science and Art Department, from the City and Guilds of London Institute and later on from the State and municipalities, they developed into Technical Institutes and Colleges (3).

One other cause of the decline of Mechanics' Institutes in England was that their methods of teaching were faulty. The right methods of technical instruction were not understood until about 1874 when the Artizan's Institute, which was the first body of its kind to attempt "the systematic instruction of

(1) Hudson: History of Adult Education (1851), Preface P.VI.
(2) James Hole: History and Management of Literary, Scientific and Mechanics' Institutes, P.21.
(3) Millis: Technical Education, 1925, P.20.

apprentices and workmen in the principles of science.... and in the technical application of those principles to actual work", was formed, and when the influence of the Elementary Education Act of 1870 and of the work of the Science and Art Department began to be felt (1). Yet the Institutes "afforded during many years of educational obscurity a glimmer of light which enabled a few of the more gifted working classes to grope after the knowledge they required" (2).

II

Interest in technical education - if not of artisans and workmen, at least of the middle and higher classes - was kept up during the second quarter of the nineteenth century by the two newly founded institutions of an undenominational type, namely, the University and King's Colleges, London. Birkbeck, whose interest in the promotion of scientific learning among the working classes was profound, was equally interested in the promotion of such learning among the upper classes. He bitterly lamented the total absence of a knowledge of physical science among them, and said that "to find their carpenters, their bricklayers and their shoemakers with greater knowledge than they themselves possessed would be a dangerous solecism" (3). This anxiety of Birkbeck well explains the part he played in the founding of University College, London. King's and University Colleges, London, and Owen's College, Manchester, (established in 1851) were, for many years, the only institutions which gave a professional education for architects, engineers and chemists; and although "their schemes of instruction were not very definitely prepared

(1) Millis, op cit, P.19.
(2) Sir Philip Magnus on Industrial Education, in "Education in the Nineteenth Century", Ed. by R.D.Roberts, 1901, P.155.
(3) Goddard: op cit, P.90.

with a view to technical pursuits", they extended an influence which was "a very potent factor in the subsequent development of the higher technical education" (1).

But the education of the working classes in principles of science connected with their daily operations was not altogether neglected during the second quarter of the nineteenth century. In 1826 the Society for the Diffusion of Useful Knowledge was established with Lord Brougham as its president. Brougham, as already noted in the earlier chapters, was a great champion of popular education, and achieved not a little success in this field during years when the state followed an extreme laissez faire policy in educational matters. His "Practical observations upon the Education of the People addressed to the Working Classes and their Employers" was an attempt to create among the workers a spirit of self-help in matters concerning their education. The pamphlet suggested ways and means by which the working classes could educate themselves without much help from the state or from private sources. First, it suggested the founding of Mechanics' Institutes like those of Glasgow and London, and secondly it proposed other agencies for education like the library, the reading room, laboratory, workshop and drawing classes. It was for the fulfilment of the latter aim that the Society for the Diffusion of Useful Knowledge was founded, and the Society gave a great impetus to popular education by providing at a cheap rate a whole library of books useful and interesting to the working classes. The Society existed for nineteen years, and during this period it was responsible for the publication of a number of periodicals like The Penny Magazine, The Penny Cyclopaedia (edited by Charles Knight),

(1) Sir Philip Magnus on Industrial Education, R.D.Roberts, op cit, P.156.

The Library of Entertaining Knowledge, The Library of Useful Knowledge, etc. These publications helped to spread scientific and general knowledge among workers who could read, although such workers formed only a minority among their class.

Among other bodies which took an interest in the promotion of technical education in England during the second quarter of the nineteenth century mention should be made of the Society of Arts and the Royal Institution. The former was founded as early as 1754 by a number of private persons "for the encouragement of arts, manufactures and commerce in Great Britain". The Society offered medals and money prizes for all valuable inventions. From the year 1829 the Society rendered very useful service by arranging periodical lectures. A few years later it added to its programme the reading and discussion of "Papers". Soon after his marriage, in February, 1840, Prince Albert was elected a member of this Society, and in 1843 he was elected President, in succession to the Queen's uncle, the Duke of Sussex. He held this office until his death in 1861, and he was largely responsible for the increased usefulness of the Society throughout the period. The importance of the Society was further enhanced when a Royal Charter was conferred on it (1847), and when the practice of holding industrial and fine art exhibitions was begun. It was the success of these exhibitions which led to the great international exhibitions the first two of which were held in London in 1851 and 1862.

The exhibition of 1851, the Great Exhibition, as it is frequently called, was an epoch-making event in the history of English Technical Education. The Prince Consort took a prominent part in organising it, and among others who rendered valuable services were Sir Henry Cole and Lord Playfair. Sir Wemyss Ried

considered the event as "the starting point in the modern history of English manufactures and arts." It gave English industrialists an opportunity of comparing their goods with those manufactured in foreign countries and showed great possibilities of improvement from an increased application of Science to Industry. But more important than the Exhibition itself were its consequences, which greatly accelerated the progress of English Technical Education. The surplus profit of £186,000 which arose out of the Exhibition was used for the purchase of land in South Kensington for the establishment of a central institution "for the dissemination of a knowledge of science and art among all classes" (1). The estate subsequently became the site of the South Kensington Museum and the headquarters of the Science and Art Department which was constituted in 1853, and which may be regarded as a direct outcome of the Exhibition.

The Great Exhibition served to convince English manufacturers of the superiority of foreign systems of industrial education and of the fact that Germany and Switzerland were fast becoming England's industrial rivals. This led to an inquiry on industrial instruction which the Society of Arts held, and a report thereon which it published in 1853. In the same year the Society held a conference to which it invited representatives of Mechanics' Institutes and of other kindred organisations (2). Such conferences were continued every year down to 1875. A small educational exhibition was held in Guildhall in connection with the conference of 1853, and its success led to a proposal for a similar exhibition on a larger scale to be held during the following year. Prince

(1) H.T.Wood: A History of the Royal Society of Arts, P.375.

(2) Ibid, P.370.

Albert warmly approved of the proposal, and promised to subscribe a sum of £100 (1). The exhibition proved very successful, contributions having been secured with the assistance of the Foreign Office from eleven foreign countries. "The exhibits included educational apparatus and appliances of all sorts, school buildings (shown in plans and models) and fittings, books, maps, etc., together with samples of work produced at schools" (2). All the exhibits later on formed the nucleus of the educational exhibition of the Victoria and Albert Museum at South Kensington.

The Society of Arts started a system of examinations the proposals for which originated in the conference of 1853. In 1854 it published a scheme of examinations which was so elaborate that it proved impracticable, and only one candidate offered himself for examination in March, 1854. In 1856, therefore, the scheme had to be remodelled, and 62 candidates appeared at the examination held during this year at the Society's House. During the years 1857 and 1858 the Society extended its examinations to the provincial towns (3). These examinations indirectly paved the way for the examinations of the Science and Art Department; but as the systems of examinations of the two bodies tended to become identical, the Society of Arts reorganised its scheme in 1870, dropping away the non-commercial subjects, and retaining only those subjects which were considered to be of a definitely commercial value (4). The term,'commercial' was, however, interpreted quite liberally to include the technological subjects in which the Society conducted examinations from 1873 at the suggestion of Sir John Donnelly (5).

(1) H.T.Wood, op cit, P.370.
(2) Ibid, P.371.
(3) Ibid, PP.426-27.
(4) Ibid, PP.430-31.
(5) Ibid, P.437.

The Society of Arts rendered very valuable services to the country at a time when the State's activity in matters relating to scientific and technical education had not yet begun. The Society was a purely private organisation, and it received no financial aid from the state; but distinguished men of letters, especially scientists, took a great interest in its activities, and they rendered honorary services to it by acting as lecturers and examiners.

The Royal Institution was founded in 1799 by Count Rumford (Benjamin Thomson of Woburn, Massachusetts), a great eighteenth century philanthropist, who did much to improve the conditions of living of the poor in England and on the Continent. Indeed the one chief ambition of all his scientific inventions was the improvement of the material comforts of the poor, and this was in full agreement with the desires of Sir Thomas Bernard, also an American, of William Wilberforce, and of Shute Barrington (Bishop of Durham), who were the first members of the "Society for Bettering the Condition and Increasing the Comfort of the Poor". Soon after the foundation of the Institution, in 1800, Rumford obtained government support through a Royal Charter. The Institution henceforth became known as "the Royal Institution of Great Britain", incorporated "for diffusing the knowledge and facilitating the general introduction of useful mechanical inventions and improvements; and for teaching by courses of philosophical lectures and experiments the application of science to the common purposes of life." (1) This aim was sought to be achieved during the early years of the Institution's life by the establishment of an industrial school for mechanics

(1) Bence Jones, The Royal Institution, P.121.

where the principles underlying various crafts were taught. Bricklayers, joiners, tinmen and iron-plate workers formed the bulk of those who received such instruction.

From the very early years of the Institution's foundation popular lectures in Science were delivered, and these were attended in large numbers, especially by members of the upper classes. From 1803, however, when Rumford's connection with the Institution ceased, and he went abroad to serve his master, the Elector Palatine of Bavaria, the popular science side began to be developed exclusively, to the neglect of the school for mechanics. Humphrey Davy "a nice able man" was appointed assistant lecturer at the Institution in 1802, and after Rumford's departure the managers of the Institution attached the first importance to the laboratory and a large reference library. In 1805 Davy became Professor of Chemistry, and during the two following years he made a series of discoveries that made him and the Institution famous throughout Europe. Davy's assistant was Michael Faraday who, in 1831, became world-famous on account of his researches in electricity. In 1833 Faraday was appointed the first Fullerian Professor of Chemistry, and his continued researches were responsible for the success of the Royal Institution during later years (1).

From the above accounts of the work of the Society for the Diffusion of Useful Knowledge, the Society of Arts and the Royal Institution, it should be clear that previous to the establishment of the Science and Art Department which, as pointed out earlier, was the outcome of the Great Exhibition of 1851, these institutions rendered very useful services to the

(1) Adamson, J.W. English Education, PP.390-91

working classes by their efforts to educate them in the principles of science connected with their daily routine. King's and University Colleges, London, and Owen's College, Manchester, as noted earlier, provided scientific instruction at the university level for the middle and upper classes.

III

The establishment of the Science and Art Department marked a very important stage in the history of English Technical Education. It was, as has been shown earlier, one of the chief consequences of the Great Exhibition which convinced English manufacturers of the superiority of foreign systems of industrial education over their own, and of the urgent necessity to improve the facilities for such instruction if England was to compete successfully with her Continental rivals in the field of manufactures.

The foundations of the Department were really laid in 1852, when a Department of Practical Art, under the supervision of the Board of Trade, was created to administer the Schools of Design, which were since their establishment in 1837 under the direct management of the Board of Trade. To this department was added a second department in 1853, and the departments thus amalgamated came to be known as the Science and Art Department (1). The Department was under the control of the Board of Trade till 1856, when it was transferred to the newly formed Education Department. During the ten years which followed its creation the Department rendered useful services by establishing science schools in various parts of the country to suit local requirements. In 1851 there were only thirty-eight science classes with 1300 pupils in the whole of England. In

(1) Adamson, J.W., English Education, P.318.

1861 the science schools had increased to seventy and the total number of pupils to 2543 (1). The Department assisted these schools by a system of Grants to which Parliament had consented, and which became known as South Kensington grants. The amount of grant received by the schools depended on the results of the annual examinations conducted by the Department in April and May, and the subjects of the examination were geometry, mechanical and machine drawing and building construction, naval architecture, physics, chemistry, geology, mineralogy, Zoology and botany.

The usefulness of the Science and Art Department was enhanced by the support lent to it from the very early years of its organisation by Thomas Huxley. While writers, like Spencer, Mill and Farrar, served the cause of scientific education indirectly, by recording their protests against the neglect of science in education, and thus voiced the general discontent that existed at the time, Huxley's services consisted in the actual work that he did to promote scientific education. In 1854 he was appointed Professor of Natural History in the Government School of Mines, Jermyn Street. The very next year he started his lectures to workingmen which he designated "People's lectures". The attendance at these lectures was so large that, in 1861, Huxley could say, "My working men stick to me wonderfully, the house being fuller than ever last night". In 1858, with the co-operation of Tyndall and J.D.Hooker, Huxley attempted to publish a science periodical for the benefit of the lay public. The attempt was a failure; but Huxley and his colleagues subscribed regularly a fortnightly article to the Saturday Review.

Among Huxley's other engagements the chief

(1) Archer, R.L., Secondary Education in the Nineteenth Century (1921), P.138

was his lecturing, at Marlborough House, for the Science and Art Department. He was an examiner for the Department from a very early date, and he regarded the examinations as "the most important engine for forcing science into ordinary education". The early success of the Science and Art Department was due in a great measure to the assistance rendered to it by Huxley, by acting for it both as an examiner and a lecturer. But the general policy of the Department was subject to a wide-spread and, indeed, fairly reasonable criticism. Though the Department had succeeded, through its grants, in increasing the science schools, it failed to achieve the most important object for which it was founded, namely the establishment of a central school of science which was so necessary for procuring a supply of efficient teachers of science. In place of a school for the training of science teachers the Department substituted an examination for them, which merely helped them to obtain a knowledge of scientific facts. The teachers who qualified for these examinations lacked in real training to teach, and consequently they 'mistook cram for education' (1).

Apart from the lack of proper training for teachers, which led to cramming in the science schools, there were two other distinct causes which contributed to this result. In the first place the increments in teachers' salaries depended on the possession of a 'science certificate', and the more the number of such certificates a teacher possessed, the greater were the chances of his promotion. This led ambitious teachers to add certificate to certificate, which in no way improved their efficiency, but, on the other hand, definitely increased their greed for promotion. Another factor which encouraged cramming in the science schools

(1) R.L.Archer, op cit, P.138.

was that the amount payable to a school depended, as noted earlier, on the success of students at the annual examinations conducted by the Department. This concentration on examinations became so unhealthy that it was remarked about the pupils that "they cram to pass and not to know, they do pass and they don't know". Even in the few instances of schools where there might have been no cramming there was a definite lack of co-ordination, the students studying one branch of science without any regard for its association with other branches (1).

Circumstances such as these, and the progress of technology abroad, especially in Germany and Switzerland, which caused great anxiety among English manufacturers, led in 1870 to the appointment of a Royal Commission "to make enquiry with regard to scientific instruction and the advancement of science, and to enquire what aid thereto is derived from grants voted by Parliament or from endowments belonging to the several universities in Great Britain and Ireland and the colleges thereof, and whether such aid could be rendered in a manner more effectual for the purpose." The Chairman was the seventh Duke of Devonshire, Chancellor of the University of Cambridge. The Commission began work immediately, and between 1870 and 1875 it issued a number of reports fully accomplishing the work entrusted to it. It thoroughly investigated the teaching of science in institutions of all grades - those directly under government control, elementary schools and training colleges, Science and Art Department classes, the universities, museums and other national collections.

The Commissioners were of opinion that government schools of pure and applied science 'did not work in concert', and their premises were not suitable for their special tasks. They recommended

(1) Adamson, J.W., English Education, P.413.

that the Royal School of Mines and the Royal College of Chemistry should be united as a School of Science, and that a building should be provided for it at South Kensington from among those which were under construction there for a projected School of Naval Architecture and Science. The School of Science which the Commissioners proposed was to undertake the instruction of teachers of science.

Among those that gave evidence before the Commission Huxley and Henry Cole, Secretary of the Science and Art Department, were very prominent. Huxley was a member of the Commission as well, and both in the capacity of member and witness he exerted his influence to the utmost. In the course of his evidence Huxley stressed the importance of teachers' training. "If I were to propose an ideal system", Huxley urged, "I should like to have all these teachers passed through a normal school in London, through a proper training school for teachers.....You will never get thorough scientific training in the country till that is the case." Huxley differentiated between "training to teach" and imparting a knowledge of subject matter, and feared that the latter was being mistaken for the former (1). He insisted that the training should be open to both secondary and elementary teachers, and it should consist of instruction not in purely technical subjects but in pure science, for the arts and crafts could be best learned in workshops. The object of lecture rooms and laboratories, he thought, was to help students to grasp principles, but not to acquire mastery over the arts.

Henry Cole stated in the course of his evidence that much of the science teaching in connection with the Science and Art Department was done by

(1) Report of the Devonshire Commission, Minutes of Evidence, QQ. 289, 292.

certificated teachers who were employed during the day in elementary schools, ahd supplemented their low salaries by teaching science at the Department's evening classes. To Huxley this state of affairs proved the "somewhat surreptitions position which science occupies at present." (1)

The Commission finally thought that the Revised Code, which had an adverse effect on the elementary schools, affected the training colleges and the Science and Art classes also. They recommended that certificated teachers should be given all possible assistance to qualify as teachers of science. This was the most direct method of improving the teaching of science in schools. The other recommendations were only to create a general taste for science among the lay public and the working classes in general. For instance it was suggested that the treasures in the national collections,museums, etc., should be explained in public lectures. The educational collection at South Kensington was to be employed to teach the general principles of elementary science, especially to the working classes who could thereby learn more thoroughly the application of science to industry.

The publication of the reports of the Devonshire Commission led to some very important developments in English Technical Education. The action was not, however, taken by the state, which felt that nothing more could be done in this direction than the assistance it was rendering through the Science and Art Department. Dr.Playfair, Sir John Lubbock and other members of Parliament made a series of attempts to induce Government to adopt effective measures for the proper teaching of science in schools and colleges; but, as Huxley pointed out, the Government only expressed

(1) Report of the Devonshire Commission, op cit, Q.314.

"warm admiration for science in general and reasons at large for doing nothing in particular." (1) It was therefore left to private organisations like the City of London Liveries Companies to carry out a scheme for technical education by employing whatever funds they could spare for the purpose. On July 3, 1876, it was resolved at a meeting of representatives of the Livery Companies of London, held at the Mansion House, that "it is desirable that the attention of the Livery Companies be directed to the promotion of Education not only in the Metropolis but throughout the country, and especially to technical education, with the view of educating young artisans and others in the scientific and artistic branches of their trades." (2) The out-come of this resolution was the foundation, in 1878, of the City and Guilds of London Institute for the advancement of technical education. Philip Magnus was appointed director and secretary of the Institute in 1880. The foundation of the City and Guilds Institute was a very important step towards the establishment of a national scheme for technical education. The Institute opened, in 1881, its Technical College in Finsbury where evening classes were held for artisans, and boys were trained for positions of foremen and other situations in the field of industry. The Central Institute at South Kensington was opened in June 25, 1884, by King Edward VII (then Prince of Wales), the President of the City and Guilds Institute. At the Central Institute young men received training for different forms of engineering and of manufacture. Training was also given to teachers who desired to teach science in schools. The training of science teachers was due almost entirely to the

(1) Huxley, "Science and Education" in Collected Essays, P.418.
(2) Quoted, Millis, opcit, P.54.

efforts of Huxley, who so eloquently put forth his arguments for training before the Devonshire Commission, and who later on became an active member of the Institute's Council. The City and Guilds Institute opened later, at Kennington, a school of decorative art, which proved so useful in testing and otherwise aiding technology that soon instruction of a similar kind began to be given in Birmingham, Manchester, Bradford and other industrial centres. The Central Institute was granted a charter in 1900.

The City and Guilds Institute's Department of Technology conducted examinations in technology, the first of which was held, as noted earlier, in 1873, by the Society of Arts. The subjects of the examination were cotton manufacture, paper manufacture, silk manufacture, steel manufacture and carriage building. Only six canditates appeared during this year, but the number increased rapidly, and in 1878 it had risen to 184 (1). Owing to lack of funds, however, the Society of Arts could not long continue its technological classes, and the progress in technological studies was definitely checked until the foundation of the City and Guilds Institute. The Institute took over from the Society of Arts the technological examinations it was hitherto conducting and encouraged a study of various branches of technology by its system of grants based on the results of examinations, similar to the grants of the Science and Art Department. A very beneficial influence was exercised on technical education through these examinations, the healthy nature of which was ensured by the guidance which the Institute gave through its syllabuses, and by its insistence that teachers of classes which it registered should possess certain qualifications.

(1) Millis, op cit, P.59.

Another great consequence of the publication of the Devonshire Reports was the establishment of Polytechnics and Technical Institutes all over London and the provinces. Their objects were to give "further" and technical education to the large majority of young workers. Part of this task was accomplished by the Science and Art Department classes and the Finsbury Technical College, but these efforts were inadequate to meet the very large demand for such education that existed during the 'eighties. It is to Quintin Hogg (1845-1903) that England owes a debt of gratitude for the movement for Polytechnics which he began in 1881, and which spread all over London within a few decades. As Sadler remarks, "the Polytechnic Institutes of London are, in some ways, the most characteristic educational achievements" of the last decade of the nineteenth and the first decade of the present century (1).

The first Polytechnic was the one opened, in 1882, in Regent Street by Hogg. As a young man of nineteen he had started and supported a ragged school, and in 1878 he opened for boys above the social level of the ragged school the Youths' Christian Institute near Long Acre (2). The object of the Institute was to give educational facilities to boys between the ages of sixteen and twenty-one. Classes for instruction in trades were also opened, but there was a good deal of opposition from the employers, who were doubtful of the trade value of the classes. But despite all opposition the trade classes were continued, and their success soon attracted wide-spread attention. Hogg was tempted to extend his activities further, and the Regent Street Polytechnic was the result. It came

(1) Michael Sadler, Continuation Schools in England and Elsewhere, 1908, P.31.
(2) Ethel Hogg, Quintin Hogg, a biography, P.92.

into existence in this way. An institute for the advancement of "practical science" was established in Regent Street in 1838. The failure of the institute after nearly half - a - century, owing to low receipts, led Hogg, in 1881, to acquire the building from the proprietors on payment of £15,000, and to adapt it to suit the purposes of his Institute at Long Acre, which was transferred to this building in 1882 (1). The building had accommodation for 2000 persons, but within a year the applications for membership numbered 6800. The fee for membership was three shillings per quarter, or half - a - guinea per year, and the fees for classes were equally moderate. Members could make a free choice of subjects of study from a lengthy list, and in addition a great variety of athletic and other recreative activities were open to them. Women were allowed to attend the classes, but they also had a separate Institute, opened in 1885, in close vicinity, and presided over by Mrs.Hogg.

Hogg spent over £100,000 in establishing and maintaining the Regent Street Polytechnic. This was in spite of the grants which the institution received from the Science and Art Department and from the City and Guilds Institute. In making his Polytechnic a success Hogg accomplished the very gigantic task of providing a large majority of workers in London with facilities for technical and other education. Soon the Institute received financial aid from other sources - from the Commissioners of the City Parochial Charities and from the Technical Education Board of the London County Council. Some of the Commissioners of the City Parochial Charities visited Hogg's Polytechnic, and they were so impressed

(1) Ethel Hogg, Quintin Hogg, op cit, P.144.

with the work carried on there that they recommended that most of the available funds should be used for the establishment of similar Polytechnics all over London. Hogg's institution was accepted as the model, and under the direction of the London County Council Polytechnics arose in different parts of London. By 1903, the year in which Hogg died, London had twelve Polytechnics.

IV

The work of the City and Guilds Institute and the Regent Street Polytechnic roused public interest in technical and commercial education to a remarkable degree. During the early 'seventies the manufacturing classes came to realise that Germany and Switzerland were fast becoming England's industrial rivals, and their consequent anxiety led, as noted earlier, to the appointment of the Devonshire Commission. The Paris Exhibition of 1878 showed that France also had during recent years made remarkable progress in industry, and that England was tending to fall behind her Continental rivals. It was this wide-spread public anxiety that led, during the 'eighties, to the appointment of the Royal Commission on Technical Instruction "to enquire into the instruction of the industrial classes of certain foreign countries in technical and other subjects for comparison with that of the corresponding classes of this country". Bernhard Samuelson, an ironmaster, well known for his interest in technical education, was the chairman of the Commission. Prominent among the members were Professor Roscoe and Philip Magnus. The Commission investigated all forms of technical education abroad and in England. The Reports of the Commission, published in 1882, and finally in 1884, showed that while England was either lacking in schools and colleges for technical instruction, or made insufficient use

of the available institutions, she was yet in advance of her Continental rivals in the field of manufactures. It was maintained by the Commissioners that as a school of practice the English workshop was unrivalled.

The Commissioners regretted that drawing, which was a very necessary part of technical instruction, was neglected in most English schools. They recommended that drawing should be made a "class subject" throughout all classes, and that work with tools in wood and iron should also be largely introduced in the boys' schools. The supervision of such subjects should be transferred from the Science and Art Department to the Education Department. For the efficient teaching of science the Commissioners recommended that the training colleges should send every year students interested in science teaching to the Normal School of Science, South Kensington. The Commissioners regretted the absence of more technical schools, for juvenile employees, of the type opened by private firms at Newcastle, Crewe, Manchester and Oldham.

For the improvement of technical education above the elementary stage it was thought that improved secondary schools were first necessary. Many of the existing secondary schools were "hopelessly bad". The Commissioners were of opinion that secondary education should be in the hands of public bodies and should be financed from rates and taxes. With regard to the establishment of institutions for advanced technical teaching the Commissioners expressed the view that "The great Colleges of the Capital, of Manchester and Liverpool have departments of applied science which, if the necessary funds were forthcoming, might be expanded into Polytechnic Schools. The Central Institute (of the City and London Guilds) might become a true Polytechnic. In short, we have the nuclei of

as many technical high schools (Hochschulen Universities) as we require." (1)

Technical education, in general, was, according to the Commissioners, a branch of national education, and its advance depended on the progress of elementary and secondary education. They pointed out that a good technical school needed much money, in addition to fees, for its maintenance. The charges for establishment and upkeep were therefore to be met from rates and taxes. For the co-ordination of different grades of technical schools a central authority was needed.

Such were, in broad, the recommendations of the Royal Commission on Technical Instruction, and its direct outcome was the Technical Instruction Act of 1889 and the Local Taxation (Customs and Excise) Act of 1890, which provided adequate state funds for the promotion of technical education. The former Act empowered the newly created County Councils to levy a penny rate for the support of technical education. The curriculum was to be supervised by the Science and Art Department. The Public Elementary Schools were not eligible for any grants under this Act. The Local Taxation Act placed at the disposal of the County and Borough Councils some surplus sums which had hitherto been used for compensating publicans whose licenses had not been renewed. This money was usually known as "Whiskey money", and Acland proposed as an amendment, that it should be set apart for supporting technical education. The amendment was rejected, but the motion of the Chancellor of the Exchequer (Goschen), introduced three weeks later, to place the 'Whisky money' at the disposal of the County Councils for purposes of technical education, was adopted (2).

(1) Quoted by J.W.Adamson, English Education, P.405.

(2) Ibid, P.409

The Royal Commission on Technical Instruction and the Technical Instruction and Local Taxation (Customs and Excise) Acts of 1889 and 1890 paved the way for a National System of Technical Education. But, as noted in the previous chapter, it was not until the publication of the Bryce Report (1895) and the passing of the Education Act of 1902 that England possessed a complete National System, including all grades of education - elementary, secondary and technical. The Technical Instruction Commissioners recommended the creation of a central authority to co-ordinate all forms of technical education, and to create harmony and co-operation between the various agencies that provided such education. It was not within their terms of reference to recommend the creation of a body that would bring about co-ordination between all grades of education - elementary, secondary and technical. But the appointment of such a body, though not explicit, was at least implicit in their recommendation, and it was left to the Bryce Commissioners to pronounce their definite opinion in the matter. The Bryce Commissioners, as pointed out in the previous chapter, adopted a broader conception of secondary education, to include within it technical instruction also, for "it comes after the education which has awakened the mind by teaching the child the rudiments, or as it were, the alphabet of all knowledge". (1) The Central Authority, which they recommended, was to supervise all forms of secondary education without exercising any direct control, such control to be left in the hands of local authorities. Its business was merely to guide, encourage and furnish all necessary information to local authorities. Their policy was one of decentralisation.

The Education Act of 1902 completed the establishment of a National System of elementary,

(1) Bryce Report, Vol I (1895) P.130f.

secondary and technical education. The Local Education Authorities created in place of the School Boards were given direct control over all three grades of education, while the Board of Education - created in 1900 by an amalgamation of the Education Department, the Science and Art Department and the Charity Commission - became under the Act the central authority, recommended by the Bryce Commission, for purposes of guiding and encouraging local efforts. The Act repealed the Technical Instruction Acts, and set apart the 'Whisky money', which had hitherto been used to support technical education, for purposes of aiding all forms of education above the elementary grade.

V

From the account that has been given of the beginnings and progress of technical education in England, it will be seen that there is a very great similarity between its development and the development of elementary education. Both have been the consequences of the Industrial Revolution, and during the long years of the state's inactivity in educational matters their progress depended mainly on voluntary efforts. Charity Schools, Sunday Schools and Monitorial Schools, established by religious and philanthropic bodies, were the only institutions available for the education of the poor throughout the latter half of the eighteenth century and the beginning of the nineteenth. Similar voluntary efforts were responsible for the establishment of Mechanics' Institutes, the objects of which, as noted at the commencement of this chapter, were to instruct adult workmen in the principles of science that were connected with their daily operations.

The years 1839 and 1853 are landmarks in the history of English Elementary and Technical Education.

By appointing the Committee of Council on Education during the former year, and by establishing the Science and Art Department during the latter, the State accepted a partial responsibility for promoting elementary and technical education. By the middle of the nineteenth century, however, elementary education had made considerable progress, while technical education, though its beginnings are to be traced to the same period as that of elementary education, made practically no advance. This was because the regulation of labour in factories and the consequent reduction in the hours of children's work brought about by the Factory Acts, compelled the state to intervene in matters of elementary instruction much earlier than in matters of technical education. Again, progress in secondary and technical education could only follow as a natural sequence of increased literacy through widely extended facilities for elementary schooling. The comparatively early failure of the Mechanics' Institutes was due entirely to the ignorance of workers which made it too difficult for them to follow the lectures delivered at the institutes.

The progress of both secondary and technical education during the latter half of the nineteenth century has been due, in the main, to two causes. In the first place the international exhibitions of 1851, 1862 and 1878, the first two of which were held in London, and the third in Paris, made England fear that some of the Continental countries, like Germany, Switzerland and France, were becoming her industrial rivals. This created the need for increased facilities for technical education which were provided mostly by private bodies. The increased interest of the state in providing such education during this

period is seen in the establishment of the Science and Art Department and in the appointment of the various Royal Commissions to investigate the conditions of secondary and technical education. In the second place the progress in elementary education from 1839 onwards, which came in two waves, - first through the activities of the Committee of Council during the years 1839-49 under the able and enthusiastic direction of Kay-Shuttleworth, and secondly through the Education Act of 1870 - was responsible for the fruitfulness of the efforts that were made during the latter half of the nineteenth century to promote technical education. The progress which England made in the field of technical education during the last quarter of the nineteenth century, more especially after the investigations of the Technical Instruction Commission and the passing of the Technical Instruction Acts, was remarkable. The 'Whisky money' set apart for purposes of aiding technical education which amounted to £472,560 in 1892-3, rose to £863,847 in 1900-1. (1) It is not surprising that with such a vast amount to aid technical education, and with the experience gained by investigation of foreign systems of technical instruction, England came to possess by 1902 a National System of Technical Education rich in its provision for various types of technical training.

(1) Graham Balfour, The Educational Systems of Great Britain and Ireland, P.167.

CHAPTER VIII

ADULT EDUCATION - ITS RISE AND LATER DEVELOPMENTS.

The Industrial Revolution, we have noted in the earlier chapters, made the lot of the English poor very miserable during its transitional years. With the growth of large factory towns, the concentration of large masses of population in them, and the increase of poverty, crime increased to an enormous extent. The education of the poor, which under pre-industrial conditions was not so urgent, now became a matter of infinite importance; but the state took no steps to provide any facilities up to the 'thirties of the last century. During this period of State inactivity attempts to improve the morals of the poor through religious instruction were made by voluntary bodies. The Charity Schools and Sunday Schools gave instruction to large masses of working class children in reading, writing and religion. But side by side with the efforts to educate children it was also necessary to educate the adult members of the working classes. During the latter half of the eighteenth century a great majority of working class men and women could not read or write, and as Foster described them, they were "free from all sense of shame". It was this ignorance and moral degradation of the working classes, which characterised the early years of the Industrial Revolution, that first created the need for the education of adults. And our efforts to trace the origin of adult education in England should necessarily extend back to the last decades of the eighteenth century when the state concentrated all attention on increasing the general wealth of the nation, and left the all-important problem of reforming the poor in the hands of the Church and the Congregation. It is true, as Adamson says, that "the great days of adult education

belong to the twentieth century", (1) and that adult education from the beginning of the present century has come to mean, not the education of men and women deprived of all schooling during years of childhood, but the education which begins after leaving school, and continues through life. But this should not stand in the way of our asserting that the adult education movement of the present century is only the last phase of the movement which took birth when English society was in the throes of the Industrial Revolution, and that it is historically continuous with it. It is, however, true that "in the absence of the earlier stages of training, experiments in adult education have too often resembled an attempt to roof a house before the walls were completed" (2). With the gradual improvement of those stages the movement gained strength, until at last adult education to-day occupies its proper place "as one element in a training which extends through childhood and adolescence to manhood and womanhood" (3).

Beginning with the closing years of the eighteenth century the movement, during its different stages of development, drew its inspiration from a number of sources. "It has drawn inspiration from churches and chapels, from the achievements of physical science,from the development of cheap literature and of a popular press, from Co-operation and Trade Unionism, from Chartism and more recent political developments" (4).

II

The history of adult education during the nineteenth century broadly divides itself into two periods, the first extending up to about 1850, and the second from about 1850 to the opening of the present century. During

(1) Adamson, J.W: English Education (1789-1902), P.346.
(2) Ibid, P.10.
(3) Ibid,
(4) Ibid, P.9.

the earlier period the first motive that underlay the efforts to promote education among adults was the religious motive. To rescue men and women from the demoralising influences of the new town life was the chief aim of the Methodists and the Evangelicals in teaching them to read the Bible. The earliest efforts to promote religious instruction among adults were made in Wales about the year 1730, when Griffith Jones, rector of Llanddowror, established "circulating schools" to teach "the young and the old ignorant people" to read the Bible. In England, however, it was not until the last decade of the eighteenth century, when the demoralisation of the working class population in towns had perhaps, reached its limit, that any widespread attempts were made to promote religious instruction among adults. Between the years 1790 and 1800 Hannah and Martha More conducted classes to teach the Somerset miners to read the Bible. During the early years of the Sunday School movement no provision was made for the teaching of adults. In 1798, however, William Singleton, a Methodist, and Samuel Fox, a tradesman who belonged to the Society of Friends, opened an adult Sunday school at Nottingham for Bible reading and instruction in writing and arithmetic. The school was at first open only to working class women, but soon a men's class was added (1). The next adult school in order of date was the one founded at Bristol in 1812. In the same year William Smith, a Methodist chapel door-keeper, with the help of Stephen Prust, a Bristol merchant, opened at Bristol two adult schools, one for women and the other for men. Smith was much interested in the spread of adult schools, and his efforts in this direction led to the formulation of the "Bristol Society for instructing adult persons to read the Holy Scriptures". In 1816 Bristol had twenty-four schools for men and thirty-one for women, and Dr.Thomas Pole gave a full account of them in a book entitled "A

(1) Sadler, Continuation Schools in England and Elsewhere, P.17.

History of the Origin and Progress of Adult Schools". The number of people in attendance during 1816 was 1,581, and the number of admissions since their commencement was 3,321. The knowledge of reading which could be obtained in these schools was regarded by many as a very valuable possession. "A joyful acquisition to many of them", writes Pole, "has been the little they have learned. I heard one of them who has learned at eighty-five years of age to read the Bible, say that she would not part with the little learning she had acquired, for as many guineas as there are leaves in the Bible, notwithstanding she ranked among the poorest of the poor. Many have acknowledged with tears of gratitude and joy flowing on their furrowed cheeks, the greatness of the blessing hereby conferred upon them" (1).

The adult school movement soon spread to other parts of England, largely owing to the efforts of the members of the Society of Friends. By 1820 there were adult schools in Plymouth, London, Yarmouth, Leeds, Sheffield, Ipswich and many other manufacturing towns. It was not, however, out of purely philanthropic motives that the promoters of the early adult schools worked so enthusiastically for the spread of religious instruction among adults. The industrial changes of the latter half of the eighteenth century soon tended to undermine the old social order, and one of the chief objects of teaching the poor to read the Bible was to maintain intact all distinctions of class and rank. Thus the object of the More sisters in teaching adults was to make them "see more clearly the advantages" they derived "from the government and constitution of this country, and to observe the benefits flowing from the distinction of rank and fortune, which has enabled the rich so liberally to assist the low" (2). Such, indeed, was the narrow outlook of most of the early adult school workers; and as a consequence in a great majority of the schools nothing more could be

(1) Pole, History of the Origin and Progress of Adult Schools (1816) P.38.
(2) Hannah More, Mendip Annals, P.243-44.

learnt but reading, although a few schools taught writing as well. But whatever the shortcomings of the early adult schools may have been, they rendered very useful services to the working classes by creating in them a love for reading which was at the bottom of their later efforts for self-instruction.

A second great impetus for the spread of education among adults during the period 1800 to 1850 was derived from the advances that were made during the period in physical science. Reference has been made in the preceding chapter to the formation, in 1754, of the Society of Arts, which, during the early years of its life created popular interest in scientific subjects by offering medals and money prizes for all valuable discoveries and inventions. The first systematic efforts to educate adult workers in the principles of science connected with their work did not, however, begin till the close of the century, when Dr.Birkbeck started lecturing to the Glasgow artisans, and the foundation of the Mechanics' Institutes followed as a direct consequence. An account of the rise and spread of Mechanics' Institutes has been given in the preceding chapter. The Institutes failed to achieve their primary object, namely, the instruction of mechanics in scientific principles; but their existence in all industrial towns greatly assisted the general progress of adult education. In all the Institutes almost from the very early years of their inauguration a prominent place was given to the teaching of subjects which possessed a general cultural value. Classes in French and other languages and lectures on literature and history were introduced to satisfy the thirst of the mechanics for general knowledge. Concerts, excursions, social meetings and other agencies for adult education were distinguishing features of some of the larger Mechanics' Institutes (1). Again, as a

(1) Dobbs, Historical Survey of Adult Education, in Cambridge Essays on Adult Education, Edited by R.St.John Parry, P.37.

witness before the Select Committee on Libraries (1849) stated, there were in Great Britain "no free lending libraries of any kind" during the first half of the nineteenth century. The Mechanics' Institutes did a great deal to meet this deficiency by allowing the members to borrow from the Institutes' libraries which contained varied collections of books to suit the professional and general requirements of the working classes. Last, but not least, the Mechanics' Institutes created among the working classes the spirit of self-help in matters concerning their education. They were to finance the institutes from their own savings, and it was again and again emphasised that the majority in every managing committee should consist of working people. In this way, during years when the adult schools were providing the working class men and women with elementary instruction, the Mechanics' Institutes satisfied their demand for higher education, such as it was during the early nineteenth century.

Beginning with the second quarter of the nineteenth century the scientific motive in adult education began, gradually, to give way to social and political motives. The desire for political education was growing rapidly among the working classes, and a group of mechanics, in 1824, stated that "all systems of education are false which do not teach a man his political duties and rights" (1). The demand for an education of this kind was satisfied by such working class movements of the early nineteenth century as Co-operation, Chartism and Trade Unionism, all of which had definite educational programmes.

Owen's socialist doctrines, which found a wide acceptance among the working classes, led to the establishment of Co-operative Societies all over Great

(1) Mechanics Magazine, Sept.11, 1824.

Britain, and one of the chief objects of these societies was to educate their members and the members' children. According to Lovett's statement there were during the first thirty years of the nineteenth century about five hundred co-operative societies in different parts of England, though most of them were short lived. In 1828 a Co-operative Society was established at Birmingham. The Society had a library and a debating club, and it proposed to establish a school for children where they would receive an education better than that of the higher classes. It also proposed to arrange concerts and lectures for the benefit of the adult members. In 1831 the members of a Co-operative Society at Salford "took a couple of large rooms and opened a school for the instruction of boys and girls and such adults as might think it worth while to learn what we had to teach" (1). In 1848 an "Education Department" was instituted by the Rochdale Society of Equitable Pioneers which was founded in 1844. The Society made regular quarterly grants for the support of this department, and in 1852 when the Industrial and Provident Societies Act was passed, and the Society applied for registration under the Act, it proposed to set apart ten per cent of its profits for educational purposes. The Government Registrar thought that the proportion was excessive, and the percentage was reduced to two and a half (2).

Next to Co-operation, Chartism was another source of inspiration for the progress of adult education during the first half of the nineteenth century. Public instruction was not one of the six points of the Charter of May 1838, but the "Moral Force Chartists" believed that universal education was essential to the Charter's complete success. As Lovett remarked, "Those who possess the power to elect must have knowledge, judgment and moral

(1) Lloyd Jones, Life of Owen, Quoted by Dobbs. P.217.
(2) Webb, Industrial Co-operation, P.69.

principle to direct them, before anything worthy of the name of just government or true liberty can be established." According to the educational policy of the Chartists, formulated by Lovett, "public education ought to be a right, a right derivable from Society itself, as Society implies a union for mutual benefit, and consequently to provide publicly for the security and proper training of all its numbers." But Lovett considered it improper to entrust the education of the people to a government that was not placed in power by universal suffrage. He therefore proposed that government should build schools while local school committees elected by universal suffrage were to be responsible for the appointment of Teachers, for prescription of courses of studies and for all other internal business of the Schools.

Part of the educational policy formulated by Lovett was the proposal to establish throughout the Kingdom "Public Halls or Schools for the People" for the physical, mental, moral and political education of children and adults. The Halls were to be used during the day as school-rooms, and in the evenings they were to be reserved for Lectures on physical, moral and political science, for readings and discussions and dancing.

To give effect to Lovetts proposals the Gate Street Chapel, Holborn, began to be used, from July, 1842, as a "National Hall." Here public meetings, concerts, lectures and "classes of different kinds" were held, and Lovett, Cooper and W.J.Fox were amongst the chief Lecturers. But the financial position of the National Hall was shaky from the beginning and it had therefore to be dissolved in 1857.

But although the efforts of Lovett and the Moral Force Chartists to promote education among working class children and adults did not meet with any great

success, Chartism produced a great change in the outlook of the people, and the efforts which some of the Trade Unions made to provide educational facilities during the 'forties were largely due to the influence of Lovett's educational ideals.

In 1842 the Journeymen Steam Engine and Machine Makers Friendly Society established a mutual improvement class at Manchester. In 1845 the Glasgow Branch of the Scottish United Operative Masons found a mutual instruction class, and also an association for the moral, physical and intellectual improvement of its members. In 1848 the London Society of Bootmakers founded a library, and a few years later the London Society of Compositors also started a library. In this way the early Trade Unions like the Co-operative Societies rendered useful services to the cause of adult education.

III

From what has been said above it will be clear that the progress of adult education during the first half of the nineteenth century was due to three main influences, namely, those of religion, the advance of physical science, and lastly the social and political agitation during the 'thirties and the 'forties which resulted in a number of working class movements.

The year 1850 marks a new stage in the development of adult education in England. Chartism as an organized agitation for political reform came to an abrupt end in 1848. The working classes now lost all faith in revolutionary methods and henceforth they tried to find ways other than political of bettering their condition. Such a conviction on the part of workers led to their concentrating all effort, during the latter half of the nineteenth century, on the further development of Trade Unionism and Co-operation, and,above all, on increasing their facilities for education which they thought was at

the root of all their problems, social political and economic. In formulating their plans for education they were guided by the ideals of Lovett and they favoured social and political studies. Such a desire found expression in the establishment of Working Men's Colleges all over England. The first of these called the People's College was founded in 1842 at Sheffield by the Rev. R.S.Bayley, an independent Minister. Bayley's chief aim was to provide the "youth of the middle and working classes" with opportunities for cultural education through a study of Latin, Greek, French, German, Mathematics, English,Logic, elocution and drawing (1).

Between the years 1842 and 1848 Bayley conducted evening classes in a "ghastly, whitewashed, unplastered garrett". Yet they were attended in large numbers. The weekly fee was ninepence and the classes were open to women. In 1848 Bayley left Sheffield, but by this time he had succeeded in creating in his pupils such an intense desire for acquiring knowledge, and a spirit of co-operation that sixteen of the young men and women who were his pupils made up their minds in October, 1848, to start the People's College afresh. Before the end of the month there were 200 students and by the end of the first year the number had increased to 530, out of which 104 were women. The Institution was entirely self-supporting, and though in October, 1848, when the college was restarted "the Committee did not possess a single book and had not a single farthing", the financial help offered by Mr.Overrand, J.P., and his brother was respectfully declined, for "a principle has been laid down and it must be abided by" (2). The Monitorial method of teaching was adopted, and the teaching was mainly in the hands of the members themselves. Public lectures by outsiders were given occasionally, but the class work went

(1) Sadler, Continuation Schools in England and Elsewhere, P.32.

(2) Mr.Rowbotham's "An account of the origin and Progress of the People's College, Sheffield", in the Working Men's College Magazine (1859), P.98

on uninterrupted. The hours were from 6.30 to 7.30 in the mornings on Mondays, Tuesdays and Wednesdays, and from 7 to 9.30 every evening.

The curriculum under Bayley was in the main humanist, but under the new management scientific subjects were also introduced. To make the studies more systematic, and to enable students to reach a worthwhile standard, they were encouraged to appear at the examinations conducted by the Society of Arts. In 1856 one candidate appeared; by 1858 the number had increased to fourteen, and twelve took certificates. Three out of the twelve successful candidates were placed in the first class, and two of these three were awarded prizes of £5 in Latin and Roman History and English Literature. The People's College which did not possess a single farthing in October, 1848, spent during the next ten years a sum of £4000, "and through many temptations steadily held to the principle of self support." The College became a model for all later Working Men's Colleges, especially to the London Working Men's College, started by F.D.Maurice and his colleagues in 1854.

At Nottingham also a People's College was established in 1846 by George Gill and others, the object being to ensure "the mental and moral improvement of the labouring population, clerks, warehousemen and others receiving wages or salaries for services." The classes for adults, which were conducted in the evenings, gave elementary instruction of a general character. A little later a day school for boys and girls was added. (1)

We shall now consider the circumstances which led Frederick Denison Maurice and his colleagues, Charles Kingsley, J.M.Ludlow, Edward Vansittart Neale and others to start the London Working Men's College in 1854.

The fiasco of Chartism in 1848 gave the working

(1) J.W.Adamson, English Education, P.164.

classes a rude shock which made them search eagerly for non-revolutionary methods of improving their social and economic position. Maurice and his friends tried to find a way out for the disappointed workers. They associated themselves under the name of Christian Socialists, and, as Maurice expressed it, they chose this name to combat "the unsocial Christians and the unchristian socialists." Their aim was "the practical application of Christianity to the purposes of trade and industry," and they thought that the social and economic condition of the working classes could be improved by a changed economic order and a liberal education. To this end they would replace the employers and wage earners by an association of operative producers who would themselves act as manager, foreman, manual worker and profit maker.

The Christian Socialists started twelve associations on these lines, each of them confined to a single industry and operating in a "self governing workshop." The associations were, however, very short lived, as the organisers were lacking in discipline and business experience.

While, however, the Christian Socialists failed in reforming the economic conditions, their educational policy proved successful. From the year 1848 Maurice and his friends engaged a mistress to teach infants in Little Ormond Yard, and they conducted classes by themselves during evenings for men and boys (1). Maurice at this time was Professor of English Literature and Modern History in King's College, London, and he secured for his evening adult classes at Little Ormond Yard, the help of some of his colleagues and young graduates from Oxford and Cambridge. In 1851 a "Hall of Association" was built in Castle Street, East, and a library and reading room were added. Here instruction was given in grammar, French,

(1) "A History of the London Working Men's College" by F.J.Furnivall, in The Working Men's College Magazine, 1860, P.144.

English History, drawing, singing, and book-keeping, and Lectures on Shakespeare, Burns, photography, architecture, astronomy and other popular subjects were delivered. But all that was done up to this year fell short of Maurice's ideal. This led to the attempts of Maurice and his friends to establish a People's College in London on the lines of the College at Sheffield to which they applied for instruction and advice. In 1854 a letter was received from Mr.Wilson, Secretary of the People's College, Sheffield, giving details of the origin and history of the College. The five annual reports of the institution were also sent. It was resolved the same year that "it be referred to the Committee of Teaching and Publication to frame and, so far as they think fit, to carry out a plan for the establishment of a People's College in connection with the Metropolitan Association" (1).

The College was opened on October 31st, 1854, and Maurice, who had become Professor of Divinity at King's College in 1846, and was dismissed on a charge of heterodoxy after the publication in 1853, of his "Theological Essays", became its first principal.

The London Working Men's College, as the twelve page pamphlet issued by the Committee in February 1854, shows, differed in many respects from the working class educational organisations which preceded it. The chief aim of the College was to provide for the working classes an education that was regular and organic. It was to be an 'organic body' of teachers and pupils, so that the term 'College' could be as rightly applied to it as to University College or King's College. The College was open to the working classes in general and the only condition of admission was that they should possess a knowledge of reading, writing and arithmetic. The entrance fee as proposed in the pamphlet was half-a-crown

(1) Quoted by Furnivall, op cit, The Working Men's College Magazine, 1860, P.146.

and the class fees ranged from two shillings and sixpence to five shillings. Teachers were to render gratuitous services and all tuition fees were to go to the common fund of the College. At the commencement the College had only thirty pupils, but the number increased rapidly in the course of a few years. That the principles laid down in the pamphlet were closely adhered to could be inferred from a restatement of these made in the prospectus of 1865. "The Students are for the most part working men; and the teachers are in general members of the Universities and of different professions, or those who have themselves been students of the College. Its purpose was and is to unite these classes together by associating them in the common work of teaching and learning. It provides instruction at the smallest possible cost (the teaching being almost wholly unpaid) in the subjects with which it concerns English citizens to be acquainted, and thus tries to place a liberal education within the reach of working men."

The success of the London Working Men's College soon led to the establishment of similar Colleges all over England. Between 1855 and 1862 Working Men's Colleges arose in Manchester, Salford, Ancoats, Leicester, Halifax, Liverpool, Oxford, Cambridge and a number of other towns. It must, however, be admitted that the original aims with which the Colleges were founded could not be realized completely, even as the founders of the Mechanics' Institutes could not realize their primary objects. Owing to their lack of sound elementary instruction many of the working men could not derive very much benefit from the lectures given in the Colleges, and as a consequence within a few years the number of operatives attending the Colleges greatly decreased in proportion to the number of clerks. In the London Working Men's College the number of operatives attending the lectures

in 1854 was 72 and the number of clerks 73. In 1860 the number of operatives was 150, and the number of clerks 246. While the number of operatives was little more than doubled the number of clerks was more than trebled (1).

But the very fact that the number of workers joining the Working Men's Colleges was increasing year by year (though not in the same proportion to the increase in the number of clerks) is enough to show that the desire for a cultural education among the adults of the working classes became firmly rooted by the middle of the last century.

Another evidence of such a deep rooted desire is the publication of books and periodicals to suit the special requirements of the workers. John Cassell who made a self study of teetolalism began publishing his famous "Popular Educator" in successive penny weekly numbers which continued to appear for many years after his death in 1865.

What benefit the working classes derived from Cassell's "Popular Educator" and other publications could be gauged from the views which Edward Baines expressed about them in his evidence before the Select Committee on the Education Bills of Manchester and Salford and National Public Schools Associations. Baines remarked that "Mr.John Cassell is doing more at the present time than any other individual to supply the increasing demand of the operative classes for useful knowledge, and in supplying works peculiarly adapted to their circumstances and condition. His popular mode of education is receiving an extended and an extraordinary circulation and is highly estimated by a large number of the operative classes. For a penny per week the working-man is supplied with lessons in grammar, arithmetic, mathematics; in Latin, French and German; and he has had enquiries for lessons in Hebrew and Greek, that the working-

(1) Working Men's College Magazine, 1860, P.190

man may endeavour to read the Scriptures in the original text. In these penny numbers are also furnished lessons in ancient history, natural history, geology and physiology; and such lessons and such subjects are being entered into by many with great avidity." (1)

During the 'forties and the early 'fifties while attempts were made by men like Bayley, Maurice and the other Christian Socialists to provide means of higher education for working men through the establishment of Working Men's Colleges, efforts to provide similar facilities for women were also made. From 1847 Mrs.Reid conducted classes for girls in her own house. In 1849 she opened Bedford Square College, which from the very beginning associated itself with University College, London. The members of the staff of this College included such eminent men as Augustus De Morgan, Francis Newman and W.B.Carpenter, who also delivered extra-mural lectures to women. In 1867 at the suggestion of Miss A.J.Clough the North of England Council for promoting the Higher Education of Women was formed under the presidency of Mrs.Josephine Butler, and Miss Clough became its secretary. The first course of lectures was given in Liverpool by James Stuart, afterwards Professor of Mechanics at Cambridge. His subject was Natural Philosophy, and the lectures were repeated in the same year at Manchester, Leeds and Sheffield. Stuart soon received an invitation from the Mechanics' Institute at Crewe to lecture to its members. During November, 1867, on the night following the great meteoric shower, he lectured on meteors to an audience of 1500 which was assembled at the Institute. Stuart was so pleased at the eagerness of the workers to learn, that he offered to lecture again at Crewe during the following year. At the request of the Equitable Pioneers Co-operative Society

(1) Report, 1852, Q.2261.

of Rochdale, Stuart repeated in Rochdale the Lectures he gave to ladies in the four towns (1).

The activities of the North of England Council for Promoting the Higher Education of Women and the interest which working men at Crewe and Rochdale took in James Stuart's Lectures paved the way for the University Extension Movement.

In 1871 at Stuart's suggestion memorials were addressed to the University of Cambridge by municipalities, industrial societies, mechanics' institutes and the North of England Council for the Promotion of Higher Education among Women, requesting that external lectures similar to those given by J.Stuart should be arranged by the University. The result of such attempts on the part of women, artisans and municipal bodies was that in 1873 the University Extension scheme was formally instituted by Cambridge, and arrangements were made for the delivery of lectures at Nottingham, Derby and Leicester. A syndicate, of which James Stuart became secretary, was formed to consider all matters relating to the Extension scheme. The system of extra-mural lectures which was thus begun by the University of Cambridge was soon taken up by all the other British Universities, and by some foreign Universities as well. A public meeting was held in London at the Mansion House in June, 1875, at which it was resolved "that the principle of the Cambridge University Extension Scheme be applied to London and that the various Educational Institutions of the Metropolis be requested to co-operate in an endeavour so to apply it." (2) The result of this meeting was the formation, in 1876, of the London Society for the Extension of University Teaching. A joint board consisting of representations from the Universities of Oxford, Cambridge and London was created

(1) J.W.Adamson, English Education, P.341.
(2) R.D.Roberts, Eighteen years of University Extension (1891), P.77.

for supervising the Society's teaching. The University of London could not by itself initiate the Extension scheme in 1876, for it was then mainly an examining body. But with the revival of its teaching functions after the Act of 1898, the work of the Society was transferred to the University, and in 1902 the University appointed a special Board to look after the Extension work.

The University Extension work was begun at Oxford in 1878. The system was reorganised in 1885 when M.E.Sadler occupied the office of Secretary. Between the years 1885 and 1892 the extra-mural teaching carried on by the University of Oxford proved so successful that in the latter year a special delegacy was appointed to take charge of the extra-mural work. The Universities' of Durham and Manchester, following the example of Cambridge and Oxford, also began their schemes for University Extension. The movement in the course of a few years became so wide-spread that most industrial towns established separate colleges for its furtherance. The Yorkshire College, Leeds, which was established in 1874 as a Scientific and Technical College, made provision for the teaching of subjects usually included in the Extension courses. So did Firth College, Sheffield (established in 1879) and University College, Nottingham (established in 1881) engage themselves in Extension work. In 1892 the University Extension College, Reading, was founded, and this was followed a year later by the establishment of the Technical and University Extension College, Exeter. Colchester had its University Extension College in 1896. These Colleges, which were primarily established for Extension work, attained in course of time the status of Universities, but like Oxford and Cambridge they developed their own systems of Extension Lecturing.

Within about two decades from the inauguration of the Extension movement it was realised that the lectures

while being, of course, quite interesting, might be of no permanent value to the workers: for in the absence of a definite aim the study of a subject over a fairly long and continuous period was not possible. In 1886, therefore, Cambridge established "affiliated centres" where students could qualify for certificates of successful study by attending for three or four years. Oxford did the same a few years later. Holders of these certificates were sometimes allowed to take the Degree of B.A. after two years study at Oxford or Cambridge. From 1902 the University of London awarded a Vice-Chancellor's Certificate to candidates who did a five years' successful "Extension" study. A little later a diploma course in humane letters was introduced under "Extension" conditions.

So much about the movement for University Extension. But still another agency for adult education had arisen during the last decades of the nineteenth century. The work of Maurice and the Christian Socialists, which resulted in the establishment of Working Men's Colleges in London and other industrial towns, created in university circles an interest in the lives of fellow citizens in the slum areas of great towns. The effect of this was to revive that connection between the universities and the masses which was a marked feature of the Middle Ages, and continued right up to the time of the Reformation. The revival of this connection during the 'seventies of the last century and the beginnings of the movement for University Settlements were due mainly to the efforts of Arnold Toynbee, an Oxford undergraduate, who began, on his own initiative, to study the lives of people in the slums. During the Long Vacation of 1875 he actually lived in Commercial Road, East London, and made acquaintance with the Rev. S.A.Barnett and with the teachers and school children of

the locality, with a view to getting a first hand knowledge of the conditions under which the poor lived. He even worked with the Charity Organisation Society, and joined the Tower Hamlets Radical Club, at whose meetings he often spoke. In 1879 Toynbee was made Bursar of Balliol College, of which he was formerly a student; but still he found time and energy to work for the uplift of the poor. He gave lectures on Economics and Politics to working class audiences in the manufacturing towns, and "he always believed in the possibility of a democratic Society whose members should be intellectual, refined, nay spiritual". Toynbee, who was physically weak, was completely worn out by his excessive toil, and he died at the early age of thirty-one.

His labours, however, proved quite fruitful. A little university colony was formed at Whitechapel at the suggestion of Rev.S.A.Barnett, and as a memorial to Toynbee a University Settlement in East London, the Toynbee Hall, was opened in 1884, with Rev.S.A.Barnett as its first warden. During the same year the Universities Settlements Association was established.

The term "Settlement" denoted the special association of university men with these organisations, and their main objects were, first, to provide facilities for the education and recreation of the people in the slums, and secondly, to inquire into the conditions under which the poor lived, so that attempts might be made to improve them. Toynbee Hall, especially, became the home of all university men who worked there, whether they rendered part-time or whole-time services. In 1884 another university settlement, Oxford House, Bethnal Green, was opened. It carried on the same kind of work as Toynbee Hall, but with this difference - that while Toynbee Hall laid emphasis on general culture, Oxford House put religious education in the forefront. The

success of Toynbee Hall and Oxford House led to the founding of other settlements. Canning Town Women's Settlement, Browning Settlement, Mansfield House and others were established before the close of the century. These, however, were not "university" settlements; but adult education formed a major part of their activities.

IV

We have so far described the growth and development of adult education during the nineteenth century. Its progress throughout was due almost entirely to voluntary efforts. During the first half of the century the religious motive led to the establishment of adult schools, the scientific motive led to the founding of Mechanics' Institutes, and the social and political motives led to the educational activities of the Co-operative, Chartist and Trade Union movements. During the second half of the century the religious and scientific motives in adult education were not so prominent as the social and political. The failure of Chartism, as noted already, convinced the working classes that the first essential to the solution of their social and economic problems was a liberal education. It was this conviction that led Maurice and his fellow Christian Socialists to establish Working Men's Colleges in London and other industrial towns for the higher education of workmen. If during the first half of the nineteenth century adult education meant the instruction of working men in reading and religion, during the second half of the century it came to be associated more and more with higher learning. The voluntary efforts for the promotion of adult education were directed more to the provision of facilities for higher rather than elementary instruction. This was partly due to the fact that, beginning with the second half of the last century, the state accepted a partial responsibility for the elementary education of adults.

The Committee of Council issued grants from the year 1851 to Evening Schools in which the majority of students were adults receiving an elementary education. Again, the passing of the Elementary Education Acts of 1870 and 1876 greatly increased the facilities for elementary education, with the result that from the 'eighties onwards the character of the evening schools also changed. The adults who joined these schools no longer required elementary education, for they had already acquired it as children. The evening classes therefore gave an advanced education to men and women. Even the character of the adult schools changed during the second half of the century. Up to the year 1851, when Hudson published his history of adult education, the total number of adults who had learned to read and write in these schools was 250,000. But during that year the number attending the schools was only 3500. As years went on the adult schools concerned themselves more and more with the social rather than the religious aspect of education.

From the opening of the present century the efforts for the spread of adult education became more organised and wide-spread than ever before, and the establishment of a national system of education changed the character of the adult education movement. Beginning with the year 1902 the object of adult education has no longer been to provide elementary, secondary or technical education, for the state assumed full responsibility in these matters. The new aim has been to give men and women a humane or cultural education which, beginning at the age of leaving school, would continue throughout life. Such a continued education has come to be regarded during the present century as an essential to the proper understanding of the rights and duties of citizenship in a democratic community. This attitude has led to a further widening of the means of spreading education among adults.

The nineteenth century closed with the foundation of Ruskin College, an institution managed solely by working class organisations, and a meeting at Oxford of Co-operators and the members of the Extension delegacy for discussion of arrangements for Extension lectures. This meeting, "the first quasi-official conference between representatives of a working class movement and those of a University", led to the formation, in 1903, of the Worker's Educational Association.

The primary aim of the W.E.A. was to stimulate interest in education among the working classes, to find out the existing demand for education among adults, and to organise the supply in relation to the demand. The Association consisted of a Central Authority, District Authorities and Local branches. In 1907 it arranged a conference, at Oxford, of working class and educational organisations, which affirmed "the growing desire on the part of work-people for higher education", and pointed out the necessity "for the further co-operation of Oxford in the systematic teaching of historical, economic and other liberal subjects." The result was the appointment of a special Committee which reported in 1908 in a volume entitled "Oxford and Working Class Education". The report gave a short historical account of the various movements for adult education, and then discussed the defects of the system of extension lectures through which the universities had for the last forty years tried to impart knowledge to the workers. They concluded that if each centre was to be self-supporting a large attendance would be needed to avoid a deficit. An adverse effect of the anxiety to avoid a defecit would be that "both the lectures and the subject to be studied must be chosen not solely or chiefly on account of their educative value, but with a view to the probability of their drawing such large numbers that the lectures will 'pay' " (1). Again, large classes

(1) Report (Oxford and Working Class Education) Para.59.

would mean that "individual students would rarely receive the personal guidance and supervision which is offered to an undergraduate in Oxford" (1). The Committee, therefore, recommended a new system of tutorial classes which should be established in important industrial towns, and which should, each, consist of not more than thirty students. "These classes should pursue a plan of study drawn up by work-people and representatives of the University in consultation;.....Oxford should appoint and pay half the salary of the teachers by whom such classes are taught; and.....such teachers should receive a status as a lecturer in Oxford" (2). To make sure that the teaching really satisfied the demands of the workers the tutorial classes were to be organised by the local branch of the W.E.A. The course of study was to be continuous, and it was to extend over a period of two years. Every lecture was to be followed by a discussion class. Every student was to write an essay every fortnight, and to do private reading at home. To facilitate home-reading the lending of books was to be carefully organised.

The report was indeed very valuable, and work at Oxford was begun immediately on lines laid down by the report. The same procedure was soon adopted by the other universities and university colleges.

The activities of the W.E.A. resulted in a closer contact "between the educational work of adult students and that of both the Universities and public educational bodies" (3). The adoption of the new plan of work recommended by the Committee appointed by the W.E.A., greatly increased the number of extra-mural students who, though not university students in the strict sense of the term, were taught by university lecturers. These students indeed made a serious study of university subjects, and as the Royal

(1) Report, para 60.
(2) Ibid, para 88.
(3) Final Report, Adult Education Committee (1919). P.33.

Commission on the University of London (1912) pointed out, they cared more for the acquisition of knowledge than for diplomas or degrees. Extra-mural teaching, as the Commissioners pointed out, became part of the regular work of universities, and it was "essential to a university, not in the narrower sense of being a condition of its existence, but in the broader view which lays upon a place of learning the duty of using its talents to the utmost, and offering its treasures freely to all who can benefit by them and sincerely desire to do so" (1).

But however remarkable the achievements in the field of adult education during the present century may be, it should not be forgotten that the success of the movement during the last two or three decades has at least partly been due to the efforts that were made in this field during the nineteenth century, whatever may have been the imperfection of such efforts. It is no doubt true that the motives of adult education to-day are very high. Adult education is not to be regarded "as a luxury for a few exceptional persons here and there, nor as a thing which concerns only a short span or early manhood". It should be regarded as "a permanent national necessity, an inseparable aspect of citizenship", and it should therefore be made both "universal and life-long" (2). But the formulation of such a high aim and the realisation of it during the past two or three decades would not have been possible had not the Industrial Revolution during its early years created the need of teaching adults to read and write, and had not the little knowledge which the workmen gained in the adult and Sunday schools created in them the desire for a cultural education and an equally strong desire for the exercise of political rights.

(1) Final Report of the Royal Commission on University Education in London, para 79.

(2) Final Report, Adult Education Committee (1919), P.5.

CHAPTER IX

CONCLUSIONS.

We have traced in detail the changes which the Industrial Revolution produced in the different grades of English education, both in its transitional years and later. We shall now gather the threads of the story.

Up to 1760 the history of English education was almost wholly a history of the grammar schools and of the two ancient universities, those of Oxford and Cambridge. These institutions were meant exclusively for the well-to-do classes and for those who desired to join the Church, although, in some exceptional cases provision was made for the admission of some deserving poorer class children.

The education of the poor during the first half of the eighteenth century was not an urgent problem. A great majority of the poor lived in villages, and were engaged in agriculture and other domestic industries. Their educational provision consisted in the variety of their occupations; and in a few instances the practical training on the farms and in the industrial occupations at home was supplemented by instruction in reading and writing which was provided by small private schools like the Dame and Charity Schools, detailed descriptions of which have been given in the second chapter. This educational provision for the poor during the first half of the eighteenth century, meagre though it was, satisfied the needs of a predominantly rural population which was economically well off.

But the economic changes of the latter half of the eighteenth century made the educational problem of the poor very important. The system of enclosures which resulted in the disappearance of the small Landowners and the growth of factories which offered high wages to the ruined agricultural labourers led to a rush of population from the

villages into the new industrial towns. The work in factories was based, as we have seen, on the principle of division of labour, and that variety of occupation which was present in the rural life was altogether absent in factory labour. This was one reason why the education of the poor under the new economic order became an urgent matter. Again the increase of poverty and crime owing to the concentration of large masses of people in towns, and to the Irish immigration, made education doubly important.

The years 1760 to 1840 were, as noted in the earlier chapters, a period of intense suffering for the poor. The state during this period did very little to improve the economic and moral condition of the working classes, and attempts to educate the poor were made by voluntary bodies. But it should be remembered that it was during these dark transitional years, when the English masses were in a state of utter demoralisation, that the foundations of all those movements in English education were laid which made the provision in all grades of education in England so remarkably rich at the opening of the present century.

Thus the work of the Charity Schools, the Sunday Schools and the Monitorial Schools during the last decades of the eighteenth and the beginning of the nineteenth centuries stimulated among the working classes a desire for the possession of adequate facilities for elementary education. By occasional rioting, by their persistent efforts to obtain a share in the government of the country, and by their determination to secure the benefits of education for their children and themselves, they expressed their opposition to the governing-class policy of keeping them ignorant and "in their proper place". The State was now compelled, on the one hand to extend the franchise through a series of Reform Acts beginning from 1832, and on the other to adopt measures for the provision of facilities for

elementary education, which alone would fit the working classes for the proper exercise of their political rights. In the fifth chapter we traced in detail the activities of the State in relation to elementary education. Beginning with the parliamentary grant of 1833 and the appointment of the Committee of Council in 1839, the State gradually extended its sphere of activity, until, in 1870, the means of elementary education were fairly wide-spread, and in 1902 a National System of Elementary Education was established, under which every child was compelled to attend school between the ages of five and fourteen. Elementary education for the masses in England has thus been entirely a consequence of the Industrial Revolution, while in the Protestant States of Europe and in Scotland its origins are to be traced to the Reformation.

But this was not all. Even the movements for the education of infants and adults began, as we have seen in the fourth and eighth chapters, during the transitional years of the Industrial Revolution. The shortcomings of these voluntary movements were no doubt many during their earlier years, but they were undoubtedly the stepping stones to the success which followed under properly organised state support during the last decade of the nineteenth and the opening decades of the present century.

Institutions for secondary and university learning no doubt existed centuries before the Industrial Revolution began. But, as noted earlier, they were few in number, and were meant almost exclusively for the upper classes and for the education of those who chose a clerical profession. The curriculum, both in the grammar school and in the university, was purely classical, and even in the classics the standards of attainments were not high.

The Industrial Revolution, however, brought about very important changes in the field of secondary and university education. In the first place it gave rise to a new type of secondary schools, the academies, whose modern curriculum

satisfied the requirements of the rich merchant classes. In the second place it led to some changes in the curricula of the grammar schools themselves. Owing to the efforts of some able headmasters like Butler of Shrewsbury and Arnold of Rugby, the curricula of grammar schools were widened to include some modern subjects. Lastly, the increase of elementary education among the masses led, during the last decades of the nineteenth century, to an increased demand for secondary education, which made the State intervene in matters relating to such education. This intervention led to an adaptation of the large numbers of private schools to suit the requirements of a vast industrial community, and to the establishment of a national system of secondary education.

Among the changes which the Industrial Revolution brought about in the field of university education the first was the reform of the older universities, those of Oxford and Cambridge. A modernisation of the curriculum, similar to the modernisation of the grammar school curriculum, began at these universities during the middle of the nineteenth century. Again corresponding to the newer type of secondary schools, the academies, the provincial universities were founded, which enabled the Dissenters and the poor, who could not obtain admission at Oxford and Cambridge (the former owing to religious tests and the latter owing to the prohibitive costs) to receive education at the university level. Lastly, it was the Industrial Revolution, which after its transitional years created among the working classes a desire for a cultural education, which led the universities during the 'seventies to extend their teaching beyond their own walls by organising extra-mural lectures.

One other and most important consequence of the Industrial Revolution was the movement for technical education, a full account of which has been given in the seventh chapter. The movement during the first half of the nineteenth century was combined with the movement for adult

education; but when about the middle of the century the scientific motive in adult education, which gave rise to the Mechanics' Institutes, gave way to cultural and political motives the two movements became separate. The state now took an interest in technical education, and with the establishment of the Science and Art Department in 1853 there began a period of steady progress in technical education, though up to the passing of the Technical Instruction Act (1889) and the Local Taxation (Customs and Excise) Act (1890) the State did not give any substantial financial aid. The Technical Instruction Acts led to a remarkable progress in technical education during the last decade of the nineteenth century, and the Education Act of 1902 established a national system of technical education, as it established a national system of elementary and secondary education.

From what has been said above it will be seen that the progress in every sphere of English education, from the infant school to the university, during the last hundred years, could be attributed to the Industrial Revolution. It is such an all-round educational progress that made England great socially, economically and politically. Again, it is this educational progress that has made her the most admirable example of a de facto democracy.

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