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VOLUNTARY INSTITUTIONS OF ADULT EDUCATION**

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## CHAPTER 2 VOLUNTARY INSTITUTIONS OF ADULT EDUCATION

### 1. Introduction

During the later eighteenth century a great number of local clubs and societies were formed by small groups of people having a special interest in science or literature or the arts. Some of these societies hired their own premises, but more generally met on a periodic basis in a coffee house or similar public place. There were "working men's libraries, book clubs, and mutual improvement societies. In the latter [*sic!*], members took turns to prepare and deliver lectures based on independent study in their library".<sup>1</sup> The Industrial Revolution brought its own movement for apprentices' libraries and institutions for artisans. From the early nineteenth century, mechanics' institutes were established for (and initially by) skilled and semi-skilled manual workers. These were followed by literary and scientific institutions, philosophical institutions, and subscription libraries, open to all but (as one contemporary Member of Parliament stated) "founded and supported" principally by the "large population of our counting-houses, the clerks of our public offices, our law pupils, young artists, &c.", who had received a reasonable educational foundation and who were eager to improve on it.<sup>2</sup>

These 'steam intellect societies' (as some modern writers have it, following Thomas Love Peacock's satirical phrase) "embraced a vast complexity of institutions and associations. Certainly, the most famous of the associations thus embedded amidst this cultural matrix were the mechanics' institutes, for it was those which boasted the clearest tradition and maintained the most formal of manuscript and printed records".<sup>3</sup> All of these voluntary bodies contributed to the cultural climate in which public libraries later grew, but it was perhaps the mechanics' institutes in particular which had the closest association with them. Furthermore, for both mechanics' institutes and public libraries the problems of education and literacy were of basic importance.

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<sup>1</sup> Keane, P. Mechanics' libraries and popular education. In, *Libraries and popular education*, edited by Boris Raymond. (Halifax, N.S.: Dalhousie University. 1978.) p.20.

<sup>2</sup> Wyse, T. On the lyceum system in America, with a consideration of its applicability to mechanics' institutions in this country. In, Central Society of Education. *Second Publication*. (London: Taylor and Walton. 1838.) pp.207-208.

<sup>3</sup> Inkster, I. Introduction: the context of steam intellect in Britain (to 1851). In, *The steam intellect societies - essays on culture, education and industry circa 1820-1914*, edited by Ian Inkster. (Nottingham: University of Nottingham, Department of Adult Education. 1985.) p.3.

For many workers, the level of education in general and of literacy in particular was a continuing problem. The Parliamentarian quoted earlier noted in the late 1830s that: <sup>4</sup>

Unfortunately, as things now are, the great mass of our working population have no choice. Many have not had the most ordinary elementary instruction; others so slight as to leave no impression; others, again, of such a description as to be of little or no use. The keys - reading and writing - are placed in the pupil's hands, but he is not shown the lock to open; he knows not where the treasure lies.

Yet the situation was slowly improving, so that as the century progressed many of the voluntary libraries and adult educational institutions, which often struggled to exist during the first part of the century, began to thrive towards the end of the century in the form of rate-provided public libraries and post-school educational facilities such as technical schools.

## 2. Literacy

Two aspects of adult education were particularly important during the early part of the nineteenth century, and these significantly affected the development of the concept of public libraries as community education centres. These were the interdependent factors of literacy and scientific education for technicians. Both matters were taken up initially by voluntary bodies in the first half of the century, and by local government authorities during the second half. On-the-job training needed low or nil literacy skills, but post-school education required both skills and a favourable attitude towards self-improvement.

In 1834 the Factory Commission reported on an analysis of returns from factories in industrial districts, giving the percentages of working class people who were unable to read or write (Table 2.1). These statistics must be treated with some degree of caution, but they do indicate the general feature that an ability to read was more widespread than an ability to write. They also show that about eighty-three to ninety per cent of factory workers *were* able to read (though it is unclear what criteria were used to determine that ability to read), suggesting that there was a foundation on which some degree of print-based education could be built. The figures also serve to explain why there was a considerable supply of chapbooks, broadsides and other street literature circulating throughout the country, in addition to other printed matter - and why the government felt

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<sup>4</sup> Wyse. *op.cit.* pp.203-204.

it wise to place a tax on certain publications which would put them outside the financial reach of workers.<sup>5</sup>

**Table 2.1: Factory workers' ability to read and write, 1834.<sup>6</sup>**

<u>County</u>	<u>Unable to read</u>	<u>Unable to write</u>
Lancashire	7 per cent	62 per cent
Yorkshire	5 "	52 "
Cheshire	10 "	53 "
Aberdeenshire	7 "	54 "
Lanarkshire	4 "	46 "
Renfrewshire	3 "	46 "

## 2.1 Loss of literacy

One of the problems in estimating the literacy rate at various periods is the phenomenon of loss through disuse. The English language of the King James's Authorised Version of the Bible may not have been very close to that spoken by the working class in the nineteenth century, yet the adult Sunday Schools aimed to create a population able to read that work. Pole quotes from a letter to him written by the Rev Thomas B. Simpson of Brislington, near Bristol, on 16 December 1813, as follows:<sup>7</sup>

The school at Brislington has been established very recently: it contains thirty-three scholars, of both sexes; and among them a very interesting class, consisting of lads who had been taught to read at a Sunday school in their childhood; but who, from early and hard servitude in the houses of farmers, had begun to lose the little they had learnt. If I were to fix on any who seem most sensible of the advantage of this mode of instruction, where all duly appreciate it, I should perhaps fix on this class of boys; and I think it important to draw the attention of the Committee to the enquiry - whether in other places there may not be those who, having lost the ability of reading their Bible with ease and correctness, are become as much the objects of their care as those who have never been taught at all.

At the children's school level, both imperfect teaching and poor attendance have also been blamed for the lack of retention of reading skills in later life. In 1838 the Manchester

<sup>5</sup> Collet, C.D. *History of the taxes on knowledge: their origin and repeal*. (London: Watts & Co. new ed 1933.) xv,231 pp.

<sup>6</sup> quoted in: Green, E. Adult education and the public library. *Library Association Record*, June 1939, p.321.

<sup>7</sup> Pole, T. *A history of the origin and progress of adult schools: with an account of some of the beneficial effects already produced on the moral character of the labouring poor; also considerations on the important advantages they are likely to be productive of to society at large; with an appendix, containing rules for the government of adult school societies, and for the organization of the schools, &c.&c.* (Bristol: C. McDowall. 2nd ed 1816.) pp.84-85.

Statistical Society recorded at some length anecdotal evidence of the loss of literacy in a nearby township: <sup>8</sup>

A considerable number of persons stated that they were once able to read in the Bible, but had now forgotten it. This takes place, according to some, because they have "so mitch else to think about"; others consider that hard work drives it out of their heads; and one woman attributed her loss of learning to having had "such a big family". A hand-loom weaver, speaking in reference to his ability to read formerly, said, "I could say th' catechis fro' end to end, and ne'er look at a book, but I cannot read now; I can only spell out words i' th' Testament, but cannot *expenale* them, or summut o' that." A young woman, twenty-eight years of age, said that she could have read in the Testament when young, but can only tell her letters now - cannot account for it, except that she has never tried to read for years. A crofter said he was at least three years at a day school, and could read the Bible, but has "quite forgotten how it's done now".

One difficulty with surveys and the interpretation of statistical evidence was noted by the Society, which reported that "Under the head of adults it is curious to observe, that of those who cannot read more *have* attended school than *have not* done so. About half of those who can read can write also, but not quite one-third can cipher". <sup>9</sup> The first part of this quotation issues a warning: a strongly positive correlation between two factors is not necessarily proof of a cause-effect relationship. Indeed, it has been suggested that, over the centuries, school attendance was less a factor in an ability to read than was parental teaching. <sup>10</sup>

The Society also reported that in Bury some 3,909 people could both read and write, and 4,579 could only read, <sup>11</sup> suggesting that the skill of writing was more difficult than that of reading. A survey in Liverpool found only three Sunday Schools in 1835/6 which did not teach reading; of those which did, one taught reading Welsh only (296 scholars with an average attendance of 255) and five taught both Welsh and English (502 scholars with an average attendance of 403), whilst the remaining sixty-six taught English only. <sup>12</sup> This matter of bilingual literacy in England was restricted geographically, but it does indicate that country-wide average statistics may hide various

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<sup>8</sup> Manchester Statistical Society. Report of a Committee on the state of education in the township of Pendleton, 1838. *Journal of the London Statistical Society*, March 1839, p.4.

<sup>9</sup> *ibid.* p.9.

<sup>10</sup> Laqueur, T. The cultural origins of popular literacy in England, 1500-1850. *Oxford Review of Education*, vol.2, no.3, 1976.

<sup>11</sup> Manchester Statistical Society. *Report of a Committee of the Manchester Statistical Society, on the state of education in the borough of Bury, Lancashire, in July 1835.* (London: Ridgway. 1835.) Appendix table 4, p.iv.

<sup>12</sup> Manchester Statistical Society. *Report of a committee on the state of education in the borough of Liverpool, in 1835-1836.* (Manchester: Bancks. 1836.) table VI, p.x.

important differencing factors. None of the surveys was qualitative, or defined the criteria employed to determine an ability to read or write.

About the same time, a traveller in Lancashire wrote that workers must be provided with the means of keeping up with knowledge as well as acquiring it, otherwise the value of schooling would be lost.<sup>13</sup> He also noted signs of loss of literacy, and wrote: "I have known many of the labouring classes who, in youth, could read very well, but from want of practice have now all but forgotten their alphabet. To read imperfectly is practically little better than not being able to read at all; when a book is a task instead of an indulgence, it will obviously not be sought as a means of relaxation".

The connection between continuing literacy and libraries was raised by Mr Bunbury of the Select Committee on Public Libraries in May 1849, when he asked Samuel Smiles: "As regards that large class of artisans of the lower grade who do not avail themselves of the mechanics' institutes, is not it a fact that at present many are unable to read with sufficient fluency to be able to derive advantage from books?" Smiles replied: "I have stated that in my opinion one great obstacle to reading books is the want of a sufficient supply of books, and that that is the cause of many who have learned to read when they were young, forgetting even the art of reading in their adult years". The point was then taken up by William Ewart, who asked: "But if they had books to read, they would not forget it?" Smiles developed the point in his answer: "No doubt the establishment of good libraries, and making them accessible to the poorer classes, would be the means of enabling them to improve themselves in reading, as well as of carrying forward their education in adult years".<sup>14</sup> So the point was made that public libraries could be a valuable link between adult literacy and adult education.

## 2.2 Estimates of literacy rates

One of the most widely used of the criteria employed by researchers for assessing literacy is the ability to sign one's name. As a class of record the church marriage registers give perhaps the longest and most complete series available to researchers, with the requirement in 1754 that marriage partners should either sign their names or make their marks in lieu. From 1839 the Registrar General of Births, Marriages and Deaths collected statistics and published them in the annual reports. Using these sources various

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<sup>13</sup> Taylor, W. Cooke. *Notes on a tour in the manufacturing districts of Lancashire; in a series of letters to His Grace the Archbishop of Dublin.* (London: Duncan & Malcolm. 2nd ed 1842.) p.137.

<sup>14</sup> Parliament: Select Committee on Public Libraries. *Report from the Select Committee on Public Libraries; together with the proceedings of the committee, minutes of evidence, and appendix.* (1849.) Paper 548, vol XVII. pp.128-129, Q.2.2012-2013.

estimates have been published. For example, it has been calculated that in 1841 some two-thirds of bridegrooms and over half of the brides signed the registers.<sup>15</sup> This is not proof of the ability to read, of course, though it has been taken as somewhat primitive circumstantial evidence.

Before the first Elementary Education Act of 1870 initiated in a practical way the national movement to ensure that all children would attend school for a minimum period, and government inspection began to work towards a larger degree of uniformity of educational standards throughout the country, there was in fact a considerable regional diversity in levels of literacy. This was not merely due to differences between town and country, however, as one study of two counties has shown.<sup>16</sup>

The Registrar General's statistics do indicate a steady overall improvement in literacy rates from 1840, but there were significant differences of skill between social classes, the two genders, geographical areas and types of community - though not between town and country *per se*.<sup>17</sup> The industrial urbanisation of parts of Lancashire and Cheshire actually resulted in decreasing literacy levels between the 1750s and the 1830s,<sup>18</sup> and (as noted below) these were areas where the mechanics' institute and other adult education movements were strong later in the century, and where many local authorities seized on the Public Libraries Acts to provide post-school educational facilities.

By 1866, the percentages of spouses making their mark instead of signing their names on marriage varied in England from 16 per cent in the rural North Western county of Westmorland to 40 per cent in the industrialised Midland county of Stafford. This tended to reflect the order of ranking for attendance of children at day schools,<sup>19</sup> though again no cause-effect relationship can be established.

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<sup>15</sup> Perkin, H.J. The origins of the popular press. *History Today*, vol.VII, no.7, July 1957, p.429.

<sup>16</sup> Smith, D.E. Literacy in West Yorkshire and West Sussex 1660-1835. *Journal of Educational Administration and History*, vol.24, no.1, January 1992, pp.58-73.

<sup>17</sup> Stephens, W.B. *Education, literacy and society, 1830-70: the geography of diversity in provincial England*. (Manchester: Manchester University Press. 1987.) pp.3-5.

<sup>18</sup> *ibid.* p.8.

<sup>19</sup> *ibid.* p.24.



### 2.3 Publications as evidence of literacy

If the volume of publication is a guide, then literacy rates increased steadily during the eighteenth and nineteenth centuries. Further evidence may be seen in the fears of successive governments regarding working class reading and access to inflammatory propaganda, leading them to impose stamp duties on the press which increased from one and a half pence (old currency) in 1789 to four pence in 1815. This raised the total purchase price of a journal to seven pence,<sup>20</sup> which was well beyond the reach of the working class. Nevertheless, printing presses were active in turning out a wide range of materials which were consumed by the working classes. As Webb put it, there was:<sup>21</sup>

... a vast substratum of popular literature - almanacs, ballads, last dying speeches, broadsides, flyers and chapbooks. . . A few dedicated and self-educated working men sacrificed their little luxuries to buy good books, but of the lower classes who were literate, certainly the majority were still drawn to these crude productions of a pre-industrial press.

In 1835 an investigation into the sale of "immoral and irreligious works" in Manchester recorded its findings, from which the weekly figures in Table 2.2 have been compiled. The numbers are obviously estimates, and do not necessarily indicate the actual or

**Table 2.2: Weekly publications sold in Manchester in 1835.**<sup>22</sup>

<u>Title</u>	<u>Number of copies</u>	<u>Price</u>
Penny Magazine	1,600 }	
Saturday's Magazine	1,600 }	
Dublin Penny Journal	1,600 }	1d and 1s
Chambers Journal	1,600 }	
Poor Man's Guardian	900 }	
Dispatch	900 }	
Moral World	900 }	1d and 2d
Police Gazette	900 }	
Political Register	900 }	
Roebuck's Political Pamphlets	900 }	
Paddy Kelly	400 }	1d
Bob Logic	400 }	
Doctor	200	1d

<sup>20</sup> Perkin. *op.cit.* p.426.

<sup>21</sup> Webb, R.K. *The Victorian reading public: from Dickens to Hardy.* (London: Cassell. 1963.) pp.210-211.

<sup>22</sup> Manchester Statistical Society. Report of a committee on immoral and irreligious works sold in Manchester, 1835. In, Ashton, T.S. *Economic and social investigations in Manchester, 1833-1933: a centenary history of the Manchester Statistical Society.* (London: P.S. King. 1934.) pp.18-19.

potential readership, but rather the types of periodicals which were being bought. The survey could not discover what proportion of the periodicals with the highest circulation was sold to the working class, but most of the others were apparently purchased by them except for *Paddy Kelly* and *Bob Logic*, which were bought almost exclusively by people employed in the warehouses.

In addition to these weekly sales, the survey found that about 600 copies of *Bridal Gem*, *Fruits of Philosophy*, and *Moral Physiology* had been sold during the past year; about 400 copies of Paine's *Age of Reason* with about 200 copies of similar works costing 6d (£0.02p.) or 15d (£0.06p.) each, within the past three years; about 800 copies of Paine's *Rights of Man* during the past three years; and about 1,800 copies of Cobbett's *Legacy to Parsons* at 18d (£0.08p.) each during the past six weeks. The survey found that cheap but innocuous works circulated more extensively than immoral ones in Manchester, and led the members of the Society to support the abolition of the Newspaper Stamp Duty which was reduced to 1d in the following year.

By contrast, Mary Carpenter cited the purchase of popular publications for a different reason when she wrote: <sup>23</sup>

A similar testimony is borne by one who ascertained from seven vendors of popular publications in a large city, the comparative number sold of different classes of periodicals. Of works of a moral and elevating tendency, such as *Chambers'* and the *People's Journal*, there are sold in proportion to those below only *seven*. Of works neither elevating nor immoral, such as the *London Journal*, &c., 384. Of works of a decidedly immoral tendency, such as Turpin and Sheppard, 234. Of periodicals of an atheistical and deistical kind, which circulate exclusively among the intelligent of the working classes, 55.

Her purpose was to indicate that "almost the only books with which the criminals as a class are acquainted, are of a character directly to stimulate to vice", contrasting this with the knowledgeable appreciation by children of books of travels, adventures or inventions, when educated in one of the schools of the British and Foreign School Society. Many children had been taught the rudiments of reading but without comprehension, and so turned to popular works of doubtful morality. <sup>24</sup> A similar concern for the 'abuse' of literacy was evident in contemporary publications on the voluntary institutions, and later on in the public libraries also.

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<sup>23</sup> Carpenter, M. *Reformatory schools, for the children of the perishing and dangerous classes, and for juvenile offenders*. (London: C. Gilpin. 1851.) p.103.

<sup>24</sup> *ibid.* p.104.

## 2.4 Illiteracy and crime

Just as drink and crime were often associated in the minds of the middle and upper classes in nineteenth century England, so too was there an increasing interest amongst persons interested in popular education about the correlation between illiteracy and crime. The police statistics for Manchester in 1841 (Table 2.3) illustrate the kind of data available at the time, which were used in support of the belief that most criminals were uneducated and of the corollary that education would lessen crime. During that year some 13,345 people whose ages ranged from under ten years to over sixty years old were taken into custody; some eighty-nine per cent of the males and ninety-six per cent of females were either illiterate or had low literacy skills.

**Table 2.3: Literacy and crime in Manchester in 1841.** <sup>25</sup>

	Neither read/write		Read only or read/write imperfectly		Read+write well		Superior instruction		TOTALS	
	M	F	M	F	M	F	M	F	M	F
Taken into custody	4901	2070	3944	1218	873	119	207	13	9925	3420
<i>percentage of Totals</i>	<i>49.4</i>	<i>60.5</i>	<i>39.7</i>	<i>55.6</i>	<i>8.8</i>	<i>3.5</i>	<i>2.1</i>	<i>0.4</i>		
Summarily convicted or held on bail	795	265	660	198	193	14	13	-	1661	477
<i>percentage of Totals</i>	<i>47.9</i>	<i>55.6</i>	<i>39.7</i>	<i>41.5</i>	<i>11.6</i>	<i>2.9</i>	<i>0.8</i>	-		
Tried and convicted	277	100	276	72	82	7	10	-	645	179
<i>percentage of Totals</i>	<i>42.9</i>	<i>55.9</i>	<i>42.8</i>	<i>40.2</i>	<i>12.7</i>	<i>3.9</i>	<i>1.6</i>	-		

In 1849 Henry Pownall, chairman of the Middlesex magistrates, gave evidence before the Select Committee on the Sale of Beer and stated that in the previous year some 559 juvenile males and 23 juvenile females had been committed as prisoners to the House of Correction at Coldbath Fields. At the same time there were some 967 males and 167 females in the Westminster prison; over 500 of these were under 14 years of age and 413 (over 80 per cent) could neither read nor write. <sup>26</sup>

Later in the century, statistics provided from Liverpool (Table 2.4) were still telling the same story, which would not have been lost on those supporting the 1870 Elementary Education Act. About thirty-eight per cent of people apprehended by police (though not necessarily convicted) in the mid 1860s were unable to read or write, whilst about fifty per cent were able to do so only imperfectly. A mere one or two per cent of people taken into custody between 1865 and 1867 were said to be able to read and write well.

<sup>25</sup> adapted from table in: Taylor. *op.cit.* p.255.

<sup>26</sup> Parliament. *Report from the Select Committee of the House of Lords appointed to consider the operation of the Acts for the sale of beer, and to report thereon to the House; together with the minutes of evidence, and an appendix and index thereto.* Sessions 1849 and 1850. [House of Commons] Reports from Committees, session 1850, vol XVIII. p.46.

**Table 2.4: Degree of instruction of persons apprehended by the Liverpool police in each of the years ended 29 September 1865, 1866, and 1867. <sup>27</sup>**

<u>Degree of instruction</u>	<u>1865</u>	<u>1866</u>	<u>1867</u>
	(N)	(N)	(N)
Able to read and write well <i>percentages</i>	505 2.0	253 1.1	288 1.2
Able to read and write imperfectly <i>percentages</i>	12,675 49.7	11,952 50.3	12,084 49.9
Able to read only <i>percentages</i>	2,826 11.1	2,427 10.2	2,220 9.2
Neither read nor write <i>percentages</i>	9,513 37.3	9,109 38.4	9,639 39.8
TOTALS	25,519	23,741	24,231
of which are under 10 years <i>percentages</i>	49 0.2	62 0.3	194 0.8

This was a period when immigration was changing the ethnic demography of the borough. In the year ending 1865, some 45,450 "apparent Irish emigrants, labourers etc... arrived in Liverpool by steamers from Ireland". The following year this increased to 73,043 although the figure dropped to 45,539 in 1866-1867. <sup>28</sup> No estimates of the literacy of these immigrants are readily available, but the rates are likely to have been low. It could be argued that the police throughout the country were merely targeting the illiterate, but the middle and upper classes viewed the arrests as proof that those having low levels of literacy and education were more likely to be of the 'criminal classes'.

The crime and literacy statistics for Liverpool and Manchester are not very different from those for criminal prisoners throughout England and Wales (Table 2.5), where about thirty-five per cent are stated to have been unable either to read or write, and some sixty per cent able to read or to read and write only imperfectly. Somewhat more significantly, one and a half per cent of those arrested in Liverpool could both read and write well, compared with over three per cent of prisoners in England and Wales during the same period.

<sup>27</sup> Adapted from data given in: Parliament. *Miscellaneous statistics of the United Kingdom. (Part VII). Presented to both Houses... 1868-69. LXII.* (London: HMSO. 1869.) p.110.

<sup>28</sup> *ibid.* p.111

**Table 2.5: England and Wales: Literacy of criminal prisoners, years ending 29 September 1865, 1866, and 1867.** <sup>29</sup>

Degree of instruction	1865			1866			1867		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Neither read nor write <i>percentage</i>	32,641 34.9	12,194 37.6	44,835 35.6	30,379 33.2	12,185 37.1	42,564 34.3	32,724 33.8	13,738 39.8	46,462 35.4
Read, or read and write imperfectly <i>percentage</i>	56,585 60.4	19,373 60.0	75,958 60.3	55,878 62.2	19,926 62.6	76,804 62.0	59,684 61.6	20,067 58.2	79,751 60.7
Read and write well <i>percentage</i>	3,465 3.7	628 1.9	4,093 3.3	3,209 3.5	501 1.5	3,710 3.0	3,495 3.6	430 1.3	3,925 3.0
Superior instruction <i>percentage</i>	193 0.2	7 0.0	200 0.2	196 0.2	10 0.0	206 0.2	195 0.2	17 0.1	212 0.2
Instruction not ascertained <i>percentage</i>	731 0.8	221 0.7	952 0.8	758 0.8	249 0.8	1,007 0.8	807 0.8	241 0.7	1,048 0.8
TOTALS	93,615	32,423	126,038	91,420	32,871	124,291	96,905	34,493	131,398

Whether or not such raw statistics were strictly accurate, they were believed by contemporary reformers who were confirmed in their opinion that education would eradicate crime. For example, a particularly strong tirade against 'the priesthood' made by J.A. Roebuck in the House of Commons in 1850 concluded: "You make laws, you erect prisons, you have the gibbet; you circulate throughout the country an army of Judges and barristers to enforce the law; but your religious bigotry precludes the chance or the hope of your being able to teach the people so as to prevent the crime which you send round this army to punish". <sup>30</sup> Roebuck was speaking in support of the second reading of Fox's Education Bill, which was being thwarted by the refusal of churches to support a national tax-supported educational system. More happily, it was also the year when the first Public Libraries & Museums Act was passed.

The first Elementary Education Act came into force in 1870, and by the 1890 Act primary schooling became both compulsory and free. In the latter year the Liverpool Public Library Committee recorded (without presenting any proof) that the diminution in crime and pauperism corresponded with the march of education. They reported an unnamed eminent scientist as having said recently that the £10 million spent each year on education prevented more expenditure upon criminals and paupers. <sup>31</sup> Crime, however, did not disappear, although it remained associated in the minds of many people with a low level of scholastic attainment. At the end of the century it was noted that 168 (29.7

<sup>29</sup> Adapted from data given in: *ibid.* p.74.

<sup>30</sup> Hansard's *Parliamentary Debates*. 3rd series, vol.CX, 17 April 1850, col.457.

<sup>31</sup> Liverpool Borough Council. *38th report of the Committee of the free Public Library, Museum and Walker Art Gallery, to 31 December 1890*. (Liverpool: Borough Council. 1891.) p.5.

per cent) of the 566 boys under fourteen years old who were in the five Truant Schools in London, had not passed even Standard I. The government inspector expressed his surprise: "It is incredible", he said, "that at the end of the 19th century so many fine healthy lads of 13 in the metropolis of the Empire should have little benefited from all the machinery of elementary education".<sup>32</sup>

Whatever the differences in the levels of literacy noted in England during the early nineteenth century, a government committee had been told as early as 1824 that a working knowledge of reading, writing and the interpretation of drawings was considered essential for skilled employment in the engineering industry.<sup>33</sup> It had already become apparent that artisans required more than an elementary schooling to enable them to be productive.

### 3. Scientific and adult education for technicians

Warning against "the inexplicable folly which has confounded reading and writing with education", one writer during the depression years of the early 1840s expressed a rare insight when he said that "every employment in which men engage is a part of their education, - that is, has a share in the formation of their intellectual and moral habits".<sup>34</sup> Although most employers failed to see the workplace as an educational force, many workers themselves saw education for employment as being essential for their economic (and often political) well-being.

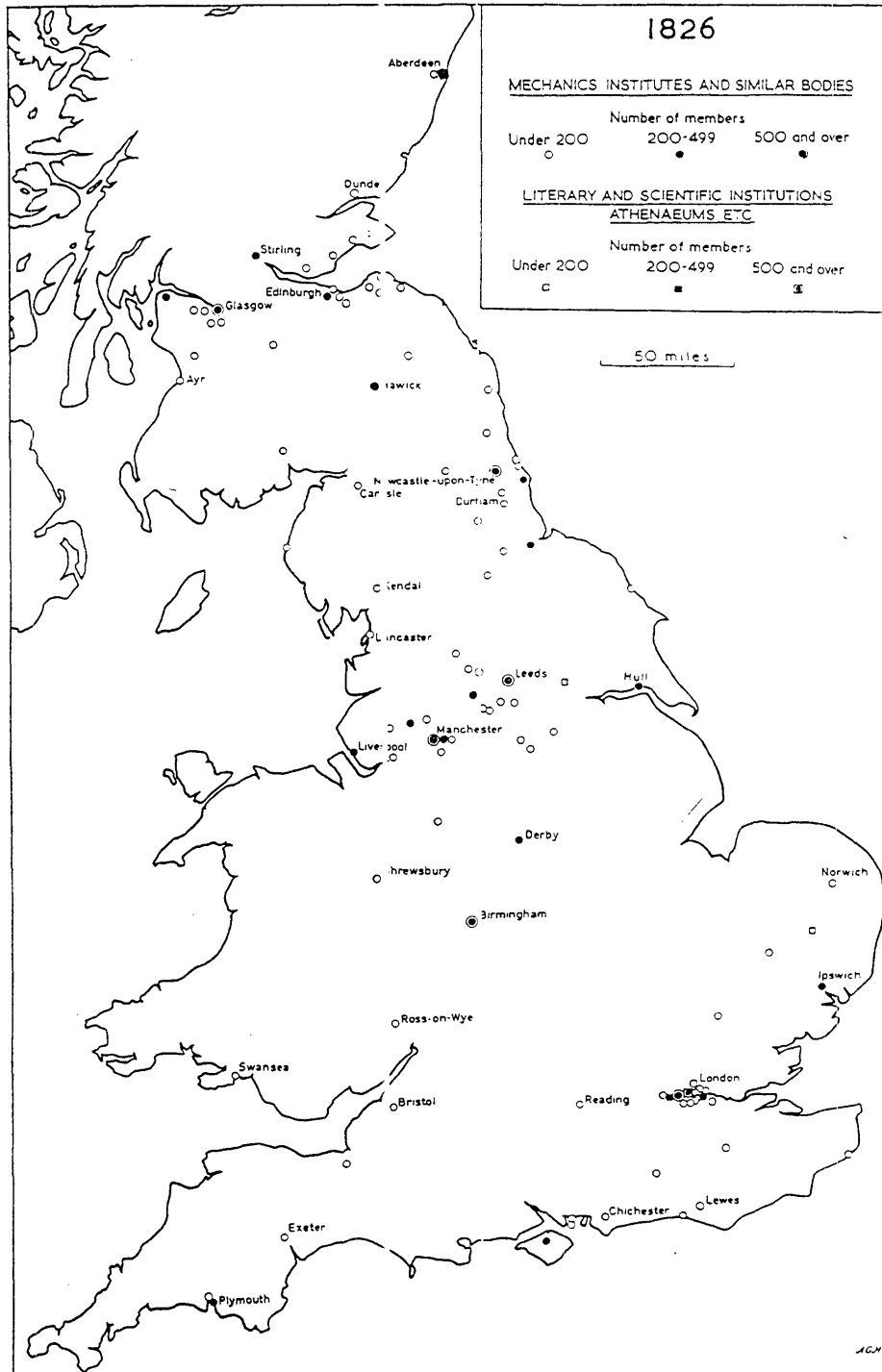
In addition to literacy, then, the second major strand in adult education was the provision of appropriate vocationally oriented education of artisans or technicians, to complement and indeed enhance the on-the-job training (if any) which they were receiving. The mechanics' institutes and similar bodies which had begun to spread throughout the country (Figure 2.1) attempted to provide this, with varying degrees of success. At the same time, some institutions were conscious of social implications in their establishment as exemplified by Rule 1 of the Oldham M.I.: "The object of this Institution is to communicate useful knowledge, and thereby to increase the power, respectability, and happiness of individuals and society". In pursuance of this, Rule 2

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<sup>32</sup> *Forty-first report for the year 1897, of the inspector appointed... to visit the Certified Reformatory and Industrial Schools of Great Britain.* C-8996. XLVIII. (London: HMSO. 1898.) pp.33-34.

<sup>33</sup> Parliament: Select Committee on Artisans and Machinery. *Report from the Select Committee on Artisans and Machinery.* (1824.) vol.V. p.25.

<sup>34</sup> Taylor. *op.cit.* pp.126-127.



**Figure 2.1: Map of England showing mechanics' institutes and similar bodies, 1826.** <sup>35</sup>

<sup>35</sup> Kelly, T. *George Birkbeck: pioneer of adult education*. (Liverpool: Liverpool University Press, 1957.) p.211.

continued: "Party Politics, and controversial Theology, will not be allowed to be discussed in any of the meetings of this Institution".<sup>36</sup> Mechanics' institutes, the Schools of Design, and local schools of science and art, all contributed to this movement and all contributed in some way to the development of public libraries in the second half of the century.

Such post-school education could be both oral requiring a degree of listening comprehension, and book-based requiring a level of literacy. By providing classes, lectures and libraries, mechanics' and similar institutes set out to satisfy both of these requirements. However, neither could be provided adequately without a regular income in the form of members' subscriptions, in spite of measures such as gratuitous lectures and the donation of books and periodicals. Membership of any voluntary body to which subscriptions must be paid depends on the perception of value for money, and on the availability of money surplus to basic requirements. This availability was generally dependent upon the changing economic climate in which workers and their families lived.

The fluctuating fortunes of mechanics' institutes may be exemplified by that at Sheffield (Table 2.6) where membership peaked in 1845 and dropped in 1847-48 before rising again. Not many lectures were held there, however, the number varying between eight and seventeen during the 1840s. An even greater variation is seen in the number of members attending classes, with a low of 91 in 1846 compared with a high of 320 in 1842. Whether because of slackness in trade at the national or local level, the economic condition of potential members made it difficult for a voluntary institution to maintain its character and indeed its very existence.

**Table 2.6: Sheffield Mechanics' Institute. Numbers of members, lectures held, and persons attending classes, 1842-1850.**<sup>37</sup>

	<u>1842</u>	<u>1843</u>	<u>1844</u>	<u>1845</u>	<u>1846</u>	<u>1847</u>	<u>1848</u>	<u>1849</u>	<u>1850</u>
No. of members	533	647	602	642	486	390	390	590	-
No. of lectures	13	17	11	11	8	13	13	-	-
No. in classes	320	254	199	224	91	-	-	250	200

<sup>36</sup> Oldham Mechanics' Institution. *Catalogue of the library belonging to the Oldham Mechanics' Institution, Providence Chapel School Room, Regent Street, Oldham, together with the rules and regulations of the institution. Established September 12th, 1837.* (Oldham: J. Dodge. 1838.) n.p.

<sup>37</sup> Hudson, J.W. *The history of adult education.* (London: Longman, Brown, Green & Longmans. 1851.) pp.161-162.



It was this constant uncertainty which was a major factor in many institutes looking for ways of increasing their membership and income, thereby sowing the seeds of their own destruction. The solution so often adopted was to organise popular functions, so that the lectures were offered for their entertainment rather than their educational value. Concerts, soirées and outings became popular in some institutes, certainly increasing their usefulness as social institutions but often to the detriment of their educational purpose. In some places only the institute libraries remained, their value depending on the quality of the books and periodicals as well as on the reading comprehension skills of members.

The Society for the Diffusion of Useful Knowledge made an effort to collect the reports of mechanics' institutes and other voluntary bodies, and an examination of these found that costs incurred in erecting buildings "or some other purpose designed to give an immediate maturity to a young Institution" created a burden which income hardly reduced.<sup>38</sup> One solution suggested was that the various activities should, in the early years, be carried out in different people's homes, with the interesting comment that a result could be "improving the social character of the neighbourhood".<sup>39</sup> Coates in 1841 compiled a "list of mechanics' and similar institutions", which noted thirty-six in the London area and a further 186 throughout the United Kingdom.<sup>40</sup> Of these, he was able to provide data summarising their annual reports for some twenty-one (or 58 per cent) in London and 103 (or 55.4 per cent) in the rest of the country (Table 2.7).

**Table 2.7: Mechanics' and similar institutions in the U.K., 1840.**<sup>41</sup>

	<u>Institutions</u>	<u>with classes</u>	<u>with lectures</u>	<u>with libraries</u>	<u>with museums or forming</u>
London	21	5	19	21	4
<i>percentage</i>		23.8	90.5	100.0	19.0
elsewhere in UK	103	16	86	88	21
<i>percentage</i>		15.5	83.5	85.4	20.4
All U.K.	124	21	105	109	25
<i>percentage</i>		16.9	84.7	87.9	20.2

<sup>38</sup> Duppa, B.F. *A manual for Mechanics' Institutions*. Published under the superintendence of the Society for the Diffusion of Useful Knowledge. (London: Longman, Orme, Brown, Green & Longmans. 1839.) p.99.

<sup>39</sup> Duppa. *op.cit.* pp.102-103.

<sup>40</sup> Coates, T. *Report of the state of literary, scientific and mechanics' institutions in England. With a list of such institutions, and a list of lecturers*. (London: Society for the Diffusion of Useful Knowledge. 1841.) pp.85-92.

<sup>41</sup> compiled from data in: Coates. *op.cit.* pp.96-105.

At that time, sixty institutions (or 48.4 per cent) were noted as either owning or renting a building in which to hold their various activities. Presumably the remainder of the institutions met in other premises, though it is impossible to be certain of the actual arrangements.

Ten years later, Hudson (Table 2.8) listed 606 mechanics' and literary institutions in England (stating that there were 610 altogether), twelve in Wales, fifty-five in Scotland, twenty-four in Ireland (though stating that there were twenty-five in existence), and one in Guernsey. In addition, he listed thirty philosophical institutions in England, three in Wales, twelve in Scotland, and eleven in Ireland.<sup>42</sup>

**Table 2.8: Mechanics' and similar institutions in the U.K., 1850.**<sup>43</sup>

	<u>Institutions</u>	<u>Classes</u>	<u>Library</u>	<u>Newsroom</u>	<u>Lectures</u>	<u>Museum</u>
England	606	263	516	369	392	28
	<i>Percentage</i>	<i>43.4</i>	<i>85.1</i>	<i>60.9</i>	<i>64.7</i>	<i>4.6</i>
Wales	12	6	11	8	12	2
	<i>Percentage</i>	<i>50.0</i>	<i>91.7</i>	<i>66.7</i>	<i>100.0</i>	<i>16.7</i>
Scotland	55	16	47	15	36	5
	<i>Percentage</i>	<i>29.1</i>	<i>85.5</i>	<i>27.3</i>	<i>65.5</i>	<i>9.1</i>
Ireland	24	4	19	13	16	1
	<i>Percentage</i>	<i>16.7</i>	<i>79.2</i>	<i>54.2</i>	<i>66.7</i>	<i>4.2</i>
Guernsey	1	0	1	0	1	1
	<i>Percentage</i>	<i>0.0</i>	<i>100.0</i>	<i>0.0</i>	<i>100.0</i>	<i>100.0</i>
TOTALS	698	289	594	405	457	37
	<i>Percentage</i>	<i>41.4</i>	<i>85.1</i>	<i>58.0</i>	<i>65.5</i>	<i>5.3</i>

The above table may have inherited some of the minor inaccuracies which recent research has discovered in Hudson's book, and on which he spent several years writing first as a thesis for the University of Giessen (for which a Ph.D. degree was conferred in 1848). Subsequently, he revised and updated the thesis for publication, and his book may be regarded as "still our most comprehensive source of factual information" on the voluntary bodies on the eve of the Public Libraries and Museums Act.<sup>44</sup> By this time the mechanics' institute and the literary and scientific institutions movements had not only resulted in the establishment of these voluntary bodies throughout the country (Figure 2.2), but also in co-operative networks.

<sup>42</sup> Hudson. *op.cit.* pp.vi and 222-238.

<sup>43</sup> compiled from data in: Hudson. *op.cit.* pp.222-236.

<sup>44</sup> Villy, B.R. James William Hudson, Ph.D. *The Manchester Review*, vol.9, Winter 1962-63, pp.353 and 361.

### 3.1 Mechanics' institute classes

Several contemporary writers were convinced that "where the funds are too small to provide competent persons to direct the classes, the institutions will generally be found in a languid state". Baker admitted that the library and reading room had their drawing power for potential members, and that lectures brought in a few more, but believed that these alone were not enough to bring in the number of people needed to run a viable institute.<sup>45</sup>

Although information has been gathered concerning the classes in individual townships, it is difficult if not impossible to generalise about the national situation. This is partly due to lack of contemporary data, and partly because the situation was fluid as institutions grew and died and as classes thrived and waned. Coates provided data from annual reports which suggested that at least 16.9 per cent of the institutions in the United Kingdom which he listed offered classes in 1840 (Table 2.7 above). Ten years later, some 41.4 per cent of the U.K. institutions which Hudson listed apparently featured classes. For England alone, the figure was slightly higher with 43.4 per cent claiming to have classes (Table 2.8 above). It is not possible to resolve the problem of the considerable differences between the respective statistics provided by Coates and Hudson.

What does seem to be clear, however, is that classes were not the major activity of the institutes in the two decades before the first Public Libraries and Museums Act of 1850. Coates suggested that "strictly elementary classes ought to form a part of all Mechanics' Institutions", because many members of the working classes who were eager to study were unable to do so because of a low level of ability in writing, spelling and arithmetic. Where these were provided (such as at the Oldham Lyceum, the mechanics' institutions in Bolton and London, and the Westminster Literary, Scientific and Mechanics' Institution) they were always well attended. Successful attendance at classes at a more advanced level might be recognised by the granting of a certificate of proficiency, as at the Edinburgh School of Arts.<sup>46</sup> One contemporary, John Watts, expressed his belief that a poor educational standard was leading to the demise of many voluntary institutions:<sup>47</sup>

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<sup>45</sup> Baker, C. Mechanics' Institutions and libraries. In, Central Society of Education. *First publication*. (London: Taylor and Walton. 1837.) p.245.

<sup>46</sup> Coates. *op.cit.* pp.62-65.

<sup>47</sup> evidence in: *Report from the Select Committee on Education, Manchester and Salford, and proceedings, Minutes of Evidence*. (London: House of Commons. 1853.) pp.68-69, quoted in: Inkster, The social context of an educational movement: a revisionist approach to the English mechanics' institutes, 1829-1850. *Oxford Review of Education*, vol.2, no.3, 1976, p.278.

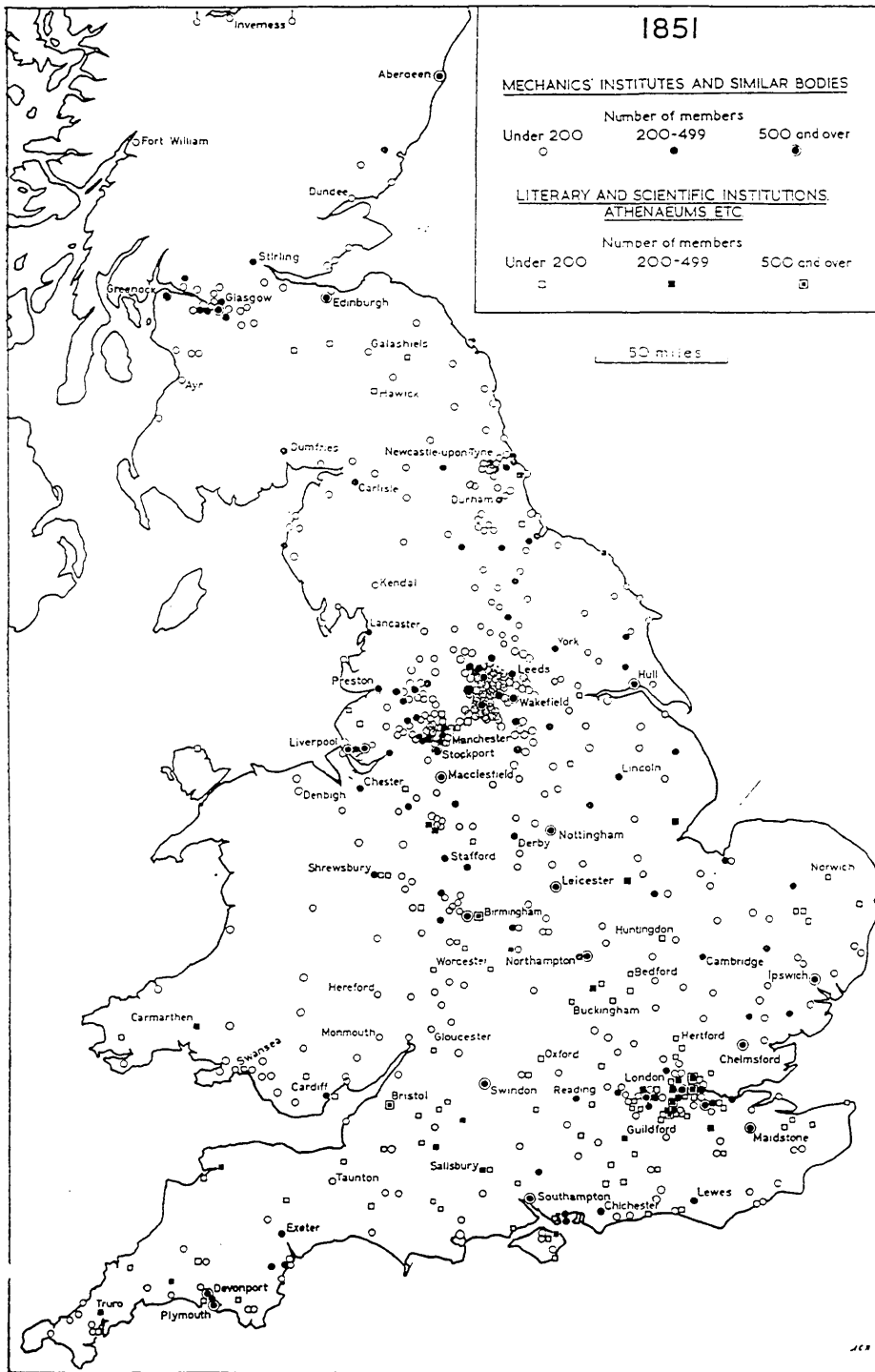


Figure 2.2: Map of England showing mechanics' institutes and similar bodies, 1851. 48

In connection with the mechanics' Institution, I found while engaged there as librarian, that the members came and went, the average stay of a member being not more than nine months. I found from the classes of books read, that they indicated but small general intelligence, and from the attendance at the classes of that institution, their irregularity and inefficiency, it then appeared to me, and has done so the more I have become acquainted with mechanics' institutes, that the absence of primary education lies at the root of the failure of so many of these institutions.

### 3.2 Mechanics' institute lectures

Even in a society where literacy skills appear to have been improving slowly, lectures remained an important source of knowledge and entertainment. Early in the nineteenth century, peripatetic lecturers could often earn a living giving courses of lectures aimed at the prosperous middle class, generally on scientific subjects but at a non-specialist level (Figure 2.3). It has been suggested that itinerant science lecturers played an important part "in the final establishment of the institutes for the working class",<sup>49</sup> and their use of apparatus was often an important feature. One such lecturer in Nottingham (before the mechanics' institute was founded) used in his demonstrations: "single and double barrelled air-pumps; an elegant air fountain; elegant working models of the steam engine; whirling table; galvanic batteries of great magnitude and power; a superb cabinet of optical apparatus including solar microscopes; cameras; magic lantern; magnetic apparatus; and a great deal more".<sup>50</sup> The educational value of these courses is difficult to estimate, and criticism was often levelled because they were usually somewhat shallow and not linked to others, so that they did not tend to lead to a deeper understanding.

On the other hand, because mechanics' institutes were established for both the instruction and "rational entertainment" of workers, at least one writer expressed no surprise when popular lectures rather than intellectual ones were the better attended. (The popular lectures were defined as being those on drama, music and comic literature.) Indeed, he stated that this was no cause for regret, though most institutions experienced a decline in attendance at one or the other type of lecture. There were exceptions; at York, for example, the weekly lectures continued to be a success, drawing in more people year after year. Because many excellent lecturers provided their services freely, many series were able to contribute funds to the library. The improved library then attracted readers

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49 Inkster. *op.cit.* p.5.

50 *Nottingham Journal*, 18 August 1810, quoted by: Wardle, D. *Education and society in nineteenth century Nottingham*. (Cambridge: Cambridge University Press. 1971.) p.171.

# PHILOSOPHICAL LECTURES.

MR. LONGSTAFF

**R**ESPECTFULLY informs the LADIES and GENTLEMEN of YARMOUTH and its Vicinity, that he purposes, in a short time, delivering a COURSE of LECTURES on ASTRONOMY, in the CONCERT ROOM. They will be illustrated by a new and elegant Set of TRANSPARENT APPARATUS, (which for elucidating this sublime Science, will be found superior to any that has hitherto been exhibited), also by an ARMILLARY SPHERE, a TELLURIAN, a LUNARIAN, an ECLIPSARIAN, &c.

## First Lecture.

Preliminary Remarks—the individual and national advantages arising from the study of Natural Philosophy; and the moral effects which it is naturally calculated to produce upon the human mind—the apparent revolution of the Heavens—a general view of the Solar System. In this Lecture will be exhibited, a representation of the circumpolar Stars in motion round the North Pole—the Solar System, containing the Sun, and all the Planets with their Satellites, together with the great Comet of 1680—also separate and distinct Telescopic views of the Planets VENUS, MARS, JUPITER, and SATURN—and of the Comet of 1819.

## Second Lecture.

The Figure of the Earth investigated—arguments in favour of the Earth's diurnal motion—the Earth an oblate spheroid, and how it necessarily assumed that figure—objections to the Earth's diurnal motion considered—the apparent motion of the Sun relatively to the Fixed Stars—arguments in favour of the annual motion of the Earth—objections to the Earth's annual motion considered—the variations in the length of the Days and the change of Seasons.—SCENE I. A Ship moving on a Horizontal Plain.—SCENE II. A Ship moving on the surface of a Transparent Globe, four feet diameter.—SCENE III. The Earth suspended in Space, surrounded on all sides by the Stars.—SCENE IV. The Earth revolving on its Axis before the Sun, producing Day and Night.—SCENE V. The Earth revolving through the signs of the Zodiac round the Sun.—SCENE VI. A Diagram for elucidating the Magnitude of the Sun.—SCENE VII. The Earth revolving in its Orbit round the Sun, on an inclined Axis, keeping always parallel to itself, producing the Seasons.

## Third Lecture.

The Moon's Diurnal and Periodical Revolutions—the cause of those constantly changing phenomena called the Phases of the Moon—the nature and extent of the Moon's Light—the Horizontal Moon—the cause and nature of Eclipses in general—Solar Eclipses—Lunar Eclipses—description of the Moon's surface as seen through a Telescope.—SCENE I. Appearances of the Moon as seen in seven different parts of her Orbit.—SCENE II. The Moon revolving round the Earth exhibiting her Phases.—SCENE III. A Telescopic View of the New Moon.—SCENE IV. Diagrams for illustrating the Magnitude of the Earth and the Figure of its Shadow.—SCENE V. The dark body of the Moon passing over the Sun's disc, producing partial and annular Eclipses.—SCENE VI. The Moon passing through the shadow of the Earth, causing Eclipses of that Luminary.—SCENES VII. VIII. IX. Magnified Views of several remarkable Lunar Spots.—SCENE X. A Telescopic View of the Full Moon, six feet diameter.

*In this Lecture will be exhibited a representation of the great Solar Eclipse that will happen on the 7th of Sept. next.*

## Fourth Lecture.

The Causes of Planetary Motion—the Planet MERCURY, his diurnal motion, temperature, and Phases; spots and mountains on his surface—the Planet VENUS, mountains on her surface; her diurnal motion; position of her axis, seasons and temperature; her Phases; when an evening and when a morning star—the Planet MARS, his colour and spots on his surface; his atmosphere, length of his day and seasons; brightness of his polar regions, and figure—the Planet JUPITER, his figure; position of his axis; length of his day and seasons; nature, number, and variableness of the belts on his disk; his Moons, their magnitude, revolution on their axis, and eclipses—the Planet SATURN, his figure, diurnal motion, and position of his axis; his belts and spots; phenomena of his ring; his seasons and temperature; his satellites—the appearance and nature of Comets, with some observations respecting their construction and use.—SCENE I. The Solar System, with the Planets in motion round the Sun.—SCENE II. Different Telescopic Views of Venus.—SCENE III. Different Telescopic appearances of Mars.—SCENE IV. Different Views of Jupiter and his Moons as seen through a Telescope.—SCENE V. Various appearances of Saturn in all the different positions of his ring.—SCENE VI. Appearance of the Comet of 1807.—SCENE VII. Appearance of the Comet of 1811.

## Fifth Lecture.

The Spots of the Sun—the Sun's rotation on its axis—the motion of the Sun in free space—the Fixed Stars—the classification of the Stars into Constellations—the utility of the Stars to the Inhabitants of this Globe—the method of ascertaining the Latitude and Longitude at Sea—reasons for supposing the Planets to be habitable Worlds—what the Stars are in themselves as parts of other Systems—to conclude with some remarks relative to the extent of the Universe.—SCENE I. Telescopic appearances of the Solar Spots.—SCENES II. III. IV. V. VI. VII. VIII. Representations of the principal Constellations.—SCENE IX. The Star LYRA, as observed by Dr. Herschell, with his forty-feet Telescope, and a magnifying power of six thousand, four hundred, and fifty.

## Sixth Lecture.—On the Tides.

The cause of the rising and falling of the Ocean—the general motion of the Tides—the Antinular Tide—the Spring and Neap Tides—the Equinoctial Tides—the Tides among the West India Islands—the Gulph Stream—the Current at the Straits of Gibraltar—the Tides in the Baltic Sea and on the Coasts of the British Isles, &c. &c.—This Lecture will be illustrated by a variety of Diagrams and Transparencies.

**SUBSCRIPTION TO THE COURSE, FOURTEEN SHILLINGS.—Tickets Transferable.**

SUBSCRIBERS NAMES RECEIVED AT THE SHOPS OF MR. ALEXANDER, AND MR. MEGGY, BOOKSELLERS.

*N.B. Mr. L. is in possession of testimonials from the late JOHN PLAYFAIR, Esq. Professor of Natural Philosophy in the University of Edinburgh, and from Dr. BREWSTER, Editor of the Edinburgh Encyclopedia.*

Alexander, Printer, King-Street, Yarmouth.

Figure 2.3: Poster advertising public lectures in Yarmouth, 1820.<sup>51</sup>

in turn. In other places, however, more was spent on the lectures than on the library.<sup>52</sup>

In advocating the establishment of popular book clubs in order to counter the problems of access to libraries faced by literate workers, Brougham had also suggested a system of public lectures to supplement private reading.<sup>53</sup> The foundation of the Society for the Diffusion of Useful Knowledge attempted to address the book problem, but although a number of bodies provided lectures and to institute lecture circuits there was no similarly national organisation which was able to do this effectively.

Whereas Brougham saw lectures as supplementing reading, Duppa believed that the value of lectures lay in arousing curiosity and so creating a desire for deeper study. He saw four major problems with lectures:

- (a) they did not take into account previous knowledge of individuals;
- (b) knowledge transfer was finite, incomplete and unconnected with other topics;
- (c) listeners did not have time to reflect on what was being said, and questions could not be asked; and
- (d) lectures were frequently inappropriate to the particular needs of individuals.<sup>54</sup>

Nevertheless, lectures remained popular throughout the century as a form of instruction or of instructive entertainment, and prominent speakers were sought as draw-cards. The Nottingham Mechanics' Institution attracted lecturers from many fields: "Dickens read there more than once; Sir Samuel White-Baker spoke on his explorations; Sir Robert Peel gave an address on 'The Progress of Society'. Other speakers included R.W. Emerson, Fanny Kemble, W. Cowden Clarke, and in later years, Justin McCarthy, Charles Dilke, Conan Doyle, Edward Whymper and Sir Ernest Shackleton".<sup>55</sup>

Duppa also suggested that a dependence on gratuitous lecturers often led to poor lectures, and in turn to lack of attendance. At Chichester, for example, the library was "considered by members at large to be more useful than lectures",<sup>56</sup> a situation which was far from unique. He supported Lord Brougham's solution of itinerant lecturers, the

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<sup>52</sup> Coates. *op.cit.* pp.51-53 and 62.

<sup>53</sup> Brougham, H. *Practical observations upon the education of the people, addressed to the working classes and their employers.* (London: R. Taylor. 1825.) p.11.

<sup>54</sup> Duppa. *op.cit.* pp.21-22.

<sup>55</sup> Wardle. *op.cit.* p.177.

<sup>56</sup> Duppa. *op.cit.* pp.34-35.

cost being shared between two or more institutes.<sup>57</sup> Wyse, in advocating his American Lyceum model, said that "one lecturer may answer for an aggregate of societies, as well as for an aggregate of individuals", and proposed that mechanics' institutes should "form themselves into districts, for the purpose of engaging lecturers in common".<sup>58</sup> Institutional debt was often given "as a reason why they were unable to employ paid lecturers and teachers, or even to bear the comparatively trifling expense attendant upon the establishment of a lecture circuit".<sup>59</sup>

The Society for the Diffusion of Useful Knowledge had in 1839 suggested that "neighbouring institutions, by dividing the travelling expenses of lecturers among them, may diminish the cost of each course of lectures", and this led to the formation of the London Association of Institutions for Adult Instruction under the foundation presidency of Dr George Birkbeck.<sup>60</sup> Thomas Coates, the inaugural Hon. Secretary, published a list of some 196 lecturers, almost all of whom lived in greater London and whose topics presumably reflected contemporary interests. Amongst these were Astronomy, Botany, Comic Painting, Electricity, Extinct Animals, Female Education, Igneous Geology, Mechanics and Manufactures, Philosophy of History, Photogenic Drawing and Daguerreotype, Phrenology, Poetry, Shakespeare, Short-hand Writing, Steam Engine, Turkey, and Vocal Music. Thirteen of the lecturers can be identified as clergymen, several as medical practitioners, a few persons from the Polytechnic and other Institutions, and two married ladies.<sup>61</sup> Clergymen of various denominations often provided a useful pool of lecturers for mechanics' institutes,<sup>62</sup> as later also for public libraries in a many places (see Appendix 3 below)..

Once again, it is difficult to obtain hard data concerning the number of institutions offering lectures at any given time, because they may not have been offered consistently. It has been suggested that "mechanics' institutes invariably had a lecture programme,

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57 *ibid.* pp.41-45.

58 Wyse. *op.cit.* pp.211 and 227.

59 Duppa. *op.cit.* pp.99-100.

60 Coates. *op.cit.* pp.3-5.

61 *ibid.* pp.106-112.

62 for example, see Duncan, G.S. Adult education in early Victorian Torquay; with particular reference to the contribution of the Church. In, *Education and labour in the south-west*, edited by Jeffrey Porter. (Exeter: University of Exeter. 1975.) pp.21-44.



classes, a library, and often a museum", <sup>63</sup> but it would appear that the nature and frequency of lectures were subject to considerable variation over the years. Even the Liverpool Mechanics' Institution was unable to sustain its public lecture programme towards the middle of the century, <sup>64</sup> though (as noted later) those at the public library thrived all through the second half of the century. Coates's list records that 84.7 per cent of the U.K. institutions in 1840 were providing lectures (Table 2.7 above), whilst by 1850 some 64.7 per cent of the English institutions were noted as offering lectures (Table 2.8 above). It is impossible, however, to be certain how reliable these figures are because a strictly controlled survey was not undertaken.

### 3.3 Mechanics' institute libraries and reading rooms

By the 1830s the cost of many books had fallen due to cheaper materials and methods of production, and to the emergence of a mass market which was to increase in size greatly during the course of the nineteenth century. Cheap publications also led to cheap second-hand books, often in durable bindings, which could be a valuable source of collection building for mechanics' institutes. <sup>65</sup> On the other hand the subject matter of new publications was still rather restricted, and it has been estimated that of the 45,000 books published between 1816 and 1851, nearly a quarter were religious, eleven percent on aspects of history, and some eight percent were works of fiction. <sup>66</sup>

Again with the warning against regarding the degree of accuracy of the tables provided respectively by Coates and Hudson, it is certain that at both dates the institutions' main function was the provision of libraries. In 1840 some 87.9 per cent of institutions in the U.K. provided a libraries (Table 2.7 above), and a small number had news-rooms also. By 1850 some 85. per cent of those in England had libraries, and 60.9 per cent had news-rooms (Table 2.8 above). A potential clientèle was being created for the new public libraries.

Millwood wrote that the Leicester Mechanics' Institute, faced with "the difficulties caused by illiteracy", confined the institute's activities from 1858 to a library and reading

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<sup>63</sup> Roderick, G.W. and Stephens, M.D. Steam intellect created - the educational roles of the mechanics' institutes. In, *The steam intellect societies - essays on culture, education and industry circa 1820-1914*, edited by Ian Inkster. (Nottingham: University of Nottingham, Department of Adult Education. 1985.) p.21.

<sup>64</sup> *ibid.* p.26.

<sup>65</sup> Baker. *op.cit.* p.242.

<sup>66</sup> Webb. *op.cit.* p.206.

room which, on the evidence of a former assistant librarian there, also catered mainly for the middle class.<sup>67</sup> On the one hand it appears strange that the directors of the Institute saw the library as being a solution to literacy problems, rather than employing more verbal means of learning such as lectures and classes. This is supported by the fact that the presumably more literate middle class took more advantage of the library's services. On the other hand this does suggest the need for a public library in the borough. (A museum had been established by the town council in 1848 under the Museums Act of 1845, and in the following year an additional rate was levied for a library. However, the Public Library Act itself was not adopted until 1862.)<sup>68</sup>

As noted above, one of the greatest of the problems facing the voluntary institutes was the fluctuation in membership (and therefore of income) due to the economic conditions during the nineteenth century, and no doubt this contributed to their increasing take-over by the middle classes. Their libraries were often starved of money, and popular lectures by local volunteers frequently replaced the technical classes given by paid teachers. Albert Smith provides a description of a lecture about 1840 at the fictional Clumpley Literary and Scientific Institution, which:<sup>69</sup>

possessed a library, - that is to say, an extensive series of book-shelves; but as the funds of the establishment, in company with other scientific societies, were not very flourishing, there was no money to buy books. In consequence of this circumstance, the committee had put forth an appeal to the world, which had been answered by various learned gentlemen volunteering to lecture for nothing, - at least, upon their mere expenses being paid them, - in order that the receipts might be applied to the purchase of books.

Accepting books donated by members and others was common, though this could result in a collection of books which were unsuitable by reason of age, physical condition or subject matter. The Maidstone M.I. had a library of about four hundred books, three quarters of which, due to the lack of sufficient funds to purchase new ones, had been loaned to it (instead of being donated) by members.<sup>70</sup>

Smith gives a somewhat sarcastic picture of a country Literary Institution in another of his novels also, "which" (he wrote) "several ardent youths founded over the carpenter's shop, for the purpose of playing at committee, giving lectures, and reading

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<sup>67</sup> Millwood, M.J. *The development of technical education in Leicester 1860-1938*. (unpublished Leicester University M.Ed. thesis. 1969.) p.19.

<sup>68</sup> Ogle, J.J. *The free library: its history and present condition*. (London: George Allen. 1897.). pp.10 and 27-28.

<sup>69</sup> Smith, A. *The adventures of Mr. Ledbury and his friend Jack Johnson*. (London: George Routledge & Sons. new ed 1856.) p.254.

<sup>70</sup> Duppa. *op.cit.* p.101.

dreary periodicals about 'progress' and general equality..." In common with other places, "the institution struggled on for a while, and at last ended in a species of convivial meeting, for songs, recitations, and the flowing-bowl; under which form, should the early-closing movement be carried, it bids fair to prosper".<sup>71</sup>

Although reliance was placed on donations, there was also some form of book selection process (or censorship, according to one's viewpoint). At Oldham, for example, the mechanics' institute library's main regulation was that: "Books on controversial Theology, and all immoral Works, shall be excluded from the Library; and all books shall be approved by the Committee previously to their admission".<sup>72</sup> A country-wide examination of annual reports does not yet seem to have been undertaken by research workers in this field, but a few case studies of larger institutions may serve as examples. At Leeds Mechanics' Institute, the works most borrowed during 1852 were fiction and unbound periodicals; history and biography came third (Table 2.9 and Figure 2.4). Looking only at the issue of books from the library, fiction headed the list with history and biography second; slightly more works on voyages and travel were borrowed than books on fine arts and literature (Table 2.10 and Figure 2.5). Only a small number of books on mechanics and the sciences were issued, suggesting that the institute library was being used more for recreational entertainment than for vocationally oriented study.

A somewhat similar situation existed in Nottingham, where just over half of the works issued during 1855 were poetry and novels; books on history and biography were the next most popular (Table 2.11 and Figure 2.6). The question naturally arises as to whether this pattern of book borrowing reflects the actual book stock, but this was not the case. Over twenty-five per cent of the institute library's stock was classed as philosophy, science and general literature (Table 2.12 and Figure 2.7), but accounted for only eight per cent of total issues in that year (Table 2.11). Clearly, the subject spread of books held in the library was not reflected in the books actually borrowed by institute members. This is supported by an analysis of the average number of times that books were read in each category (Table 2.13).

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<sup>71</sup> Smith, A. *The Pottleton legacy: a story of town and country life*. (London: George Routledge & Sons. c.1856.) p.471.

<sup>72</sup> Oldham Mechanics' Institution. *op.cit.* n.p.

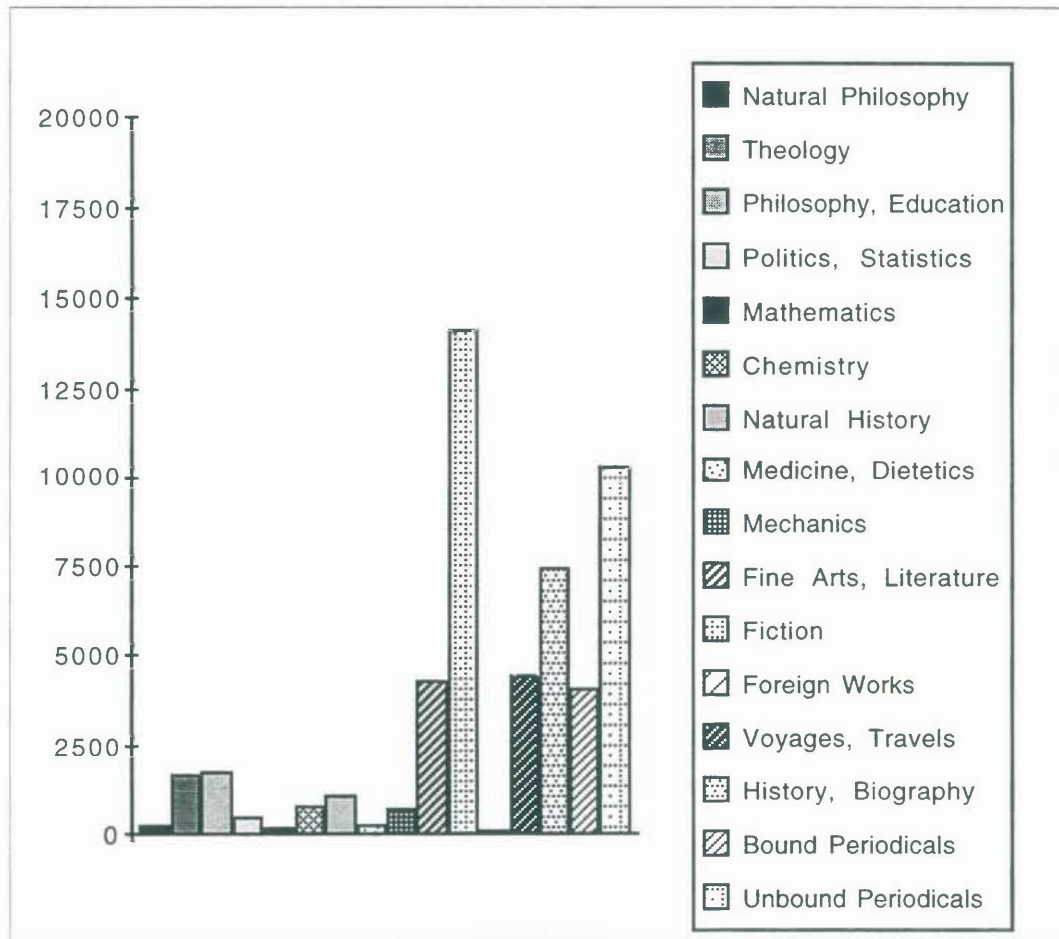


Figure 2.4: Leeds Mechanics' Institute. All Library issues, 1852. <sup>73</sup>

Table 2.9: Leeds Mechanics' Institute. All Library issues, 1852 <sup>74</sup>

	<u>number</u>	<u>percent</u>
Fiction	14090	27.3
Unbound Periodicals	10325	20.0
History, Biography	7413	14.4
Voyages, Travels	4435	8.6
Fine Arts, Literature	4268	8.3
Bound Periodicals	4040	7.8
Philosophy, Education	1698	3.3
Theology	1654	3.2
Natural History	1055	2.0
Chemistry	736	1.4
Mechanics	704	1.4
Politics, Statistics	477	0.9
Medicine, Dietetics	222	0.4
Natural Philosophy	207	0.4
Mathematics	146	0.3
Foreign Works	74	0.1
TOTAL	51544	

<sup>73</sup> created from table in Hole, J. *An essay on the history and management of literary, scientific, & mechanics' institutions.* (London: Longman, Brown, Green, and Longmans. 1853.) p.27.

<sup>74</sup> *ibid.*

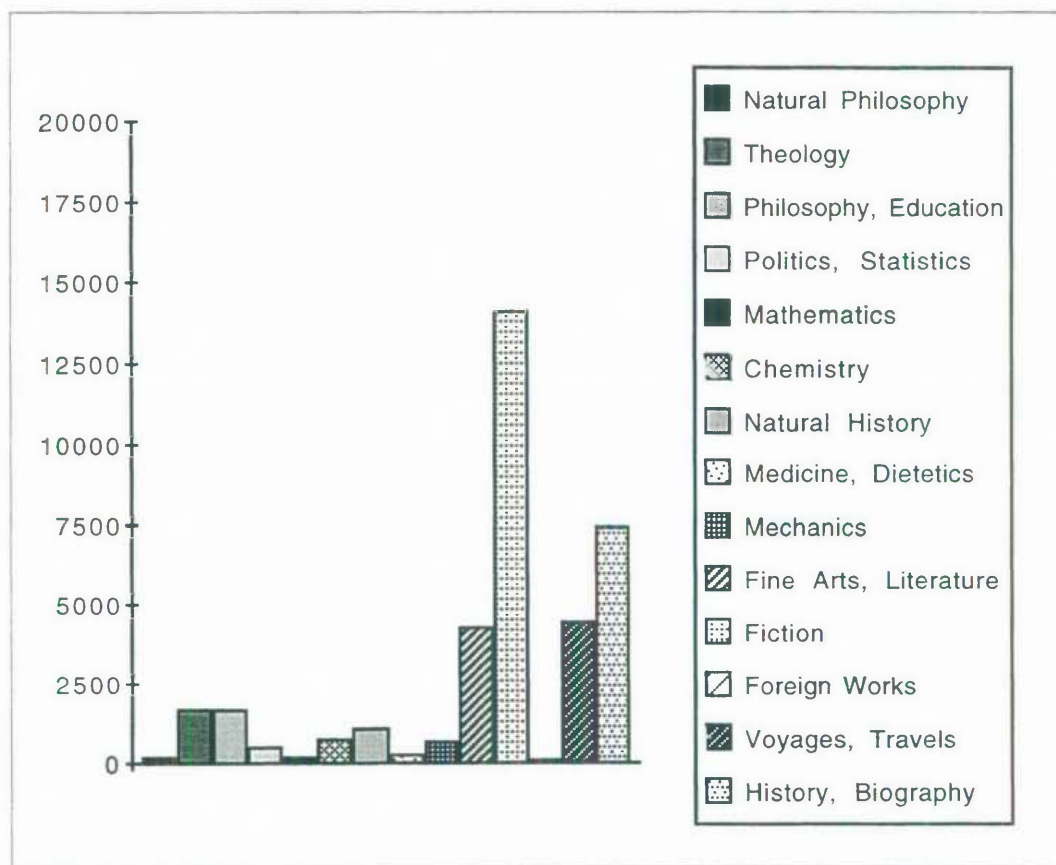


Figure 2.5: Leeds Mechanics' Institute. Library book issues, 1852. <sup>75</sup>

Table 2.10: Leeds Mechanics' Institute. Library book issues, 1852. <sup>76</sup>

	<u>number</u>	<u>percent</u>
Fiction	14090	37.9
History, Biography	7413	19.9
Voyages, Travels	4435	11.9
Fine Arts, Literature	4268	11.5
Philosophy, Education	1698	4.6
Theology	1654	4.4
Natural History	1055	2.8
Chemistry	736	2.0
Mechanics	704	1.9
Politics, Statistics	477	1.3
Medicine, Dietetics	222	0.6
Natural Philosophy	207	0.6
Mathematics	146	0.4
Foreign Works	74	0.2
TOTAL	37179	

<sup>75</sup> created from table in Hole. *op.cit.* p.27.

<sup>76</sup> *ibid.*

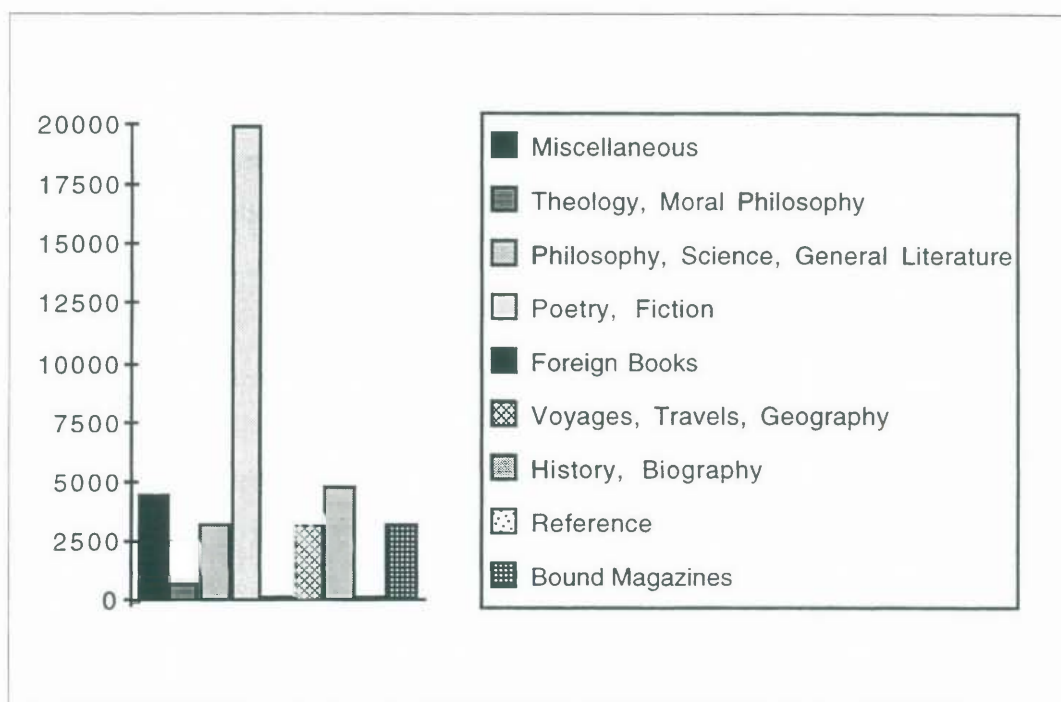


Figure 2.6: Nottingham Mechanics' Institute. Library issues, 1855. <sup>77</sup>

Table 2.11: Nottingham Mechanics' Institute. Library issues, 1855. <sup>78</sup>

	<u>number</u>	<u>percent</u>
Poetry, Fiction	19864	50.4
History, Biography	4800	12.2
Miscellaneous	4396	11.2
Voyages, Travels, Geography	3193	8.1
Bound Magazines	3168	8.0
Philosophy, Science, General Literature	3142	8.0
Theology, Moral Philosophy	680	1.7
Reference	110	0.3
Foreign Books	63	0.2
TOTAL	39416	

<sup>77</sup> created from data given in Wardle. *op.cit.* p.877.

<sup>78</sup> *ibid.*

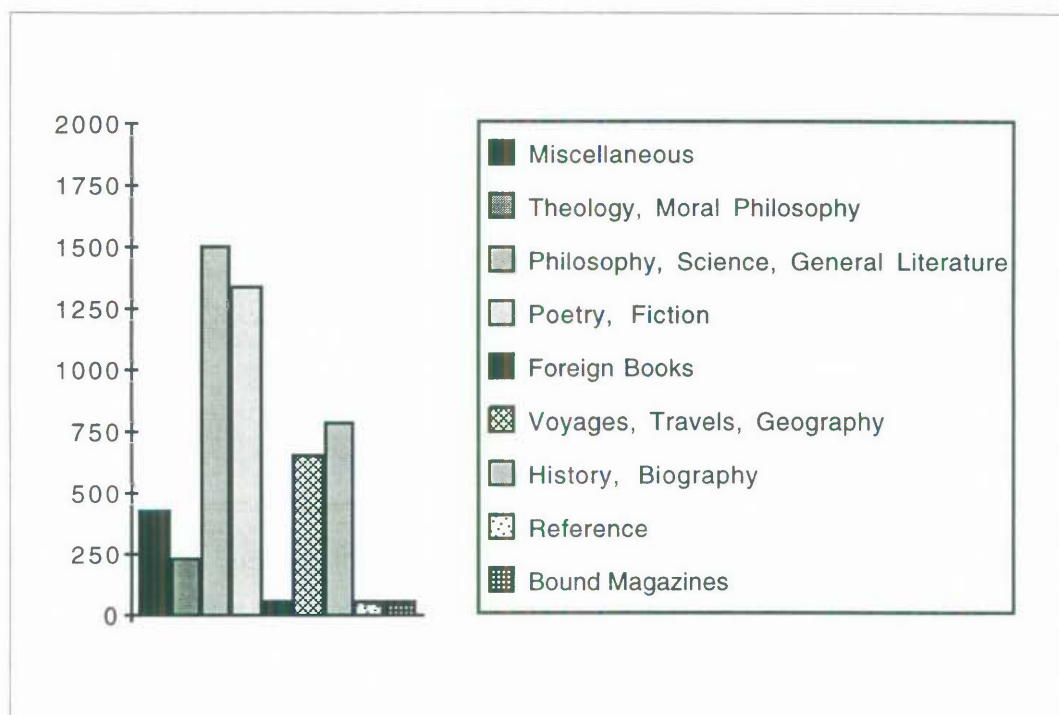


Figure 2.7: Nottingham Mechanics' Institute. Library stock, 1855. <sup>79</sup>

Table 2.12: Nottingham Mechanics' Institute. Library stock, 1855. <sup>80</sup>

	<u>number</u>	<u>percent</u>
Philosophy, Science, General Literature	1499	25.5
Poetry, Fiction	1341	22.8
Bound Magazines	843	14.3
History, Biography	778	13.2
Voyages, Travels, Geography	655	11.1
Miscellaneous	428	7.3
Theology, Moral Philosophy	227	3.9
Foreign Books	58	1.0
Reference	53	0.9
TOTAL	5882	

<sup>79</sup> created from data given in Wardle. *op.cit.* p.877.

<sup>80</sup> *ibid.*

**Table 2.13: Nottingham Mechanics' Institute. Number of times library books were issued, 1854.** <sup>81</sup>

	<u>number of books in stock</u>	<u>times issued</u>
Poetry, Fiction	1341	14.8
Miscellaneous	428	10.3
History, Biography	778	6.2
Voyages, Travels, Geography	655	4.9
Bound Magazines	843	3.8
Theology, Moral Philosophy	227	3.0
Reference	53	2.1
Philosophy, Science, General Literature	1499	2.1
Foreign Books	58	1.1

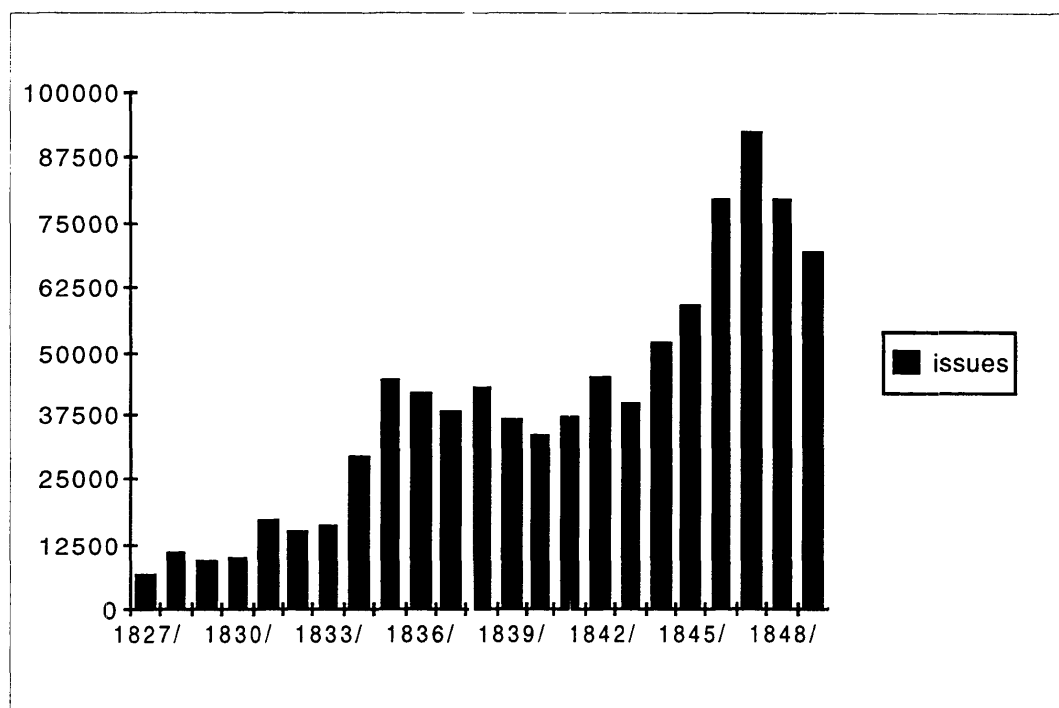
The turnover of fiction and poetry (both considered 'light reading' at that date) is far greater than any other category named, although it is unfortunate that we do not know exactly what was contained in the 'Miscellaneous' class. In spite of financial problems the libraries of the voluntary institutions continued to be used, and helped to create the climate in which more influential persons could work for the passing of library legislation. At Manchester the number of books issued by the mechanics' institute library increased greatly (Figure 2.8) in the years leading up to the 1850 Public Libraries and Museums Act, which the city council quickly adopted.

This increase in the number of books issued corresponded with a similar increase in actual membership of the institute (Table 2.14), but was also due in part to an increase in the average number of volumes issued per member each year (Figure 2.9). At the same time, although there was considerable fluctuation in the amount of money spent each year on the library for books and binding (and an increase in the amount spent on newspapers), there is no correlation between spending and borrowing (Figure 2.10). It is apparent that by 1850 the library had become the major service used by members of the Manchester Mechanics' Institution. The number of lectures held by the institute also varied from year to year (from a low of thirty-six in 1827 to a high of ninety-one in 1836), but did not show a significant overall increase. Similarly, the number of people attending classes also varied, between 186 in 1828 and 1000 in 1847 (Table 2.14 and Figure 2.9).

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<sup>81</sup> created from data in Wardle. *op.cit.* p.180. [original source: *Nottingham Review*, 19 January 1855.]





**Figure 2.8: Manchester Mechanics' Institution. Issues from the library, 1827-1849.** <sup>82</sup>

### 3.4 Mechanics' institute museums

The provision of a museum, or a collection of some kind, was undertaken by a number of institutions. Coates's list of 1840 noted that some 20.2 per cent in the U.K. had museums (Table 2.7), whilst ten years later Hudson indicated only twenty-eight institutions (4.6 per cent) in England had one (Table 2.8). The problem here may be the definition of a museum as determined by the two authors, as well as by the compilers of the annual reports from which data were obtained. Some may have reserved the term for a collection of historical artefacts, whereas others may have included collections of apparatus used in demonstrations. Coates emphasised that a museum should "illustrate the natural or artificial productions of the place where the institution is placed and its neighbourhood; their geological structure, fossils, plants, birds, and fishes; and the manufactures or the peculiar industry of the inhabitants." <sup>83</sup> They were to be used actively as educational tools, and not merely the result of human instinct to collect.

Wyse had earlier noted that the various interests of institute members ought to result in the collection of materials of local interest at little or no expense, and that it was

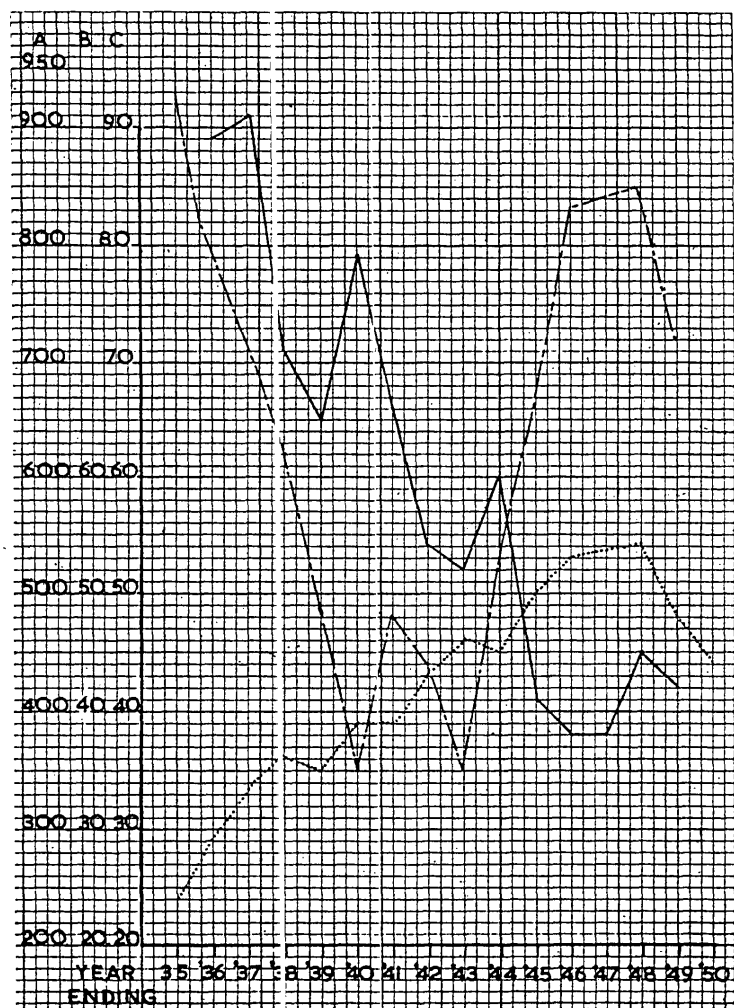
<sup>82</sup> created from data in table in Hudson. *op.cit.* p.129.

<sup>83</sup> Coates. *op.cit.* p.73.

**Table 2.14: Manchester Mechanics' Institution. Library and educational statistics, 1827-1849.** <sup>84</sup>

Year.	No. of Members.	No. of Lectures.	Issues from the Library.	Pupils attending Classes.	Nett Cost of Lectures.	Cost of Bks. and Binding.	Nett cost of Newspapers.	Nett cost of Classes.	Rent, Taxes, and Interest.
1827	571	36	6639	200	£477	£334	—	£76	£540
1828	580	37	10,927	186	105	15	—	51	314
1829	530	—	9362	—	—	—	—	—	—
1830	568	—	10,000	—	—	—	—	—	—
1831	633	44	16,731	—	82	40	—	80	—
1832	576	40	15,000	—	97	105	—	90	61
1833	664	42	15,843	—	51	46	—	57	63
1834	1092	65	29,065	—	139	207	—	30	461
1835	1526	81	43,949	903	190	255	—	78	310
1836	1238	91	41,384	826	248	170	—	96	61
1837	1392	79	38,053	730	280	121	—	110	285
1838	1161	65	42,451	622	288	183	—	158	329
1839	1014	79	36,536	900	280	98	—	173	66
1840	866	66	33,427	401	221	105	gain	157	76
1841	1092	54	36,792	483	124	71	gain	130	150
1842	1083	52	44,683	439	299	159	2	110	299
1843	1030	60	39,246	352	71	96	5	—	166
1844	1236	41	51,744	533	213	191	28	—	209
1845	1507	38	58,785	651	234	256	49	—	41
1846	1893	38	79,327	818	107	268	63	120	50
1847	2096	45	92,453	1000	147	208	65	117	40
1848	1953	40	79,634	865	143	196	86	146	51
1849	1992	42	69,058	720	113	131	94	141	85

DEVELOPMENT OF THE EDUCATIONAL WORK OF THE  
MANCHESTER MECHANICS' INSTITUTION

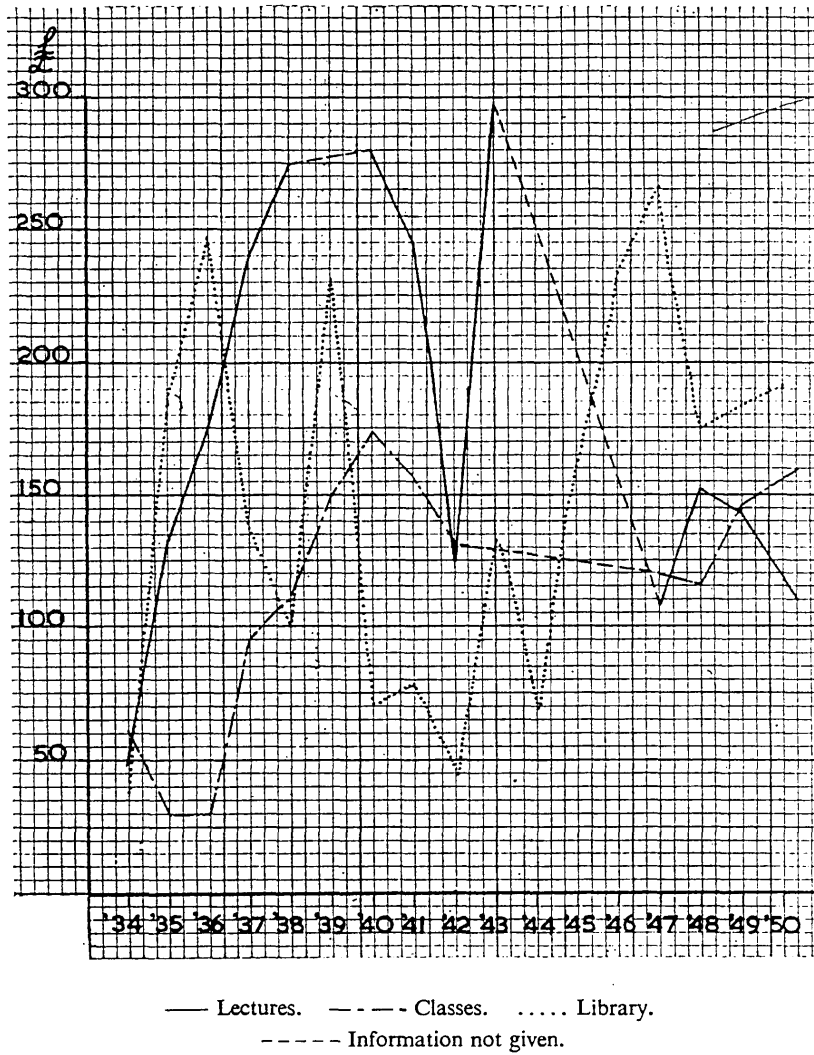


- A. - - - Membership of Classes.
- (i) Note that membership is numbered in 100's, not 10's.
  - (ii) The figure for 1840 represents the average membership for the year. In other years the figures are those for the number on the class list at the end of the Christmas quarter.
- B. . . . . Number of Volumes issued from the Library per Member.
- (i) 2 volumes (of the same work) could be issued together from 1846-7; previously each member could only take out one volume at a time.
  - (ii) For the years ending 1835 and 1836 the membership figures used are those for the end of the year; but in other years the average figures have been used.
- C. — Number of Lectures delivered.
- It is unfortunate that the figures for the average attendance at lectures cannot be given instead of the number of lectures delivered.

**Figure 2.9: Manchester Mechanics' Institution. Membership of classes, number of volumes issued, and number of lectures, 1835-1850.**<sup>85</sup>

<sup>85</sup> Tylecote, M. *The mechanics' institutes of Lancashire and Yorkshire before 1851*. (Manchester: Manchester University Press. 1957.) p.300.

NETT EXPENDITURE ON THE EDUCATIONAL DEPARTMENTS OF  
THE MANCHESTER MECHANICS' INSTITUTION



Note: The library figures sometimes include gains and losses in the printing and sale of the catalogues.

Figure 2.10: Manchester Mechanics' Institution. Expenditure on lectures, classes and library, 1834-1850.<sup>86</sup>

precisely these items to hand which would help to create a museum of relevance and uniqueness. Taking the co-operative hierarchical feature of American Lyceums, he also proposed "local museums, local collections of models, local committees for statistical and other inquiries, and finally, the establishment of some central museum, to which the local museums may be invited to contribute duplicates".<sup>87</sup>

Other voluntary bodies were also forming museums, especially collections in natural history, and these were often open to members of mechanics' institutes. Coates considered this to be a satisfactory arrangement, but he believed that the task of making working models (especially of machines) to be particularly suitable for mechanics to undertake. These could be formed into collections maintained by the institutes for the use of members, and also displayed to the general public at the exhibitions of works of art and natural objects which were held by a number of voluntary institutes.<sup>88</sup> In some cases these exhibitions reached thousands of people, and contributed to the atmosphere in which the Great Exhibition of 1851 was held.<sup>89</sup> Within a few years the situation was potentially changed by the passing of the 1845 Public Museums Act,<sup>90</sup> which allowed certain local authorities to levy a rate for the provision of museums. This was soon extended by the passing of the 1850 Act,<sup>91</sup> which further affected the future of the voluntary bodies.

#### 4. Other educational facilities

Allied to the scientific and technological work which mechanics' institutes attempted to undertake, were certain government initiatives which the institutes and other bodies often incorporated into their own programmes. These were the classes in design, art and science which could attract State subsidies under certain conditions. All three had connections with public libraries - there is an important connection between the schools

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87 Wyse. *op.cit.* pp.212 and 227.

88 Coates. *op.cit.* pp.72-74.

89 Kusamitsu, T. Mechanics' institutes and working class culture: exhibition movements, 1830-1840s. In, *The steam intellect societies - essays on culture, education and industry circa 1820-1914*, edited by Ian Inkster. (Nottingham: University of Nottingham, Department of Adult Education. 1985.) pp.33-43.

90 8 & 9 Vict. c.43. An Act for encouraging the Establishment of Museums in Large Towns. (1845.)

91 13 & 14 Vict. c.65. An Act for enabling Town Councils to establish Public Libraries and Museums. (14th August 1850.)

of Design and the 1845 Public Museums Act, whilst later in the nineteenth century many public libraries either themselves offered classes in art and science or were associated with them in other ways (as noted in Chapter 7 below).

#### 4.1 The Schools of Design

In 1835, William Ewart (supporter of Buckingham's Bills and later of public library legislation) moved that a Select Committee of the House of Commons be appointed "to inquire into the best means of extending a knowledge of the Arts and the Principles of Design among the people (especially the manufacturing population) of the country". This reported in the following year, recommending the establishment of Schools of Design, and £1,500 was allocated by Treasury to establish "a Normal School of Design with a Museum and Lectures". This was opened in 1837 in Somerset House (London), and in 1841 the decision was made to assist regional Schools in manufacturing districts also.

It was noted that classes in the arts of design were well attended in mechanics' institutes in large towns such as "London, Liverpool, Manchester, Bolton, Birmingham, Coventry, Sheffield, and Glasgow", and suggested that government aid (similar to that given to schools) would be beneficial.<sup>92</sup> By 1851 there were seventeen "branch schools in such centres of industry as Manchester, Birmingham, Glasgow, Leeds and Paisley, the expenditure on which absorbed nearly one-half of the vote" of £15,055. Established as a Council under the control of the Board of Trade, it became the Department of Science and Art in 1853 and part of the newly constituted Education Department in 1856. It was incorporated by Royal Charter in 1864.<sup>93</sup>

Dr Hudson, whose work on voluntary institutions (*The History of Adult Education*) appeared in 1851, had been the first Honorary Secretary of the Government School of Design in Leeds. Nevertheless, he was a firm believer in voluntaryism, and that the drawing classes held in mechanics' institutes were superior to those in the government schools. In evidence to the Select Committee on the Government Schools of design in 1849, he accused the government of having "made a botch" of art education, although he excepted the efforts of George Wallis at Manchester to create a class of

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<sup>92</sup> Baker. *op.cit.* p.244.

<sup>93</sup> this paragraph is based on: Committee of Council on Education: Department of Science and Art. *Calendar, history, and general summary of regulations of the Department of Science and Art. 1893.* Presented to both Houses of Parliament by Command of Her Majesty. (London: HMSO. 1893.) Paper C-6831. pp.5-7.

designers.<sup>94</sup> The connection between Wallis, the Schools of Design, and the initiation of legislation leading to the provision of local authority museums and libraries, is noted in Chapter 4 below. Furthermore, it was the government Minute of 1852 re-organising the Schools of Design and forming the Department of Practical Art, which enabled the Public Libraries and Museums Act of 1855 to permit local authorities to provide and maintain schools of science and art.

#### 4.2 Schools of science and art<sup>95</sup>

Although not local voluntary institutions on the pattern of mechanics' and literary institutes, the schools of science and art were local in the sense that they could be organised by private individuals and voluntary in the sense that they were set up and dissolved at will. Membership was on a fee-paying basis, though classes had to conform to government regulation if they were to be subsidised by the Department of Science and Art (which serviced the whole of the United Kingdom). Many such schools were in fact run as part of the work of mechanics' institutes, and following the Act of 1855 by public libraries also.

The Department of Science and Art, created in 1853 on the reorganisation of the Department of Practical Art, moved from the Board of Trade to the newly formed Education Department three years later and was incorporated by Royal Charter in 1864. Grants were first given to local science schools in 1853, established in eleven towns in England (plus one in Scotland), but by 1859 only three in England (and the one in Scotland) remained, with a total of 395 pupils. In that year a new scheme was introduced by which any place could establish science classes in certain subjects, teachers had to hold the Department's certificate of competency after examination, and financial aid consisted of payment on results.

During the rest of the century many hundreds of science classes were established in mechanics' institutes, public libraries, schools and other institutions (Table 2.15). Between 1862 and 1892 the number of science subjects for which grants could be obtained had increased from six to twenty-five, and scholarships were also being offered. In 1895 some 113,398 individual students were examined in science subjects in 202,868

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<sup>94</sup> Villy. *op.cit.* pp.354-355.

<sup>95</sup> This section is largely based on: Committee of Council on Education. Paper C-6831. *op.cit.* pp.6-13 and 17-24.

papers by the Science Division. Of these some 85,303 (42 per cent) passed, of which 49,861 (24.6 per cent) were at first class in the elementary and advanced stages. <sup>96</sup>

**Table 2.15: Science schools and classes (U.K.), 1862-1895. <sup>97</sup>**

<u>Year</u>	<u>Schools</u>	<u>Pupils</u>	<u>Classes</u>
1862	70	2,543	140
1872	948	36,783	2,803
1882	1,403	68,581	4,881
1892	2,553	180,410	10,352
1895	2,673	193,404	9,545

In 1852, the Department of Practical Art was formed for:

- (a) The promotion of elementary instruction in drawing and modelling.
- (b) Special instruction in the knowledge and practice of ornamental Art.
- (c) The practical application of such knowledge to the improvement of manufactures.

Schools of art (in addition to the existing Schools of Design) were also established, and the Department arranged for examples to be prepared for sale to elementary schools at half cost price. Art classes could be (and were) established in mechanics' institutes and public libraries, amongst other bodies. Aid was given to schools of art and art classes, elementary schools, and teacher training colleges. By 1893 such aid was being given for classes in twenty-three different subjects. <sup>98</sup>

In 1895 some 1,853 art schools and classes (including some science schools which took art subjects) were examined by the Art Division of the Department of Science and Art. These had 136,768 student under instruction throughout the U.K., with pass rates of 46.8 per cent at the elementary stage, 62.5 per cent at the advanced stage, and 35.8 per cent in the honours division. Altogether, the Division examined some 146,967 papers at 1,698 centres. <sup>99</sup>

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<sup>96</sup> Committee of Council on Education: Department of Science and Art. Paper C-7941. *op.cit.* p.ix.

<sup>97</sup> The statistics for 1862-1892 are taken from: Committee of Council on Education. Paper C-6831. *op.cit.* p.10. Those for 1895 are taken from: Committee of Council on Education: Department of Science and Art. *Forty-third report of the Department of Science and Art of the Committee of Council on Education, with appendices*. Presented to both Houses of Parliament by Command of Her Majesty. (London: HMSO. 1896.) Paper C-7941. p.viii.

<sup>98</sup> Committee of Council on Education. Paper C-6831. *op.cit.* pp.16-19.

<sup>99</sup> Committee of Council on Education. Paper C-7941. *op.cit.* pp.xxix-xxx and 78.



#### 4.3 Museums of science and art <sup>100</sup>

The South Kensington Museum and the Bethnal Green (Branch) Museum originated in the collection of models, casts, prints etc. formed over the years from 1837 in connection with the schools of design, and specimens were also donated to local schools of art. From 1852 an annual grant was made to add to the museum, and schools of art could purchase examples at half price. Following the removal of the museum to South Kensington in 1857, works of art were regularly sent as exhibitions throughout the country where they were viewed by members of mechanics' institutes amongst others.

The science section of the museum dates from the creation of the Department of Science and Art, although it remained small in size and restricted to geology until it could be arranged for public display when it was removed to South Kensington. The section then added collections in fossils, animal products, models of machinery, examples of structure and building materials, and of educational apparatus, donated by the Society of Arts. Other collections were later developed in such areas as economic entomology and forestry, ships and naval appliances, and the history of the steam engine from its earliest days. A loan collection of scientific instruments and apparatus circulated objects to local museums and schools throughout the country, where again they were open to viewing by workers and encouraged the formation of museums in mechanics' institutes as well as under the Public Libraries and Museums Acts.

The Department was also associated with lectures to working men, given in the Lecture Theatre of the Museum of the Royal College of Science (which incorporated the Royal School of Mines) in London. In 1894-95 these were on 'The Sun's Place in Nature' by Prof Norman Lockyer (442 tickets), 'The Story of the Biceps Muscle' by Prof G.B. Howes (218 tickets), and 'Heat Engines' by Dr A.R. Willis (165 tickets). <sup>101</sup> By this date some voluntary institutions still had lecture programmes, public libraries were offering lectures either free of charge or at a low cost, and the Technical Instruction Acts had initiated the movement for local technical colleges throughout the country.

## 5. Social and recreational needs

Although, as noted above, the character of some institutes changed from a serious purpose to the provision of entertainment, it may be argued that this was in fact meeting a

<sup>100</sup> This section is largely based on Committee of Council on Education. Paper C-6831. *op.cit.* pp.35-39 and 43-54.

<sup>101</sup> Committee of Council on Education. Paper C-7941. *op.cit.* p.xxvi.

felt and expressed need. Buckingham and others had been conscious of the recreational as well as the educational needs of working class families, in proposing legislation for good weather 'public walks' or open spaces to complement the 'public institutions'. In 1825 he had noted that the lack of open spaces in the new towns had made the traditional sports impossible for the common people, and this led them to spend their leisure time in the public house and other sedentary ways. With social insight he pointed out that only government measures could solve the problems which individuals, and the working classes in particular, were unable to do by themselves.<sup>102</sup> In 1833 Richard Slaney successfully moved in the House of Commons for a Select Committee to examine the matter of open air places of recreation, whose report<sup>103</sup> was used by Buckingham in the following year in connection with another Select Committee.

This Select Committee, which Buckingham chaired, was appointed "to inquire into the extent, causes and consequences of the prevailing vice of Intoxication among the labouring classes of the United Kingdom, in order to ascertain whether any legislative measure can be devised to prevent the further spread of so great a national evil". It concluded that there was an urgent need for:<sup>104</sup>

The establishment, by the joint aid of the Government and the local authorities and residents on the spot, of public walks, and gardens, or open spaces for athletic and healthy exercises in the open air, in the immediate vicinity of every town, of an extent and character adapted to its population; and of district and parish libraries, museums, and reading rooms, accessible at the lowest rate of charge; so as to admit of one or the other being visited in any weather, and at any time; with the rigid exclusion of all intoxicating drinks of every kind from all such places, whether in the open air or closed.

This dual approach was the basis for Buckingham's attempted legislation of 1835-1837 which failed for a number of reasons, although both aims were at least partially realised under later legislation.

Migration from the countryside to the new industrial townships contributed to the lack of recreational amusements, with taverns and coffee houses being the only substitutes of easy access. One proposal for the voluntary institutes was that "concerts might, without much difficulty, be performed, if a music class were taught in each Institution: music forms so soothing and so delightful a recreation, that it is desirable to

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<sup>102</sup> Buckingham's *Oriental Herald*, vol.VI, 1825, p.439.

<sup>103</sup> Parliament: Select Committee on Open Spaces. *Report from the Select Committee appointed to consider the best means of securing open spaces in the vicinity of populous towns as Public Walks and Places of Exercise; with minutes of Evidence.* (1833). Paper 448. vol.XV.

<sup>104</sup> Parliament: Select Committee on Inquiry into Drunkenness. *Report, with minutes of evidence, and appendix.* (1834). Paper 559, vol.VIII. pp.588-589.

see a love for it extended as widely as possible". Concerts were a feature of the London Mechanics' Institution, whilst at Manchester Mechanics' Institution on at least one occasion "from the coffee-room the members adjourned to the lecture-room, where the vocal music class interested the company with songs and glees: after which the phantasmagoria afforded considerable amusement". The Lyceums in and around Manchester had recreation as a primary object, with vocal and instrumental music classes being a regular feature, and with occasional concerts "of a superior character" at a small additional charge.<sup>105</sup>

The mechanics' and similar institutions did have an acknowledged social purpose, and events such as tea and coffee parties, concerts, recitations and even dances were often organised; these could be attended by workers' families. Excursions to other townships were not only enjoyable family outings, but had an educative function when (as was usually the case) they included visits to manufactories and museums.<sup>106</sup> The growth of competitive railway systems facilitated this travel at a price affordable by the artisan class.

As with 'liberal' adult education in the twentieth century, the social aspects of adult and vocational education institutions in the nineteenth century cannot be ignored without seriously distorting the picture of people's cultural needs and provision.

## 6. Conclusion

Mechanics' institutes, literary and philosophical societies, and similar bodies not only grew in number during the first half of the nineteenth century (Figures 2.1 and 2.2), but in many towns developed from rented premises into substantial buildings (Figure 2.11) containing classes, libraries, lectures, and sometimes museums and recreational facilities. The functions and services of these voluntary institutions varied in different places and at different times. As such they were perhaps "not representative of an educational movement", but "rather, one aspect of a wide process of structural differentiation occurring concomitantly with profound social change" as Inkster concluded.<sup>107</sup> There is a danger that simplification in educational historiography may obscure the fact that there were considerable variations in provision and purpose

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105 Duppa. *op.cit.* pp.97-98.

106 Coates. *op.cit.* pp.76-79.

107 Inkster, I. The social context of an educational movement. *op.cit.* p.299.



(a) IN 1834



(b) IN 1870

**Figure 2.11:** Keighley Mechanics' Institute, 1834 and 1870. <sup>108</sup>

throughout the country. Regional differences in literacy have been noted in section 2.2 above, those of mechanics' institutes have been pointed out by Inkster,<sup>109</sup> and Stephens has focussed attention on regional variations in schooling.<sup>110</sup> In the same way, there were variations in the way in which local authorities used the Public Libraries and Museums Acts to offer educational services.

Of the many strands linking the voluntary bodies and the later public library systems, those of literacy and scientific education have been stressed. The institutes may not have served the increasingly literate and 'schooled' working classes as originally intended, but many continued to the end of the century. Others had become the nuclei of public libraries and technical colleges as financial pressures and government legislation created the conditions for the development of 'public institutions' to be provided from local government rates.

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109 Inkster. *op.cit.* *passim*.

110 Stephens, W.B. *Regional variations in education during the Industrial Revolution 1780-1870: the task of the local historian*. (Leeds: University of Leeds Museum of the History of Education. 1973.) *passim*.

