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Walker, Martyn

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175 Anniversary Lecture Dr Martyn Walker

University of
HUDDERSFIELD
Inspiring tomorrow's professionals

School of Education and Professional Development

Inspiring tomorrow's professionals



Founded 'for the classes of the community, with the advantages of instruction in the various branches of science and the useful arts'

First Annual Report Huddersfield Scientific and Mechanics' Institute 1825 (p.1)

Dr Martyn Walker
The University of Huddersfield
m.a.walker@hud.ac.uk



‘By studying the past it is possible to anticipate the future
and understand the present’

Emile Durkheim (1858 – 1917)

The Industrial Revolution and the need for education and training

- Skills and training handed down from father to son and mother to daughter were no-longer applicable to a rapidly developing industrial age,
- Frances Anne Vane, Marchioness of Londonderry (Right),
- Malicious Injuries to Property Act (1861).



Early developments

- First generation of engineers, often from humble backgrounds, developed skills through trial and error,
- The evolving middle classes had a fascination for philosophy (science), such as the Cast Iron Philosophers in the 1790s and the Lunar Society. Members included Matthew Boulton, James Watt and William Murdoch (pictured right).



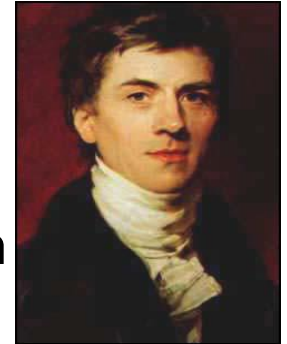
There was clearly a need for technical education and training.

Academic, Political, Social and Media support for mechanics' institutes

Dr George Birkbeck MD



Lord Henry Brougham



James Hole



Dr Samuel Smiles MD



Sir Edward Baines



Beginnings of a Movement

- The Anderson Institution, Glasgow,
- Edinburgh School of Arts, opened in 1821,
- Glasgow Mechanics' Institute having separated from the Anderson Institution, was opened in 1823,
- London Mechanics' Institute, founded by Birkbeck (and Brougham), opened in 1823,

These early successes resulted in the Movement beginning to spread across the Britain.

Uncertain times.....?

- Lancaster, Leeds and Manchester 1824,
- Birmingham, Bradford, Huddersfield 1825,
- Sheffield 1832,
But.....
- Bradford closed and reopened in 1832,
- Huddersfield closed in 1826, and re-opened in 1841 as the Young Men's Mental Improvement Society and a year later, the Mechanics' Institute,
- Birmingham closed in 1840 and re-opened in the late 1840s.

Failure of the Movement

- The name 'mechanics' institute' put off the gentling masses attending,
- Public lectures were pitched at those who were well educated,
- Funded by the good intentions of the professional classes but misunderstood in many cases the educational needs of the gentling masses.

From humble beginnings to award-winning University

- The Huddersfield Scientific and Mechanics' Institute (S&MI) was founded in 1825 for 'for the classes of the community, with the advantages of instruction in the various branches of science and the useful arts',
- In 1826 there was a national banking crisis and money was required to prop up the banks so loans were called in,
- This forced the S&MI to merge with the Philosophical Society,
- The Philosophical Society became a member of the Yorkshire Union of Mechanics' Institutes in 1839.

Re-branding.....

- Nationally, mechanics' institutes were re-branding...some had closed and re-opened such as those at Skipton.
- Others, notably Manchester, had had a lucky escape from closure due to falling membership.
- Schwann donated his library to the Society and became its first President and benefactor,
- In 1842, the Improvement Society was re-named the Huddersfield Mechanics' Institute, which had broken away from the Philosophical Society.

National and local developments 1841 to 1850...

- Formation of several Mechanics' Institute Unions across the Country.
- Huddersfield became part of the Yorkshire Union of Mechanics' Institute Union in 1842
- By 1843, the Institute was offering classes in pneumatics, natural philosophy (chemistry), geography, grammar, French and industrial drawing as well as elementary reading, writing and arithmetic.

There was a substantial increase in membership and the Committee believed that this was due to three factors:

1. Personality of Schwann who as President had been working exceedingly hard in support of the Institute,
2. The enthusiasm of several members who had been teaching the classes for free, 'with much zeal and regularity as though they were receiving a high remuneration',
3. Crucially, the management of the Institute was left entirely to the membership, 'whose warmest sympathies are engaged in its success and with some of whom its prosperity has been made a matter of almost personal concern'.

- ‘Nearly the whole of the Members are operatives in the receipt of weekly wages’,
- Classes were offered in grammar, geography, elocution, vocal music, mathematics, chemistry, architectural and mechanical drawing and ornamental design,
- Elementary classes in reading, writing and arithmetic, with average attendances being between 180 to 200 every evening’.

Income generation....

- Institutes received no direct State funding,
- Rail Travel was a new experience as were visits. Thomas Cook started his travel agency through initially arranging Leicester Mechanics' Institute visits.
- Members had the opportunity to pay fees half-yearly, quarterly or fortnightly,
- Wider public engagements through readings and musical nights, galas (over 500 attended the one in 1846) lectures and visits,
- The Committee arranged for a discount for those wishing to travel by train to visit the York Institute, the museum and castle.

- 'The irregularity of attendance is much to be deplored, forming, as it does, so great a barrier to discipline and progress'.
- Much depended on parents and guardians to enforce attendance and employers to arrange hours of work to finish on time in order that young men and boys could attend at 8 pm. The Committee was so concerned about attendance that they made visits to those who were poor attendees,
- Probationary classes were arranged to support those who had no previous elementary education.

1846 Design and Chemistry

- By 1846 a School of Design had been established, offering Ornamental, Architectural and Mechanical Drawing. The classes were popular and the standard of work was high.
- The chemistry class was taught by William Marriott who would build up the classes to between 30 – 40 by 1863 with the emphasis on practical laboratory sessions.
- ‘This class, the objects of which are so important...to so many useful arts in life and its aids being necessary in almost every process of agriculture and manufacture, in the operations of bleaching, dyeing, and printing’.

1846 Female Educational Institution

- Huddersfield Female Educational Institute was founded in 1846 by Frederick Schwann and supported and organised by his wife, Mary, the daughter of a Unitarian minister from Birmingham.
- In 1848 that there had not been much progress during the year as a result of 'the severe depression of trade'. There were 70 members in 1849.
- The classes were delivered in the British and Foreign School. The accommodation seems to have been small and rather uncomfortable but it did have a library.

- The 1848 *Report* made specific mention that ‘It is truly encouraging to find young men who have received instruction in our classes, so willing to impart their knowledge to others; and when it is remembered that they belong to the industrious classes, that their teaching is entirely voluntary, and that they attend regularly week after week ...the whole noble band of voluntary teachers, as constituting the mainstay of the Institution’.

- The Committee appealed to the manufacturers in the district that it was, at the time, a well know fact: ‘that competent designers, sufficiently artistic and numerous to meet the requirements of the manufacturers, are not always to be found in this neighbourhood...it would be highly credible to establish and support a school of art in our own town, where beautiful designs might be produced when woven in the fabrics of our manufactures.’

Responding to European competition and the debate around fees

- ‘Our neighbours on the continent, especially France and Belgium, are fully sensible of the importance of these schools [technical education]...French designs are superior to English, and ...fetch more cash in the market’.
- The Committee was very conscious that increasing the fees would be detrimental to its membership with high running costs now being incurred due to having 800 students.
- ‘The Committee would exclude from the Institution the very class it seeks especially to benefit. This class consists of operatives, mechanics, and youths engaged in manufacturers, who could not afford to pay more’.

Huddersfield Mechanics' Institute 1850

Huddersfield was the 10th largest Institute by membership in the country and second only to Leeds in Yorkshire.

1. Edinburgh	2,035
2. Leeds	1,852
10. Huddersfield	887

Huddersfield Female Institution 127

Ireland – The Great Famine 1845 -1852

Wales – Well-established Sunday schools



The Mechanics' Institute 1850

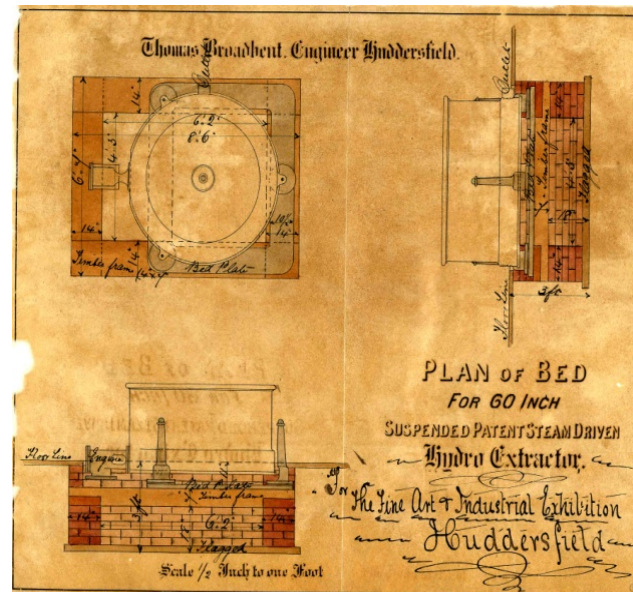
- An ex-student of the Institute taught the Design Class, Having 'a practical knowledge of the loom, he teaches his pupils to adapt their designs to it'.
- The purpose of the class was to provide 'competent and skilful native designers' to support local industry.
- The profile of those who attended the architectural drawing classes included 'mechanics, operatives, workers in brass and iron, builders, joiners, cabinet makers, carvers, gilders and painters. Students of Ornamental Drawing had become competent in cloth designs and colour.

The Great Exhibition of 1851

- The Great Exhibition was held in London,
- The quality of products and exhibits from overseas 'shocked' British industrialists.
- Institutes had held exhibitions for many years,
- Funds were raised to allow workers to attend the 1851 Exhibition, Sir John Ramsden donated £25 to support members at the Institute

- Society for the Encouragement of Arts, Manufactures and Commerce (Society of Arts),
- Union of Mechanics' Institutes formed in 1855,
- Rev Dr James Booth, Chief Examiner for the Society of Arts.
- Huddersfield Institute was a member of the Union,
- Examination Centres was in London.
- 1856 Huddersfield became the Centre in the North of England,
- 1857 Exams held in the military riding school.

Thomas Broadbent's Suspended Patent Steam Driven Extractor



Heritage Quay University of Huddersfield Archives.

- James Hole encouraged penny savings banks to set up branches in mechanics' institutes,
- I approve of Savings Banks in connection with Mechanics' Institutions, as contributing to raise the character of the working classes, and to make the humblest abodes the homes of honest content, and grateful industry (Earl of Carlisle, 1860)
- Huddersfield was no exception, the Institute offering members to save at its local branch of the Huddersfield Banking Company,
- The Yorkshire Penny Bank had branches in many institutes and later it would become the Halifax Building Society.

Language classes

- French and German were offered for several years,
- Report for 1854
‘They [the language classes] are attended...so much by the operatives, who constitute nine-tenths of all the classes, as by clerks, warehousemen, and persons engaged in the service of merchants and manufacturers...there are some students who attend them from a love of the language.

Female Educational Institute

- The Educational Institute in 1857 reported that it had been founded 'by ladies and gentlemen' who 'observed in many villages, and most towns of the Kingdom, Mechanics' Institutes for the instruction of young men, but no similar provision for the young women of the working classes'.
- The Committee were pleased to report that the Institute was flourishing and the membership had reached 128.

1859 Teaching observations

- The Classes continued to be well-organised with committee members acting as class inspectors visiting each one every week. Members of the Committee took it in turns to do this on a weekly rota, reporting back 'any defects or irregularities they may observe'. In all there were 87 Classes, 20 being taught by paid teachers and 38 by volunteers. The number of classes per subject varied between 14 arithmetic classes and 2 chemistry and correspondence classes.

From rented accommodation to civic pride

- Success of the Institute meant that it had moved from one rented building to another. Having limited space meant it was unable to take as many students as desired to attend.
- By 1859, a building fund had raised £3,700 from bazaars and annual soirees. Workmen in one mill alone raised £30,
- In 1860, the foundation stone for a new building was laid attended by Sir John Ramsden MP and W.E Foster MP.

Financially sound...

- The Institute always seemed to be financially sound,
- Schwann often made donations towards teachers' salaries,
- There were donations for the book stock,
- Galas, lectures and readings all contributed,
- Exhibitions contributed to the building fund,
- In 1860 the Institute made a surplus of just over £6 with an annual income of £776 and a membership of 1,243.

Space a problem too for the Female Institution

- The Female Institution Committee reminded the Yorkshire Union that:
‘Huddersfield claims the pre-eminent distinction of having been the first to establish an Institution, organised and managed on a separate and independent basis, for the education of young women of the working classes’.
- Bradford also had a separate Female Institution, using rented accommodation, opened in 1859.
- Many other institutes welcomed women,
- Nationally, Leeds, Liverpool and Manchester had large numbers.

- ‘The female population, from its employments and its habits of life, has much in common with male artisans. The mechanics’ institutes, which have effected such an incalculable amount of good in the case of working men, will no doubt also prove to be the agencies best fitted to awaken similar classes of the other sex, those higher aspirations and faculties now dormant, and to give them the first impulse to self-culture’.

Fanny Hertz of the Bradford Female Institution published a paper in 1860 entitled ‘Mechanics’ Institutes for Working Women with Special reference to the Manufacturing Districts of Yorkshire’.

- The Committee gained possession of the new building in 1862, free of debt,
- There was a marked increase in attendees due to 'the good accommodation now afforded by the healthier and larger rooms which have been duly appreciated and enjoyed',
- The increase in membership meant it was 'full' almost immediately,

Progression of student learning

- ‘Men who in early life received little or no education, which is the great majority, on entering this Institution read very indifferently, few could write well, fewer still could spell correctly, and not many were able to work the elementary rules in arithmetic’,

To

- Former students of the Institute were ‘at work with the principal manufacturers and tradesmen of the town, not merely employed as mechanics and workmen, but in places of trust, which they have attained by their intelligence and good conduct’.

Continued....

- I have seen lace designs from Nottingham, patterns from Manchester, ribbons from Coventry, applications of natural forms from many schools , which might compare well with foreign work...I mention no names, but in examining work from the school of Huddersfield, only one year's duration, we were astounded by the efforts on one pupil, only 18 years of age...no less than ninety works...in each of the nine stages she attempted, every drawing was so conscientiously carried out, that I am sure the examiners would only have been too glad to have sent up all her works as a good example for students to follow'.
- Henry O'Neil, Examiner at South Kensington (1873).

1876 Supporting teachers with continued professional development

- ‘Several masters and mistresses of the day schools have availed themselves of the opportunity of studying drawing here; and it is hoped that in a very few years it will be the rule to have education in drawing in all our elementary schools. This will form a very valuable nursery to such an institution as this’.

- Department of Science and Art, South Kensington,
- Society of Arts
- Yorkshire Union examinations
- The City and Guilds of London Institute for the advancement of Technical Education were involved in setting and managing the examinations in relationship to the cloth manufacture class, paying teachers delivering the subjects on their results.

Plans for a new Technical School and Mechanics' Institution

- By 1881, it was clear that Northumberland Street had outgrown its usefulness,
- Joint Committee meeting of the Institute and Female Institution noted:

‘while providing for the extension and full development of the technical classes connected with the staple trade of the district, far better accommodation is required also for the School of Art and the Science School, and at the same time additional requirements of the Penny Bank, Reading Room and Library are needed.

- As with Northumberland Street, a building fund had been set up with external sponsors including the Worshipful Company of Clothworkers donating £1,000,
- The Committee recorded in 1884 that ‘the new and handsome building’ had a weaving shed, dye-house, chemistry laboratories, art rooms and a mechanical drawing room, all of which were fitted with ‘the necessary approved appliances’,

1888 Higher education at Huddersfield

- Oxford and Cambridge Universities had concerns that they had no presence outside their respective towns,
- Durham also became involved,
- Tutors went out to the provinces and delivered lectures in the classics,
- The Oxford University extension lectures were delivered at Huddersfield and were successful, both in numbers attending, with over 400 seated in the large Hall, and income received. There was also a series of lectures on Commercial Law, delivered through the Huddersfield Incorporated Law Society, which were popular.

Occupations of members

In 1847, there were

Finishers	58	Spinners	27
Dyers	14	Woolsorters	12
Weavers	41	Factory Hands	52
Carpenters	27	Masons	13
Mechanics	24	Wheelwrights	12
Warehousemen	14	Smiths	13
Shoemakers,	14	Twisters	13.....and others

Government takes control....

- Technical Instructions Act 1889 which gave local authorities the power to levy a penny rate in order to provide technical courses, appoint teachers and provide grants to schools and mechanics' institutes.
- Tax on Spirits
'To distil wisdom out of whiskey, genius out gin and capacity for business out of beer',
- Education Act of 1902

- **Letter from Sir Edward Baines to the President of the Huddersfield Institute, Thomas Brooke.**
St. Anne's Hill, Burley,
Leeds, Dec. 23rd, 1880.

Summary

- Historians and educationalists have argued the Institute Movement was not a success or provided technical education to the gentling masses.....
- Huddersfield responded to the need to introduce elementary education as well as industry-relevant subjects and the beginnings of HE,
- Supported its students through home visits and support,
- Huddersfield responded to opportunities (e.g., SofA),
- Women were encouraged to attend their local institute...Huddersfield had its own which merged with the Institute. As now, Huddersfield was inspiring.....

