

MECHANICS' INSTITUTIONS

Recent movements in education have tended to emphasize vocational and industrial training — to correlate the practical with the so-called cultural subjects. In this connection it may be worth while to recall the efforts made a century ago to graft scientific and cultural studies upon mechanical training. The mechanics' institutions which attained considerable influence during the first half of the nineteenth century were the result of the growth of democracy and education among the workers, who began to realize that training of the mind would make the hand more efficient.

ORIGIN OF MECHANICS' INSTITUTIONS

The growth of organizations initiated by men who sought to better the situation of mechanics or artisans constitutes one of the most interesting chapters in the educational and social history of Great Britain. As early as 1760 Dr. John Anderson, at Glasgow, began to illustrate his lectures in natural philosophy by the results of observation in the shops of the city. In order to carry out his design he began the instruction of what he described as his anti-toga class, which was composed of workingmen who were permitted to attend in their working clothes. At his death the property of Professor Anderson was devoted to the establishment of Anderson University at Glasgow — an institution for the instruction of artisans. And thus the course he began was perpetuated. In 1796 a course of lectures was given to over 1000 persons of both sexes.

It was in Glasgow, also, that Dr. George Birkbeck, in

1799, lectured to 500 practical mechanics and, apparently as a result of these lectures, was called to the chair formerly held by Dr. Anderson. It has generally been conceded that these lectures were the origin of mechanics' institutions under whatever name they were organized. Both Dr. Birkbeck and Lord Brougham cited these lectures to show the value of such instruction for the working classes. Professor Anderson, it has been said, "opened the temple of science to the hard laboring mechanic and artisan."¹

The city of Birmingham became a center for organizations to better the life of the working man under such names as the Reformation Society in 1787, the Sunday Society in 1789, the Cast Iron Philosophers in 1791, the first Artisans' Library in 1795, and the Birmingham Brotherly Society in 1796. The Sunday Society grew out of an association for mutual improvement, wherein members addressed their associates upon the subjects connected with their occupations. Many of these speakers were connected with the technical trades of the community and they constructed apparatus to illustrate "the principles of mechanics, hydrostatics, pneumatics, optics, electricity, and astronomy." Admission to such lectures was not confined to members, inasmuch as they were free to young persons employed in the factories of the city. In some of the organizations already mentioned there were classes in drawing, in geography, and in the study of those sciences in the application of which many members were interested. From the Artisans' Library which was established especially for the use of the working people useful reading could be had for a penny a week. Dr. Andrew Ure, a Scottish chemist, has been credited with the addition of the library feature to the original design of these several associations. And

¹ Barnard's *The American Journal of Education*, Vol. XXII, p. 31.

the movement to provide literary and scientific societies for the middle and lower classes was advocated about the same time by *The Monthly Magazine* (in 1814), one of the most popular periodicals of the time.

In 1823 the Glasgow Mechanics Institute, the Liverpool Mechanics' and Apprentice's Library, and the London Mechanics' Institute were established, and for many years it was believed that the latter was the first of its kind in London. In 1831, however, the *London Mechanics' Magazine* pointed out the fact that an organization called "The Mechanical Institution" had been active in 1817. That institution purposed to disseminate useful knowledge among its members and their friends by lectures and discussions on various branches of science. It is noteworthy that the initiative in that instance was taken by the mechanics themselves, whereas the London institution of 1823 resulted from a call sent out by the *Mechanics' Magazine*.

After 1823, under the leadership of Dr. Birkbeck and Lord Brougham, such institutions spread throughout the kingdom until in 1850 there were 700 societies scattered through the towns and villages. In first class towns these agencies of instruction included the following features: (1) a reference library, a circulating library, and a reading room; (2) a museum of machines, models, minerals, and natural history; (3) lectures on natural and experimental philosophy, practical mechanics, chemistry, astronomy, literature, and the arts; (4) an experimental workshop and laboratory; and (5) elementary classes for teaching arithmetic, algebra, geometry, and their different applications, particularly to perspective, architecture, mensuration, and navigation. The reading rooms of the London Mechanics' Institute were open from 9 A. M. to 10 P. M. A public lecture was given on each Wednesday and Friday evening commencing at 8:30 o'clock. The lecturers were paid 3£

13s 6d. "when they did not find any of the apparatus" and it is assumed, therefore, that a larger fee was allowed when apparatus was furnished.

In the classes connected with the London Mechanics' Institute the instruction included the subjects already mentioned and in addition the French and Latin languages and sometimes shorthand. Drawing was very popular and 100 of the 300 enrolled were pursuing it. Modelling, also, was among the subjects offered. There was a class of 120 members which received instruction on the mutual plan—a popular method about that time (1840). Chemistry, experimental philosophy, geography, natural history, and phrenology were the subjects of most prominence in this class. Ninety at least were studying music under paid instructors. In 1849 there were 120,000 members in these various institutes; there were more than 400 reading rooms with libraries possessing an aggregate of 815,000 volumes. Moreover, to meet an apparent demand, a "Society for the Diffusion of Useful Knowledge" began the publication of a series of cheap and useful publications on a large variety of subjects.

An institution at Manchester (about 1835) was designed to enable mechanics and artisans of any trade to obtain a knowledge of the science connected with that trade. Since there was no art that did not depend upon scientific principles, the object in view was to teach such principles. Lectures, classes, a library, a reading room, and a preparatory school were the means to be employed. The plan was practically the same as that pursued in London, with some additional features. For example, a gymnasium was open to members for a small fee. The German language as well as French and Latin was taught. A subordinate organization of probably one hundred members, to which any one over the age of eighteen was admitted, had in view not only

the acquisition of knowledge, but also the promotion of social relations. The meetings were held fortnightly when some member read a paper on a subject to which his attention had been drawn, and this reading was followed by a conversation upon the same subject. It seems that the day school was among the most important interests of these organizations, since parents were taking the education of their children into their own hands. The school for boys at Manchester was opened in 1834; and that for girls in 1835. They were intended first for the sons and daughters, brothers and sisters of the subscribers to the Mechanics' Institute who paid four shillings a quarter; while non-subscribers paid five shillings. It is observed that in addition to the common literary subjects the girls were instructed in sewing and knitting.²

MOVEMENTS IN NEW ENGLAND

In 1823, Mr. Timothy Claxton, who had been identified with the "Mechanical Institute" in London in 1817, came to New England and engaged to work in the vicinity of Methuen, Essex County, Massachusetts, where there was a factory for the manufacture of cotton goods and also a machine shop. Because of his previous experiences in London he took the first opportunity to promote the establishment of a similar society in New England. It was then that he learned of a lyceum — probably the first in this country — which had been organized about 1819 in the village of Methuen. The organization was called the "Methuen Social Society for Reading and General Inquiry". Its membership was composed of both men and women who sought useful knowledge through a course of reading.

Before this society, which seems to have lost some of its early enthusiasm, Timothy Claxton in 1824 gave a lecture

² Barnard's *The American Journal of Education*, Vol. VIII, pp. 250, 253; *Connecticut Common School Journal*, Vol. II, pp. 271-273.

in which he used a crude air pump constructed by himself to illustrate his subject. As a result of this and succeeding lectures the lyceum was revived, the constitution was changed, and a library and apparatus were provided. Debating was introduced and the women were permitted to hand in compositions which were publicly read at the meetings. Members were requested to deliver lectures upon their own occupations, but considerable persuasion on the part of active members seems to have been necessary in order to secure a response on the part of the diffident ones. The society met at the houses of members until it became too large to be thus accommodated. Then it tried the school house and thereafter the town hall. Neither of these having proved satisfactory a building for the special use of the organization was provided at an expense of \$1200. The exercises during the month were as follows: at the first weekly meeting there was reading by all the members; at the second, reading by one member; at the third, an original lecture; at the fourth, a general discussion.

In 1826 Mr. Claxton removed to Boston and there aided in establishing the Boston Mechanics' Institute. This was the first organization to introduce popular lectures in various branches of science with a view to arousing a greater interest therein. It was not a long-lived institution, but it furnished an incentive to the formation of others. The early decline of the Boston Institute was caused, it appears, by its unsocial character. During the winter a course of lectures designed to present in a plain manner information relative to new discoveries, was all that was undertaken; there was no library, no reading room, and no regular classes. Although a class in "mechanical science" was formed on the initiative of certain members, with the expectation that the management would encourage it and adopt it as a branch of the Institute, it was not so recog-

nized. Indeed, a committee which had been authorized to provide a room for the class decided that it was not expedient to do so.

Such institutions seem to have been more or less influential in the encouragement of the manufacture of apparatus to illustrate the teaching of science in the schools. Timothy Claxton engaged in the manufacture of such apparatus in Boston in 1829, and in 1836, having visited England, he entered into an arrangement to supervise the making of school apparatus similar to that which he had been making in Boston. It may be observed that this period marks the general movement for popular education in the United States.³

It is quite evident that the activity in England and Scotland about 1827 had impressed the General Court or legislature of Massachusetts; for during January of that year two bills were introduced subsequent to a resolution relating to the establishment of a practical seminary. The subject was referred to a commission which supported the measure and presented reasons therefor. The commission suggested for example, that England and Scotland, through mechanics' societies, were giving to the great body of arti-

³ Barnard's *The American Journal of Education*, Vol. VIII, pp. 253-256; *American Journal of Education* (1827), Vol. II, p. 58.

The Franklin Junta, a sort of lyceum under the leadership of Benj. Franklin, was a conspicuous organization in Philadelphia in 1727. This was formed for mutual improvement under rules which required that each member should present one or more queries on any point in morals, politics, or natural philosophy. The questions raised were to be discussed by the members or company and once in three months each one was to produce an essay of his own composition — an inflexible rule it is assumed — on any subject he pleased to select. Franklin asserted that this organization was the best school of "philosophy, morality, and politics" in the province. It should be said that the membership was not limited to any one class. On the contrary, it included mechanics along with a copyist of deeds, a self-taught mathematician, a surveyor, a young gentleman of fortune, and a merchant's clerk who later became a provincial judge.— Barnard's *The American Journal of Education*, Vol. VIII, p. 251.

sans a scientific education, and that the bounty of the State of Massachusetts ought to be devoted to the same purpose. An appropriation to begin such instruction was asked for, but it was the opinion that the popularity of the institution would insure future support.

It is noteworthy that within the same year in which the organizations of the Liverpool and the London mechanics' institutions were completed (1823) a similar institution — The Gardiner Lyceum at Gardiner, Maine — was established. It sought "to give to mechanics and farmers such a scientific education, as would enable them to become skilful in their occupations". The need of such instruction was evidenced by the actual observation of the difficulties confronting mechanics because of the lack of information in the elements of science. Instruction was begun in January, 1823, and the courses of three years were adapted to all classes of persons who were engaged in productive labor in that community. Mathematics, drawing, chemistry, including agricultural chemistry, natural philosophy, political economy, mineralogy, natural history, natural theology, and history constituted the subject matter for the three years.

Besides the regular classes, however, there were also short-session classes. For example, a class in surveying was admitted in September; one in civil architecture and one in agriculture were admitted in November; another in chemistry was organized in January; and still another, in navigation, began work in May. The class in agriculture which entered in November was instructed in agricultural chemistry, in anatomy and diseases of domestic animals, and those portions of natural history which were of peculiar interest to the agriculturist. These short-session classes pursued courses covering four months. This institution, therefore, was a lyceum, wherein recitations were regularly

conducted; and the practical application of the lesson is shown in the fact that surveying and leveling were taught in the field as well as in class rooms. Classes in chemistry performed experiments in a laboratory; classes in mechanics calculated problems in the practice of the machinist and engineer; and all, it seems, acquired more than the abstract principles of science.⁴

Referring to the prospect after the opening of the Boston Mechanics' Institution (1826) the editor of the *American Journal of Education* declared that "their benefits are perhaps more direct and substantial, and their sphere of usefulness is necessarily much wider," than that "connected with any other department of scientific instruction. A fresh interest and variety will at the same time be communicated to the general subject of education, by the intelligence drawn from this wide field of popular and general improvement."

At the opening of the Boston Institute, George B. Emerson delivered a long address in which he set forth the advantages to be derived from the uniting of study with the daily occupation. A summary from that address may be suggestive. No one, he said, could for a moment doubt that if a mechanic were informed relative to the principles of mechanical power, and the laws which explained the general nature of the great powers and bodies of the universe as revealed in natural philosophy, or the properties of all substances with which the art and science of man are connected, as shown in chemistry, he would be greatly helped by the acquisition. There were persons, it appears, who believed that the possession of knowledge and the exercise of the understanding operated to defeat the best use of the physical powers. That is to say, that "vigor of mind and mechanical skill are inconsistent with each other." The

⁴ *American Journal of Education* (1827), Vol. II, pp. 148, 216.

lecturer went on to show the great inventions which had come from the fact that there were *thinking* mechanics. Great inventors were named to demonstrate the possibilities which might be created in the organization of such institutions as the mechanics of Boston were then dedicating. It was shown, also, that the people of England and Scotland produced more than three times as much as an equal number of workmen on the continent, the difference being due to intelligent operation.

The Mechanics' Institution did not purpose to educate philosophers but intelligent and skilful mechanics; and there was much information that could be acquired, however advanced in life one might be, without any preparatory knowledge of any other science. There were few who would not be benefited by the lectures to be provided, for they would not be wholly confined to subjects of interest to mechanics. It was obvious that the entire community would be the gainer through the uplift of the individuals. In a material sense walls would be better constructed because of the experiments to test their strength; and lumber would be more durable, because trees would be felled at the right time. By making such knowledge familiar to working masons, carpenters, and joiners some of the annoying things of life would be removed. At that time, the speaker asserted, such information was "buried in books, or in the memories of studious men, who have no means of bringing it to its right destination." Indeed, "by an absurdity of misapplication" it had been theretofore given to those who least needed it. It was designed to open such sources to the mechanic. Up to that time, it seems, the principles of science had been accessible only to such as were preparing for the so-called liberal professions. The poor and the employed had been almost, if not wholly, deprived of such advantages. The mechanics' institutions offered to all the

uninformed who chose to accept the opportunity to become familiar with the facts connected with their daily lives and occupations.⁵

In 1839 Horace Mann called attention to the fact that a class of institutions known as lyceums or mechanics' institutes had recently come into prominence in Massachusetts. Before some of these organizations annual courses of popular lectures on literary or scientific subjects were given. Others maintained libraries or reading rooms, and in some instances the two were combined. Although the purpose which controlled public libraries, namely, the diffusion of knowledge and instruction, governed them as well, they were, nevertheless, greatly inferior to the general library in point of efficiency. The patronage of young people, however, led Mr. Mann to conclude that these popular movements constituted an important agency in interesting the youth of the State in instruction. Furthermore, such agencies could not in any instance be omitted in enumerating the opportunities for intellectual advancement. At that time—in 1839—there were eight mechanics' institutes and more than 130 lyceums in Massachusetts, and about 35,000 persons were in regular attendance. To be sure, there were, besides, numerous private clubs or associations for literary purposes.

The lecturer in the institutions mentioned sought, it was observed, to instruct or amuse persons of maturity, and seldom treated of the elementary phases of his subject. He assumed that his audiences were fully acquainted with the essentials of the subject, and the details, therefore, were usually the content of the discourse. Occasionally, however, lectures were serious, didactic presentations of important outlines in philosophy or morals. Some people attended these courses "in the true spirit of philosophical

⁵ *American Journal of Education* (1827), Vol. II, pp. 273-278.

inquiry; others resort to them as places of amusement for a leisure hour; some attend them in order to dignify a life of idleness with a seeming mental occupation, and others again attend them as they would attend a theatre, or other assembly, where the supposed refinements of the company, and not the instructiveness of the occasion, constitutes the attraction."

These institutions were not designed, therefore, for the improvement of the juvenile portion of the community. Such lectures could not be substituted for books even for youth, much less for children. Moreover, the honest seeker after knowledge would be forced to do much collateral reading in order to make any progress. Indeed, intelligent men had often considered the popular lecture as a superficial method of obtaining information, inasmuch as a few ideas might be construed as a "system of truth". Horace Mann, however, believed that this attitude was somewhat extreme, because outside of one's daily occupation a person must be content with general notions. A passing acquaintance only with many subjects and an intimate knowledge of a few was the only reasonable view to be accepted. Only when knowledge was associated with one's vocation were superficial notions dangerous. It would be a mistake to refuse enlightenment to the great body of citizens because they could not become proficient in all science. Among the greatest advantages of such movements Horace Mann mentioned the social side. People of different opinions were brought together; better topics of conversation were provided, and thereby a great variety of gossip or almost slanderous fault-finding in the community was shut out. Well-informed persons asserted⁶ that "in the city of Boston, the general topics of

⁶ *The Connecticut Common School Journal*, Vol. II, pp. 175, 177.

In 1827 the "controllers of the Public School" of Philadelphia said that the new modes of employment might materially affect the character and condi-

conversation, and the mode of treating them, have been decidedly improved since what may be called the reign of Popular Lectures."

MECHANICS' INSTITUTIONS IN IOWA

The first of such institutions to be organized and incorporated in Iowa was the Mechanics' Mutual Aid Association at Iowa City, which was formed in 1841 and chartered during the legislative session of 1841-1842. At its inception it seems to have had but one purpose, the relief or mutual assistance of those who had allied themselves together for

tion of the individuals who engage in them. Children engaged in manufactories should not only be protected but they should also be instructed in morals and in those literary subjects of which they were deprived when withdrawn from the public schools. Legislation should provide for this protection. At a period (1827) when public attention appeared to be drawn to the subject of "national economy" and efforts were being made to "accomplish great purposes in regard to national policy and industry" it was deemed proper to submit such a question for consideration. The suggestions seemed especially applicable to that community (Philadelphia). At the same time editorial comment on the general situation declared that there were probably many manufactories even in New England (in 1827) "at which no express arrangement is made either for the education of the juvenile part of those who are employed in them, or for the improvement of adults." Legislation might not be effective but nevertheless "some measures should be speedily adopted to secure the instruction of children placed at such establishments".

Within the same year (1827) the first steps were taken to establish an agricultural institute in Pennsylvania. It was designed after the institute of Fellenberg, near Berne, Switzerland, which had been visited by Anthony Morris for the purpose of adapting its principles to the institution in view. Although the various branches of a classical and scientific education would not be excluded, particular attention by practical teachers would be given to those from the laboring and mechanical classes, in the country where, it was asserted, no provision had yet been made to extend "all the facilities of education attainable in the city". Indeed, the object in view was the instruction in such subjects as were "peculiarly appropriate to rural life."—*American Journal of Education* (1827), Vol. II, pp. 622, 623, 699.

In 1836 a law "for the better instruction of youth, employed in manufacturing establishments" was passed in Massachusetts. In complying with this law the Boston Manufacturing Company, in 1839, erected at Waltham three well equipped buildings in which schools were maintained at an annual expense of \$7000, this sum being in addition to the regular taxes contributed for the public schools.

that one end. But members of the organization "feeling a deep interest for the prosperity of this young and growing Commonwealth; and knowing also that a lack of the facilities for educating youth here, would materially retard the growth of the settlement; conceived the design of establishing an institution of Learning at the Capitol of the Territory." The charter further declared its purposes and powers to be "to promote such measures as may tend to the advancement of the mechanical arts; and also whatever may tend to the promotion of education, and the advancement of the arts and the sciences."

In order to render substantial aid to the Association the Territorial legislature granted a site of one-fourth of a block out of the land reserved for school purposes in Iowa City on condition that within two years a building worth not less than one thousand dollars should be erected thereon. But the stipulated amount was easily raised for the subscriptions for the building and the ultimate outlay was about \$4000. In April, 1842, subscriptions at twenty-five dollars a share for stock in the building were opened; and in so far as that part of the equipment was concerned it was a stock company.⁷

According to the provisions of the by-laws of the Association, in order to become a member one must possess a sound mind, be free from infirmity of body, of a good moral character, industrious in his habits, by occupation a mechanic, and not under 21 nor over 50 years of age. To

⁷ Miscellaneous manuscript records of the Mechanics' Mutual Aid Association; *Laws of Iowa*, 1841-1842, pp. 4-6; prospectus (manuscript), among the records of the Mechanics' Mutual Aid Association, 1843; H. W. Lathrop in *Iowa City Republican*, March 31, 1897. See also the subscription list among the records of the Mechanics' Mutual Aid Association.

By the provisions of the act granting the lot to the Mechanics' Association a bond for the execution of the requirements was necessary. Three members — George T. Andrews, A. G. Adams, and Thomas Ricord — signed the bond of \$1000. A copy of the bond is preserved.

ascertain these facts an investigating committee was usually appointed and its findings were submitted in writing to the Association. But whether the report showed a favorable or unfavorable opinion of the committee, balloting for membership took place and if two-thirds of the members were favorable to the candidate he was declared elected.⁸

At the laying of the corner stone of the academy building in June, 1842, Rev. John Libby, the orator of the day, set forth in an extended address the position of the mechanic among men, and described the independent life, and the peace of mind produced by honest labor. He showed that the opportunities of the mechanic depended on the improvement in his occupation which could be made by application to study or reading during a definite portion of the day. Besides he called attention to the remarkable discoveries and the great inventions which were due to thinking mechanics; and one may believe that he had access to the address of George B. Emerson quoted earlier in this article. There was great promise, also, in supporting a school for the families of men engaged in such occupations. And lastly, the mutual protection of families in distress was among the most valuable features of the organization. Such was the character of the address that the Association later requested it entire for publication.⁹

The records of the organization show an expense account of \$13.88 from March, 1841, to October, 1842. The items were mainly for room rent at fifty cents a session.

⁸ Constitution of the Mechanics' Mutual Aid Association, Art. VIII; by-laws of the Mechanics' Mutual Aid Association, Secs. 3, 4.

⁹ Address of Rev. John Libby at the laying of the corner stone of the Mechanics' Academy. See also a letter of Rev. John Libby, dated December 1, 1842.

Although it has been shown that the corner stone contained nothing at the time of its removal, it was at one time decided by the trustees to enclose therein the names of the President of the United States, John Tyler; of the Secretary of State, Daniel Webster; of the Territorial officers of Iowa; the

It is apparent that the ways and means to support a school of the type in view was causing some anxiety. This is evidenced by a petition to Congress through the Territorial delegate, Augustus C. Dodge, for thirty-six sections of land to endow the institution. In his letter in reply to this petition Mr. Dodge said that while he doubted his ability to secure favorable action on the part of Congress, because the members from the older States considered the public lands as so much cash in the treasury, he would gladly present the petition and urge its consideration for so worthy a cause. In his communication, however, he called attention to the fact that two townships of land for a "Seminary of Learning" (the State University) had already been given to this Territory.¹⁰

The opinions or wishes of the management are revealed also in other ways. Indeed, a stray scrap of paper shows that a resolution to authorize the trustees to dispose of the academy to any society they might think proper to direct it was offered at about the time it was finished, or ready for occupancy in June, 1843. Furthermore, in August of the same year the trustees appointed a committee to wait on a Mr. Gardner (probably S. B. Gardner), to learn what his terms would be for going east to raise money and books for the benefit of the academy; and likewise to learn when he would be ready to go. To be sure, there seems to be no available proof that this plan was carried out.¹¹

Sometime in the early history of the organization, prob-
officers of the Association; and the names of all members with their ages, occupations, and nativity.

¹⁰ See petition for grant of land in aid of the Mechanics' Academy; also a letter of Augustus C. Dodge in reply to the petitioners, dated January 11, 1843.

¹¹ See fragment of resolution among records of Mechanics' Mutual Aid Association; also minutes of the Board of Trustees of the Mechanics' Academy, August 8, 1843.

ably in 1843, the following scheme for the care of orphans was proposed: a fund was to be created from one and one-half per cent of the tuition fees in the literary department, and from all donations which had been or which might be received for the benefit of the Association. For this accumulating orphan fund certificates of shares should be issued and these would be entitled to the same dividends (provided there were any, of course), as shares held by members. Thereafter this dividend together with the one and one-half per cent of the tuition already mentioned should be put in charge of the trustees who would be held responsible for its safe investment. When the interest on this investment amounted to enough to pay the tuition of a pupil it should be used to put some orphan in the academy. If it should happen that there were no orphans among the members, then the most needy orphan in the community should have the benefit of the fund. The aid should not extend beyond the giving of a good English education if there were not enough funds to give the elementary subjects to all orphans of the members. If, however, the funds were sufficient to educate all orphans then the orphans of non-members should have the advantage of all the higher branches taught in the academy.¹²

By May, 1843, the girls' department of the school was announced to begin operations in June. The cost of instruction was to be laid upon the patrons at rates which varied according to the branches taught. For the common branches the charge under the by-laws first adopted was three dollars for a term of three months. English grammar and geography in addition to the common group increased the cost to four dollars a session; while mathematics, natural science, rhetoric, and logic raised it to five

¹² Manuscript resolution among the records of the Mechanics' Mutual Aid Association.

dollars. Latin and French, with drawing and painting required another dollar, and the customary fees for music were required of those who were so ambitious as to undertake the study of the piano. Such was the announcement which, as will be seen, probably covered a larger outlook than this institution was ever able to control.

Among the documents relating to this institution there are two copies of by-laws. It is quite certain that the first draft was approved on May 13, 1843, while the second is described as "By-Laws for the first term" which suggests a revision before the opening of the school. The reduction in the original tuition rates is a noticeable feature; and the curriculum was materially modified. For example, among the charges for instruction for each session the patron would pay fourteen dollars for the "higher English branches usually taught in high schools including Natural Science, Geometry, Algebra, Plane and Spherical Trigonometry, Surveying and other branches usually in the same class." Greek was mentioned along with Latin and French among the subjects for which extra fees would be collected. As finally advertised, however, the advanced or "high school" group was not described, for the promoters seem to have been wise enough to let "classical school" cover all that might be taught above the common English branches.

In order to insure sufficient support the trustees were required not only to advertise the school at least one month previous to the opening, but they were likewise instructed to procure subscriptions during each vacation for the next session. The Association seems to have hoped for some profit which would possibly come from the difference between the cost of instruction and other expenses and the total amount of tuition collected. Nevertheless, the history of this institution like that of many others does not reveal any such income. On the contrary, there was always an

uncertainty as to the kind of contract which might be made with persons competent to manage the instruction.

According to the rules governing the school there were two sessions annually, the summer session commencing in April and ending on the last Saturday in August; while the winter session began about the first of October and ended the last Saturday in February — March and September only being vacation months. Teachers were required to conduct classes five and a half days a week since Saturday afternoon was the only weekly intermission. The daily sessions were from nine until twelve, and from one until four o'clock in the winter, and from nine until twelve and from two until five o'clock in the summer.

It appears that considerable care was given to the employment of teachers, and disappointment was expressed at the non-arrival of a teacher from Oberlin. A substitute, Mrs. George S. Hampton, the wife of a well-known citizen, was engaged to take the place in the girls' department at a salary of one hundred dollars for five months, the greater part of the payment to be made in mechanical labor of the members of the Association. The money payment depended entirely on the amount of tuition which could be collected. For the boys' department, Hugh Hamilton and William Hamilton were employed in 1843, and they proposed to teach the first session of 1844 for \$300 and board themselves; or for \$200 and board, the service being for five months. In this instance they would accept half cash and half in trade. On the same occasion Dr. William Reynolds proposed to take charge of the boys' department and to use therein the apparatus which he owned, for the net income from tuition. Again, the most of his compensation could be paid in the labor of the Association inasmuch as he wished to build an addition to his home.

The supervision of instruction was to be maintained by

the trustees through a visiting committee of three who were required to visit the school regularly during the last week of each month. According to their report in August, 1843, the school was in very good condition although some things were not conducted in a manner to please all the committee. It was observed, however, that "we cannot expect to get teachers that will be perfect in everything". At that time there were 42 boys and 63 girls in attendance; the total income from tuition for the five months was estimated at \$319.52; the salaries of teachers amounted to \$247, leaving a balance of \$72.52 to the credit of the Association. The trustees in October, 1843, urged each member to secure pupils for the academy. About that time, also, orders were issued to assess an extra charge of thirty-one cents a pupil for fuel during the winter session.¹³

In the spring of 1844 the bids from teachers indicate a situation involving some competition. For example, one agreed to take charge of the girls' department and to pay the Association eighteen and three-fourths per cent of all collectible bills for tuition, for the use of the rooms in the academy. Again, two women teachers proposed to conduct the girls' department for twenty-five per cent of the income provided the trustees advertised the school and collected the bills. At the same time Dr. Reynolds renewed his offer to handle one room and to pay \$60 a year for its use. Besides, the two Hamiltons, already mentioned, offered to take one room and to keep up the classical department for one year for all the income except ten per cent on collectible bills. The two women teachers and the two Hamiltons were employed on their own terms.

In July, 1844, the academy rooms were leased, it appears, to W. K. Talbot for a period not to exceed two years. The

¹³ By-laws of the Mechanics' Academy; report of the Trustees of the Mechanics' Academy, August 23, September 13, and October, 1843.

trustees provided, however, that he should agree to maintain a school to instruct in the common English branches "together with the branches that are taught preparatory to a Collegiate course." A further provision that "nothing like sectarianism to be taught and that the society receive at the rate of 10 per cent on the tuition reserving the right of holding the meetings of the society in some room suitable for that purpose" was made a part of the record. Whether the association wanted a collegiate preparation for the children of the families constituting its membership, or whether this feature was made prominent to attract patronage is a matter of some interest, although it may not be determinable.

There were some very definite rules which the association adopted for the government of the school. For example, any pupil in the higher department who showed any disrespect for his or her teacher, or who might be guilty of any improper conduct "shall be reprimanded before the whole school by the principal". Persistence in insubordination would lead to a reprimand and possibly to expulsion by the trustees who would forthwith inform the parent of the reasons for such action. Again, each pupil on entering should be required to select and retain a seat with "reference to class and studies" and under no conditions except a change of classification should the seat be permanently changed. There were other regulations governing teachers whereby they were required to keep a classified record showing names, residence, time of instruction, and subjects pursued by each pupil. They were especially cautioned to see that each pupil of the proper age studied "composition, to produce one semi-monthly at farthest, and if practicable weekly"; and boys were to be "exercised in declamation" in addition to the composition.

Thoroughness was not only desired but it was also em-

phasized in the regulation that teachers should require scholars "to thoroughly understand the progress to every result obtained and to completely master the ground passed over." A merit roll should show a weekly record of each pupil as to "demeanor and scholarship" and this should always be "open for the inspection of visitors" and be exhibited to the friends and patrons at examinations.

Signs of disruption appear in reports submitted in January, 1845. According to the opinion of the building committee the Association was nearly out of debt, and the completed structure belonging to the organization was valued at about \$3700. But while this investment was being cared for other expenses were incurred through the benevolent features of the Association. The attendance upon sick members and the expenditures of benefits to which they were entitled were the functions of committees which seem to have acted judiciously. Nevertheless, an extended disaffection of the membership showed a breaking up of the Association and neglect of its obligations. Some were dissatisfied, some refused to attend meetings, and dues in very many instances were unpaid. The Association considered itself solvent, however, if those in arrears would pay their dues. It may be assumed that all these dues were never collected for among the last items is that of the auditing committee, early in 1846, which showed 87½ cents collected during the year and expenses for the quarter ending January 7, 1845, as follows: candles 37½ cents, paper 12½ cents, and matches 6¼ cents, a total 56¼ cents.¹⁴

For some years after the project was given up by the Mechanics' Association the Academy building was used by private teachers. In 1853, however, when the city was incorporated, the public school was housed in this building.

¹⁴ Minutes of Trustees, March 12 and 13, 1844; reports, 1845 and 1846; by-laws of the Mechanics' Academy for the first term.

In 1854 the Trustees of the State University leased the Academy and the State school retained it under a lease until 1866, when by exchange of properties with the owner of the Academy it came into possession of the State. The first session of a University class was held in the building erected by the mechanics of Iowa City; and later it served as a dormitory when, owing to the pranks played there, it was nicknamed the "Old Sin Trap". It was the first hospital building in connection with the medical college and it gave way only for the first wing of the present University hospital, the corner stone of which is the same as that laid fifty-five years before for the Mechanics' Academy. Moreover, a tablet bearing the inscription: "Mechanics' Academy, founded June 14, 1842" is set into the walls of the hospital building.¹⁵

Besides the Mechanics' Mutual Aid Association at Iowa City there were several other institutions of similar character in the State. The Mechanics' Institute at Dubuque was incorporated for the purpose of erecting a building and providing a library for members, each one being held responsible for the performance of contracts which might be made. The Davenport Institute, likewise, was granted the power usually given to institutions for "literary and scientific purposes". The object of the Muscatine Lyceum was the "establishment of a library and scientific apparatus, the cultivation of the arts and sciences and the diffusion of useful knowledge". This lyceum had been in existence for some time prior to its incorporation. The Mount Pleasant Lyceum, incorporated in 1844, had practically the same powers as that at Muscatine, a library and scientific apparatus being the conspicuous features in the proposed equipment. Again, there was the Washington

¹⁵ Aurner's *Leading Events in Johnson County Iowa History*, Vol. I, pp. 152, 249-251.

Lyceum in Jackson County established for the encouragement of "science and literature, the promotion of education, the advancement of knowledge, and the development of worth in the sciences".¹⁶

Perhaps the institution in Iowa corresponding in purposes most nearly to the original mechanics' organizations was the Burlington Mechanics' Institute which was incorporated in 1844. Its objects as set forth in the law were as follows: "to improve the members thereof in literature, the sciences, arts and morals; for the establishment of a library, reading room, cabinets of geological, mineralogical, botanical, and other specimens; to endow and support a school for the education of the children of indigent mechanics and others, and to advance the social, intellectual and moral condition, of its members generally."

Another institution, the Grandview Literary and Philosophical Society of Louisa County, was distinguished by the powers given the executive committee. Unlike the law relating to any other similar institution, the act in this case authorized an assessment of not to exceed five dollars upon each member, for the purchase of "books, maps, charts and philosophical apparatus, for the use of the society". Furthermore, an assessment for support might be included. There were other incorporated lyceums and institutes in Iowa, but only the eight just described seem to have had purposes corresponding to the organizations in New England, and in Old England and Scotland.¹⁷

REASONS FOR DECLINE

The transmitting of information through conversation, address, or lecture was a natural method which had its

¹⁶ *Laws of Iowa*, 1841-1842, pp. 9, 106, 1842-1843, pp. 89-91, 1843-1844, pp. 127, 128, 130, 131.

¹⁷ *Laws of Iowa*, 1843-1844, pp. 72, 95, 96.

origin in remote times. It was adopted by the first organizations which were inaugurated for the mutual benefit of their members. Manuscripts were rare and expensive and the masses were ready to listen to such leaders as were qualified to speak fluently and with some authority. In time, however, printing, a cheap press, and a knowledge of reading altered this situation. People were soon enabled to obtain the sources from which most of the lecturers and instructors derived their information. If the lecturer, therefore, distributed second-hand discoveries he must be very able indeed to make it worth while to listen to him, for it is said that "Ejecting a certain quantity of known matter in the face of an audience is not education".

To be sure, this conclusion did not imply that lectures had no longer a place in the general plan of distributing information; but they were not nearly so effective as a well-organized school system, which was rapidly becoming a recognized necessity. The artisans, it seems, who were identified with the mechanics' institutions soon discovered that they were gaining but little from the lectures offered. Members began to abandon the courses and a mixed constituency of artisans, shop-keepers, and clerks remained to support the lecturers. This mixture produced a variety in the demand, and the continuity of the work was destroyed. Indeed, the lecturers themselves have been described as an "assemblage of professors, conjurers, ventriloquists, and musicians"—a description which seems to correspond very closely to a modern chautauqua.

CLARENCE RAY AURNER

THE STATE HISTORICAL SOCIETY OF IOWA
IOWA CITY IOWA