

CHAPTER ONE

THE VISION OF A NEW EDUCATION

The Industrial Movement Comes to Iowa



The Iowa State College, in its inception, was not "just another college" to promote local aspirations, to satisfy sectarian zeal, or to provide personal gratification. The open prairie site was located only by survey boundaries, the sponsorship and control were wholly public, and the establishment, aside from certain initial local gifts, was financed by state appropriation. There was no benefactor to provide endowment, name, and advice. Motive and purpose were to be found rather in the vision—which Hawkeye reformers shared with those of other states—of a new education for a new age. This vision, though at times blurred, was a true one. Simple and primitive as was the initial organization, undeveloped and halting as was the program, mistaken as were certain of the immediate objectives, here was the pioneer state's response to the most influential movement in modern higher education. For this "Industrial Movement" was an effort to keep education in line with the trend of a democratizing and industrializing nation, by providing a technological training that was popularly available. The ultimate solution was the modern land-grant college of which that of Iowa was to be typical.

A NEW EDUCATION FOR A NEW SOCIETY

Educational extension had been one of the major democratic reforms of the twenties and thirties. Attainments varied as greatly as the forms of organization, but there had come to be a general agreement on underlying principles. The free

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school, the free academy, and the state university were definitely on the way to realization. To complete the system, the chief remaining need was a technological content and method. This emphasis, too, in a tentative way, had its precedents.

From early days the homelier needs and their vocations had not been overlooked. Scientific effort was applied to existence, security, or comfort; there was no time for the luxury of the pure and abstract. Franklin's researches were all directed to such pragmatic ends; his plans of education, and those of his sympathizers like Dr. Rush, included them. Throughout the agitation for free schools earning efficiently was stressed, if not always logically. The Fellenberg manual labor schools joined to their other aims that of agricultural and mechanical skill, and certain of the lyceums were even more directly vocational. The pioneer Rensselaer Institute, kept from being merely another of these visionary ventures by the ability and foresight of its leadership, became a permanent center of technical training, though with its program greatly restricted from the original, over-ambitious design. All of these preliminary efforts but prepared the way for the American phase of the Industrial Movement, which came with the new economic order.

In the two decades before the Civil War, in response to the changing economic scene—the increasing mechanization of farm and factory, the extension of transportation and communication, the growing mercantile and financial complexities, and the rise of a permanent labor problem—there arose a demand for a corresponding change of emphasis in education. Why not, it was demanded, have special training for the farmer and mechanic as well as for white-collared or high-stocked professions and the military establishment? The agitation, scattered at first, developed into a more or less concerted effort corresponding to the parallel European movement. The representatives were nationwide. Agricultural society leaders and journals, North, South, and West, joined agri-

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cultural education to the demand for state and federal boards. Labor mutuals, becoming increasingly class-conscious, gave trade education a leading place on their agenda. Crusaders for women's rights sought to have their cause included though they were usually regarded as embarrassing allies. Some agitators had the breadth of social vision to include all these causes in their schemes of popular education, as Horace Greeley did in his proposed people's colleges and Jonathan B. Turner of Illinois in his industrial university plan.

This great opportunity found the existing collegiate system wholly unprepared. The basic sciences were coming in slowly and on unequal terms, with inadequate equipment and, too often, incompetent instruction. Concessions made here and there to the new trend by chairs of applied chemistry, agriculture, and civil engineering generally alienated the old interests without winning the new. President Francis Wayland's report to the trustees of Brown University in 1850 gave classic statement of the plight of a system that had served the past but was failing to meet the needs of the present and hence was being rejected, as declining enrollments testified.

An enduring but not an immediately felt influence came from a group of American scientists who had studied at European universities. These native research leaders with immigrant recruits laid the foundations in the forties of the Sheffield school at Yale, the Lawrence foundation at Harvard, and of less notable beginnings in certain other institutions. But these early centers of research and advanced study had little contact with the occupational masses, and their leaders were generally not in sympathy with the practical reformers. There was need for reformers, educators, and scientists to unite on a program that, while scientifically sound, would arouse popular interest and thus win public support. So slow and difficult was such a task that of all the state agricultural colleges projected, only one—Michigan—had been actually established when the Iowa legislature passed its founding act.

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FORMATIVE EDUCATIONAL INFLUENCES IN IOWA

Iowa's provision for an agricultural college was one of the modernizing policies that followed the great migration of the middle fifties. Strategy of location on the direct line of westward movement and availability of natural resources had brought statehood to this trans-Mississippi territory before the last fruits of the Northwest Ordinance had been garnered (by the admission of Wisconsin); and these same natural advantages insured cross-state transportation even without hastening subsidies. But the earlier comers were largely pioneer river and timber dwellers—patch-clearers rather than settled farmers. Permanent homemakers and institution builders came with the spectacular rush of settlers in the fifties which was to treble the population by the end of the decade. This migration, mainly from New England, New York, Pennsylvania, and the Old Northwest, with certain special foreign-group settlements, mainly Scandinavian, German, and Dutch, was to bring political and social transformation as well as economic expansion. In the election of 1854 the old Jacksonian control passed to the free-soil interests, who were committed to an extended program of governmental activity. The new constitution followed in 1857 authorizing a banking system and providing permanent location of the capital and of the state university.

Economic life was moving from the extractive and subsistence stages. Improved cattle were being imported. Nursery stock was being adapted and acclimated. Settlements were leaving the forest fringes and moving out boldly to the open prairies. In 1854 the first locomotive was ferried across the river at Davenport, and two years later rail connection had been made with the temporary capital at Iowa City and another line projected between the rivers which was shortly to rescue the college farm from prairie isolation. Local agricultural societies were started in the forties, and in 1853 the

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state society was founded by a group of progressive farmers of the southeastern counties. The first state fair held the following year ranks among the outstanding events in the making of modern Iowa. Another sign of growing agricultural stability was the establishment of the state's first agricultural paper—*The Iowa Farmer and Horticulturist*—at Burlington in 1853. James W. Grimes, who added to his other interests agricultural and horticultural improvement, was a founder of this paper and served as editor until his election as governor. Mark Miller's *Northwestern Farmer* followed at Dubuque three years later.

Other agencies of information and improvement were not lacking. Newspapers multiplied. Of state imprints for 1858 half were educational and fraternal and the rest about equally divided between religion and regional promotion. Hiram Alvin Reid's "Harp of the West; a poem in five parts" showed literary aspiration at least. Historical consciousness at this early stage was indicated by the existence of a Hawk-Eye Pioneer Association, a Pioneer Settlers' Association, and a Plymouth Society. In the "cultural period" of the lyceum, 1855-60, the nation's best talent came to the state. In addition to Emerson, the intellectual sage, and Greeley, the political oracle, there appeared scholars like George P. Marsh, Edwin P. Whipple, and Professor Haddock of Dartmouth, who was heard, no doubt with great profit, on "The Province of History"; reformers like Parke Godwin and Wendell Phillips; and, in lighter vein, readers like Park Benjamin and John G. Saxe.

Home missionary devotion and competitive zeal, which insured the extension and diversification of religious sects, led to an inordinate multiplication of colleges and seminaries. Probably at least a score of these uncertainly classified foundations had reached some stage of existence during the decade, and about a dozen had survived the depression of the late fifties. But however great the initial contribution of the sec-

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tarian groups, the main responsibility for education was early recognized as a public one. The free-school system was on the way to establishment. The Horace Mann-Amos Dean report of 1856 had pointed the way, and the new constitution had given the powers. The State University was opened in 1856 with a federal land grant as an endowment, the promise of the Old Stone Capitol as a home, and a relatively broad curriculum on an elective basis as an intellectual inducement. Even such a liberal program was not sufficiently extended to meet Hawkeye desires. With the prevalent ideas and the special opportunities and interests of the state, industrial education was bound to be urged.

EARLY INTEREST IN TECHNICAL EDUCATION

Schemes for technical education paralleled the history of the territory and the pioneer state. At the session of the Wisconsin territorial legislature held at Burlington in January, 1838, an act of incorporation was passed for the "Davenport Manual Labor College." The design of this institution left nothing to be desired in training for vocation, citizenship, and social adjustment; it aimed to promote "the general interest of education and to qualify young men to engage in the several employments and professions of society, and to discharge honorably and usefully the various duties of life." Lack both of funds and of available students prevented the trial of an enterprise that—even for a manual labor establishment—was most ambitious.

Other projects of the period had the same general aim. In 1842 the Mechanics' Mutual Aid Association of Iowa City organized an academy and erected "the finest school building in all the Territory." The "male department" was in charge of two brothers from Kenyon College, and the "female" was directed by a graduate of Emma Willard's celebrated Seminary at Troy, New York. In addition to the elementary and "cultural" studies the Academy advertised courses in natural

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philosophy and astronomy, natural science, chemistry, surveying, civil engineering, geography of the heavens, and civil and political economy. Although the association assured the public that their institution would be made "one of the best Literary Institutions in the Valley of the Mississippi," the promoters soon lost interest, and the enterprise was abandoned. Similar institutes and instructional "lyceums" were tried throughout the older settled area during this decade. In 1854 the *Dubuque Reporter* referred to a "people's college"—meaning, in accord with current usage, a manual labor institute—as the "highest worldly pride" of a thriving western village. The following year the famous Wittenberg Manual Labor College was started. Western College, a sectarian enterprise, was founded in 1856 with a view to agricultural instruction and student labor. A professor was chosen "to take charge of the college farm, to furnish work to students, and conduct the whole upon scientific principles."

PROPOSALS FOR PUBLIC AID

The idea of public aid for technical training was held from the beginning of statehood. Ten years before the founding of the Agricultural College, January 24, 1848, in the extra session of the First General Assembly a memorial was sent to Congress seeking "the donation of the site and buildings at Fort Atkinson, in this state, together with two sections of land, including the same, which shall form a branch of our state university." The reasons urged provide an admirable statement, for this early period, of the aims and plans of agricultural education. "Agriculture being the leading interest in this state, we desire to elevate the conditions of those who engage in it, to cause it to be regarded as a progressive science; and for this purpose to furnish our young men with the means of combining sound theory with useful observation and experiment. To effect this object we contemplate the early establishment of our agricultural school upon the manual labor plan. . ." The

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location was held to be "one of the finest agricultural portions of the state" and one that would "soon be surrounded with a dense population." The buildings were well adapted to this purpose and would house and provide recitation rooms for from one hundred to two hundred students; with the disbandment of the garrison they would be of little service for any other use.

In the early fifties there was much sentiment for using the university fund for a polytechnic institute that would give special emphasis to agricultural instruction. The *Farmer and Horticulturist* favored such an establishment and in March, 1854, published an elaborate and well-reasoned article, "State University—Scientific and Agricultural School." The writer, George F. Magoun, a graduate of Bowdoin College, was a pioneer religious leader and reformer who was to become the first president of Iowa College at Grinnell. At this time he was both a pastor and a practicing lawyer. The need for scientific training for the farmer, he held, was no longer in dispute—the "good sense of the age" had settled the question. He proposed to submit certain reasons why the university fund should be devoted to this purpose. In the first place, the possible uses of the fund were either a school of applied science or another old-line college. With the latter type the state was adequately supplied by private initiative. "Local and denominational zeal will be likely to supply us with all the Colleges we shall want for fifty years to come. It is a superfluous and needless effort to build another on the basis of the State University Fund."

By reason of this multiplication of local and sectarian foundations he was convinced that a state university could not secure the requisite general patronage from all sections of the state, for, as he quaintly put it, "local or denomination zeal is stronger than State zeal, the latter is a more enlarged and disinterested feeling; and when once the former has the field the latter has small chance." Whatever was to be the ultimate

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organization of the state's higher education, there was the limiting condition that the existing fund, according to the most generous estimate, was inadequate for a "university" of the usual sort but would probably provide adequately for a science school which would be a start toward a true university. With the medical school at Keokuk as the first unit, one of "Sciences and Arts" should now be added. "A Polytechnic School, like that of Paris, would certainly answer better the idea of 'a Universal School' than a mere college." If at first the fund was sufficient for but one chair, he suggested it be that of chemistry applied to the arts, and urged "how much such a professor might do for the State, for the whole State, for our industrial classes—Mechanics, Manufacturers, Machinists, Farmers!" With other states making provision for industrial education, should "Iowa alone be destitute?"

With complacent optimism Magoun was sure that "for a School of the Arts we could obtain men of the very first rank—advanced scholars, lecturers, and demonstrators. The highest minds of the age are enlisted in such enterprises. They could develop the magnificent resources of the State, now sleeping in the soil, and in the minds of our young artisans and agriculturists." The "active or industrial classes" were in the overwhelming majority in Iowa, yet no provision had been made for their special training and uplift. Their opportunity was now at hand: "If they speak, especially if THE FARMERS speak, the thing can be done, and our University Fund saved from being squandered, or from being devoted to ends for which it is inadequate or is not needed." Motivated as it was, in considerable part, by a desire to prevent competition of state with sectarian higher education, the plea was both plausible and realistic.

After such agitation in his paper it was natural that Grimes as governor should support the plan. In his first inaugural address in 1854, he made the recommendation with characteristically logical appeal:

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"I do not believe it to be sound policy to establish a literary institution that shall come into rivalry with the various denominational colleges now struggling into existence. These institutions should be encouraged, and not depressed. They can and will educate the young men who wish to enter the professions of law, physic and divinity. But the State has a greater want, than of lawyers and doctors. She wants educated farmers and mechanics, engineers, architects, chemists, metallurgists and geologists. She needs men engaged in the practical duties of life, who have conquered their professions, and who are able to impart their knowledge to others. She wants farmers who shall be familiar with the principles of chemistry, as applied to agriculture; architects and mechanics, who will adorn her with edifices worthy of so fair a land; and engineers and geologists who will develop her resources, and thus augment the wealth and happiness of her citizens. This want can only be supplied by the establishment of a school of applied sciences. I have no hesitation, therefore, in recommending that the University fund be appropriated to establish a practical scientific or polytechnic school."

In vetoing a bill for an appropriation for the medical college at Keokuk, January 23, 1857, he asserted that the people of the state had the right to expect that the University should "furnish the ground-work of education that is important to the successful prosecution of every trade and profession in life." It has been charged that Grimes as "an eastern man" lacked an appreciation for the western state university type of higher education, but with his rare insight into western ways and problems it may well be that he sensed truly the type of education most needed by the new state. Had funds been available it is very likely that the University would have been organized at this time in accord with the recommendation. Such an early emphasis would not have precluded later development along broader liberal and professional lines as, for instance, the history of the "Illinois Industrial University" has shown. Schemes for an industrial emphasis in the University continued throughout the founding years. Among the bills to establish branches of the University, presented in the Sixth General Assembly, 1856-57, was one for an agricultural school at Delhi in Delaware County, and a member of the

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constitutional convention assumed the offering of agricultural instruction at the University in urging as one of the advantages of locating it within the five-section grant in Jasper County that there would be room for a model farm.

AGITATION FOR AN AGRICULTURAL COLLEGE

In any case, the more ardent industrialists in Iowa, as elsewhere, strongly favored a separate "agricultural college." Suel Foster, the pioneer Muscatine horticulturist, was the earliest and the most persistent champion of industrial education in the state. Foster was a native of New Hampshire and had settled in Iowa a decade before statehood was attained. He belonged to the chronic agitators of the Middle Period and supported many causes, to the good of the community but often to the detriment of his nursery business. He gained a worthy supporter in his educational crusade in 1855 when William Duane Wilson became editor of the *Iowa Farmer*. This veteran journalist—who had curiously acquired his title of "General" from service as general superintendent of lighthouses on the Great Lakes and who was the eldest uncle of Woodrow Wilson—was another who never lacked his causes, and the main one for the next few years was agricultural education. These congenial co-workers, in articles in farm papers and addresses before agricultural and educational gatherings, now and throughout their lives, advocated "practical" agricultural colleges, with farms for demonstration and experimentation and with manual labor required of all students. With the single-mindedness of the devotee they rationalized their scheme to meet all pedagogical and research requirements and to bring solution to all known problems of the country—economic, social, physical, and moral.

Their most specific "Plan of an Agricultural School" was given by Wilson in the *Farmer and Horticulturist* for June, 1856. There were three essential features. A model farm well stocked and equipped would demonstrate the most approved up-to-

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date methods and organization. An experimental farm was essential to test and extend knowledge in the main branches of the occupation. Instruction was to be provided in all the sciences concerned with cultivation and husbandry, namely, in the editor's enumeration, chemistry, meteorology, mineralogy, zoology, animal and vegetable physiology, and veterinary medicine and surgery. Surveying might be added as desirable for a "liberal agricultural education." For all three purposes a museum of agricultural products, a collection of agricultural implements, and a veterinary hospital were necessary. A college thus equipped and with adequate staff, Wilson concluded, would give the most thorough test and the widest dissemination of the information that the Iowa farmer needed. To secure the fullest and most immediate benefit to the occupation, Wilson and his fellow agitators advocated an agricultural bureau to supplement and cooperate with the college.

PRELIMINARY LEGISLATIVE EFFORTS

Such appeals met little direct opposition, but the lack of means, and indifference and prejudice occasioned discouraging delays. Times became so hard that the smallest appropriation seemed a burden. But whether times were good or bad, there was a traditional suspicion of any sort of positive governmental activity. Such an attitude was glaringly reflected in a legislative reaction of this period.

In the first annual report in 1854 the State Agricultural Society appealed to the Fifth General Assembly for a modest yearly support fund of a thousand dollars and for the establishment of a bureau at the capital with a provision for geologists and chemists to investigate, make observations, and consult with farmers on special problems. The resulting achievements in applied science, the petitioners were convinced, would "ultimately lead to the institution of agricultural schools, upon experimental or pattern farms, where the whole circle of the natural sciences will be taught and practically

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applied, without which it is quite safe to say that the highest capabilities of land culture, horticulture, and stock raising can never be elicited." The appropriation was granted, and the Senate passed the bill to establish a bureau, but the action in the House indicated the contempt with which such a function was regarded as well as the lack of belief in public economic aid and supervision of any sort. A member, with as curious as mistaken a sense of humor, moved an amendment that "The Secretary of said Bureau shall at his own expense procure one pair of every kind of animals, and for their accommodation he shall cause to be erected in the forks of the Raccoon and Desmoines, a building similar to Noah's Ark; that he shall also procure one pair of every kind of fowl which shall be permitted to run at large in the State House yard and roost on the trees; *provided* always, the drawer of said Agricultural Bureau shall always be kept a little open for Shanghais to lay in, which eggs shall be preserved and distributed equally amongst the members of the next General Assembly." On the formal roll call the burlesque motion was lost by only nine votes whereupon the bill was laid upon the table. Fortunately, this contemptuous disposal of the measure did not reflect the prevailing sentiment toward policies of agricultural improvement, as the next session was to indicate.

Following endorsement by the State Society at its annual fair in 1856, a measure was introduced in 1857 for "the establishment of a State Agricultural College." The bill passed the House by a vote of thirty-nine to twenty-two, but the Senate amendments of which the House disapproved arrived too late for adjustment at this session. The supporters had the assurance of Governor Grimes that, although he thought such a separate establishment was somewhat premature, he would approve the bill. Legislative victory was now clearly in sight.