

THE FOUNDING OF THE MASSACHUSETTS
AGRICULTURAL COLLEGE:
AN INTERPRETATION

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The purpose of this essay is to explain hypothetically why the Massachusetts Agricultural College was founded in Amherst as a separate *agricultural* college. A few historical facts will help make this query worthwhile. Although various states appropriated the income from the 1862 Morrill grant in different ways, they nonetheless followed a few basic patterns: a group of states such as Kansas and Michigan established new agricultural and technological colleges; others, like Connecticut and Rhode Island, gave the money accruing from the grant to existing institutions for education in agriculture and engineering; still others, notably New York, sustained therewith universities comprising a variety of subjects beside agriculture and the mechanic arts. On accepting the federal gift in 1863, the Massachusetts legislature resolved to divide the proceeds of the sale of the land scrip between the proposed Institute of Technology in Boston and another new college for agriculture and horticulture. As a result, the Massachusetts Agricultural College has become, in the words of President William S. Clark, "the only one in the United States devoted exclusively to the professional education of farmers and gardeners."¹

Why was the Massachusetts Agricultural College founded separately from the Institute of Technology? A few additional facts will further prompt our curiosity. First, taking advantage of the 1862 Morrill

grant, Governor John Andrew advocated, in his official announcement of the federal munificence, a plan to consolidate several existing and new educational and scientific institutions around Boston, thereby producing a grand system of higher education in Massachusetts. These institutions included, as two of the key elements, the Institute of Technology and the Agricultural College, along with Harvard College, the Bussey Institution, and the Museum of Comparative Zoology.² Second, around 1860, the founders of the Institute of Technology and the Agricultural College, William B. Rogers and Marshall P. Wilder, cooperated closely in a largely unsuccessful attempt to create a Conservatory of Art and Science. Indeed, Wilder even served as one of the trustees of the early Institute of Technology.³ In spite of this, the Agricultural College was created independently.

Closely related to this query is another question relative to the location of the Agricultural College: why was it founded in Amherst? For the College trustees' choice of Amherst apparently contradicted one of their fundamental policies. In opposition to Governor Andrew's consolidation plan, they had pronounced a complete separation, requisite of the proposed Agricultural College, from any existing educational institutions. In selecting Amherst in 1864, the trustees located the new College almost adjacent to Amherst College, one of the most established of the colleges in Massachusetts.⁴

In the following, the author will try further to clarify the contour of the two-fold query, as well as to provide a hypothetical explanation to the question, without giving any definitive answer to it. Section I will be for the analysis of the major historical events relative to the founding of the Agricultural College, from Governor Andrew's 1863 address before the Massachusetts General Court through the arguments in the first few Annual Reports prepared by the early presidents of the institution. Section II will be devoted to an interpretation of the

founding of the College in view of the solution of the two-fold query, in which the author will combine some aspects of the College's pre-history and certain neglected portions of its establishment process. In so doing, he would like to produce a viable picture of the institution within the context of the history of higher education of the State in the 1860s.

I

In July, 1862 President Lincoln signed the Morrill Act which gave each state 30,000 acres of public land for each senator and representative in Congress. Twelve such members entitled Massachusetts to land scrip for 360,000 acres which, when sold one dollar per acre, would produce a fund yielding an annual income of around \$18,000.⁵ When he announced his plan relative to the disposal of this grant in January, 1863, Governor John Andrew knew that the munificence from Congress was hardly sufficient, by itself, for maintaining, to say nothing of creating, a full-fledged agricultural college.⁶ (The annual expenses of Harvard University in the mid-1860s were around \$150,000.)⁷ Moreover, such college as stipulated in the Act would entail a recruitment of competent men, as many as twenty of them, perhaps, to fill its chairs. Where would they be found, disconnected from colleges and universities?⁸ In face of these anticipated difficulties, Andrew's logical solution lay in a combination of the congressional grant with the educational and scientific resources, both potential and active, in the State. Specifically, Andrew referred to the projected Bussey Institution for agricultural education in Roxbury with a large endowment which, fortunately enough, "was closely connected with Harvard College and the Lawrence Scientific School." Hence, his plan for a consolidation of the major educational and scientific institutions in

and around Boston, the proposed Institute of Technology, the Museum of Comparative Zoology, Harvard College, the Bussey Institution and other means and instrumentalities accumulated at Cambridge, in view of the realization "in actual experiment the true idea of a University."⁹

In advocating the creation of a grand university, Andrew relatively emphasized agricultural education. As shown in his reference to the proposed Agricultural College as being "devoted to the grandest development of knowledge for agricultural, mechanical and military uses,"¹⁰ he did not neglect other aspects of the project. Nevertheless, Andrew largely conceived the new College in terms of an extension of the scope of practical and scientific training in agriculture. Among others, the mechanic arts and science were subservient to the central purposes. "Although agriculture was the first art invented," he stated, "it must be the last to be brought to perfection, since it requires contributions from every branch of natural science, and aid from every other art."¹¹ In spite of his frequent allusions to agriculture and the mechanic arts, farmers, rather than mechanics, were the major clientele. The institution had to be made the means of "a positive increase of human knowledge in the departments bearing on agriculture and manufactures, and the medium of teaching not only farmers, but those who shall become teachers and improvers of the art of farming."¹² Andrew's proposal for a grand system of higher education in Massachusetts produced an effect of stressing agriculture as the key factor for uniting a variety of educational and scientific elements.

Concerning Andrew's address, three things should be noted. First, he clearly anticipated the scarcity of the congressional grant for the creation, even for the maintenance, of an agricultural college. This perception caused him to oppose any division of the expected fund, as well as to recommend the combination of the grant with the resources of the Bussey Institution and those of other existing institu-

tions. Second, he emphasized education in agriculture at the relative neglect of that in the mechanic art. Third, in his consolidation plan, Andrew automatically settled the location of the proposed Agricultural College: it was to be in or around Boston.

In response to Governor Andrew's proposal, the Joint Committee of the State legislature considered the matter, giving its thought to two major issues: whether to accept the federal offer of the grant, and, given the grant, how to promote therewith education in agriculture and the mechanic arts. As to the former, the Committee endorsed the Governor's position and it recommended that the State gratefully accept the offer as well as comply with the stipulations of the Morrill Act. As to the latter, however, the Joint Committee's ideas differed with those of Andrew. It proposed to establish an independent agricultural college separate from any established institution in the State, and located as distantly as possible from any towns and cities.¹³

Like Governor Andrew, the Joint Committee held a realistic prospect concerning the limited amount of money that would accrue from the Morrill grant. Indeed, it strongly warned against an authorization of any great expenditure of money for whatever educational project before the proceeds from the sale of land were ascertained.¹⁴ The Joint Committee, however, did not share Andrew's emphasis on agricultural education:

"Agriculture," though mentioned first, has no pre-eminence in the law over "the mechanic arts." The terms "agriculture and the mechanic arts," were evidently chosen to represent *all forms of industry*, which, by handicraft and the use of machinery, contribute to the sustenance and comfort of man.¹⁵

Moreover, the Act did not force any state to establish a school or schools after a prescribed model. Given the diversity of industrial pursuits which supported the Commonwealth, it was "extremely un-

wise and unjust for Massachusetts to give the income from this grant, however large or small it may be, an exclusively agricultural direction."¹⁶ Although the State undoubtedly demanded an agricultural school, Massachusetts needed too "a school in which the science of machinery, the science which shall discover and teach how to utilize the exhaustless resources of comfort and wealth in nature, shall be taught."¹⁷

This proposal on two distinct schools for agriculture and for the mechanic arts partly derived from the position taken by the Board of Agriculture in favor of an independent agricultural college. Appearing before a hearing of the Joint Committee, the Board specified four conditions that had to be filled for such a school; 1) the school had to be suitably located from the point of view of soil experimentation; 2) expenses for the board should be small; 3) agrarian youths should be separated from academical ones for the successful prosecution of manual work programs; 4) the school had to be located in a rural locality to prevent youths from the immoral influences of cities.¹⁸ In its opposition to Andrew's plan for consolidation, the Board would decidedly "prefer not to take the Bussey farm, and not to take the two hundred thousand dollars from the Bussey estate . . . but would deliberately prefer to take their portion of the congressional grant alone" ¹⁹ The Board judged that the Bussey farm did not meet the major conditions specified above, and the Joint Committee could not but recommend conclusively that the fund should be "for the purpose of establishing a college of the mechanic arts near Boston, and an agricultural college in some rural district easy of access to farmers."²⁰ One of the resolutions adopted by the Board itself read: "the (agricultural) institution should not be immediately connected with any institution established for other purposes."²¹

Division of the fund, which Andrew and the Joint Committee itself feared, was inevitable. Hence, the Committee recommended

that one-tenth of the entire grant be set apart for the land of the Agricultural College, six-tenths, for the use of the same, and the remainder, or three-tenths, for the use of the Institute of Technology in Boston.²² The division of the Morrill grant, which was relatively small by itself, between the two institutions had made the portion for the Agricultural College even smaller. In any event, financial difficulties were to befall the proposed school.²³

As might be expected, the Charter of the Agricultural College, which John Andrew approved in April, 1863, was devised doubly to safeguard the congressional grant against any misuse at the inception of the College. The Joint Committee seemed to have drafted the Charter with the assumption that the project should be supported, to a considerable extent, by individual citizens, as well as by the Morrill grant. Moreover, the former held the key for a successful launching of the proposed College. For the Charter comprised a section (sec. 6.) which stipulated that one-tenth of the fund, the first substantial gift to the new institution, would not be paid unless "the said college shall first secure, by valid subscriptions or otherwise, the further sum of seventy-five thousand dollars."²⁴

This condition proved almost insurmountable. As stated in the First Annual Report of the Board of Trustees, by January, 1864, "several propositions had been made . . . with reference to the location of the College" and several localities had manifested a liberal disposition with reference to raising and offering funds to aid in the establishment of the institution. None of these, however, had "matured to be the subject of special report."²⁵ By March, 1864, the Board of Trustees sent a petition to the State legislature and insisted that, notwithstanding the sixth section of the Charter, one-tenth of the grant should be realized prior to the security of \$75,000 by individuals or by a community. For land was "necessarily the first object

to be procured.”²⁶ Since the location counted much for the absolute certainty of subscriptions, the State should permit the Board of Trustees to fix the location without prior approval on the part of the legislature. Again, the founding of the College would entail a variety of unexpected expenditures, to say nothing of adequate compensation for able professors. Inasmuch as the legislature had already granted a portion of the income from the congressional gift to the Institute of Technology, another recipient of the Morrill grant, it should transfer immediately the funds to the proposed Agricultural College.²⁷

Partly in reply to the First Annual Report of the Board of Trustees, as well as to its petition, the Joint Committee on Agriculture tried to promote the organization of the College by recommending a few modifications of the 1863 Charter. Entitled An Act Concerning the Massachusetts Agricultural College, the Committee’s proposals included the following; (1) the Board of Trustees be changed to the Massachusetts Agricultural College; (2) the Governor be authorized to transfer one-tenth of the grant to the College; (3) \$10,000 per annum be appropriated to defray the necessary expenses of the College; (4) all money accruing from the remainder of the grant set apart for the College be applied to the payment of the annual appropriation.²⁸ Seen from various angles, the recommendations of the Joint Committee on Agriculture, under the chairmanship of William S. Clark, were most favorable to the Agricultural College.

As the act passed through the State legislature, the two branches introduced a few modifications concerning items (3) and (4) mentioned above. As for the former, the General Court decided to appropriate \$10,000 for the year 1864 only, an amount which, moreover, the College should repay to the State. Similarly, instead of spending money from the fund for annual appropriation, the Agricultural College had to use the same first for the sake of said repayment.²⁹ The passage of

the act partly eased the Board of Trustees' embarkation on the actual founding of the Agricultural College, with special reference to its location. Nevertheless, its stringent financial conditions, especially their gloomy prospects, remained almost the same. It was under such difficult circumstances that the Board selected Amherst as the site for the proposed Agricultural College.

By May, 1864, when the Board of Trustees was finally ready to fix the location, four towns in the State had responded with the \$75,000 which was stipulated in the Charter: Lexington, Springfield, Northampton, and Amherst. Of the fourteen members of the Board who participated in the decision, ten voted for Amherst on the first ballot. Immediately thereafter, the dissenting members changed their preferences to make the vote unanimous.³⁰ In the summer of that year, the Trustees bought a tract of four hundred acres of land in Amherst for the imminent establishment of the proposed institution.³¹

Given the anticipated financial difficulties attending the College's founding, the Board's decision on location was less than understandable. For, of the four towns considered, Amherst was the least satisfactory from this point of view. Prior to the Board's selection of the location, the town of Amherst had been active in promoting the raising of the \$75,000 that would entitle her to offer the site. Unlike Lexington and Springfield, where a few individuals promised to provide necessary funds, Amherst, like Northampton, tried to rely upon popular efforts in this direction. Unlike Northampton however, Amherst decided to obtain up to \$50,000 by taxation, involving every dweller of the town in the endeavor of inviting the Agricultural College.³² Around the beginning of 1864, the town applied for a legislative approval of the taxation of its people for that particular purpose. This ended in failure when, in February, the State legislature rejected the bill for taxation largely because of strong opposition from the repre-

sentatives of Northampton.³³ It was only a few months after the defeat that the Board of Trustees decided to locate the proposed institution in Amherst. Partly because of the Board's decision, Amherst held a few town meetings in July, 1864 and confirmed its adherence to the taxation plan for raising \$50,000 and to make another application thereon to the State legislature. Thereupon, the town of Amherst and the Board of Trustees exchanged two bonds in which fifteen and ten citizens of Amherst signed for \$50,000 and \$25,000 respectively, with the assumption that the former would be raised later by taxation. Governor Andrew and his Council approved these documents as good and sufficient upon which the location of the Agricultural College in Amherst was virtually confirmed.³⁴ In this way, the Board of Trustees selected Amherst not because of financial advantages, but rather, in spite of some financial uncertainties which would result therefrom. Unlike Lexington, Springfield, and Northampton, which had largely secured \$75,000, Amherst was then in a state of detention derived from the legislature's negative reaction to her application. Indeed, in the process of the second application for taxation, there would emerge some 150 remonstrants who opposed taxing a town's inhabitants for a State institution, which rendered the financial promise from Amherst even more vague.³⁵

Whence the Board's selection of Amherst? In September, 1864, in its report to the Governor, the Board of Trustees defined the basic characteristics of the Agricultural College upon which the selection of location was made. Since the State had granted three-tenths of the federal gift to the Institute of Technology, the Agricultural College should be "more especially for instruction in those branches related to agriculture." Moreover, as a state-wide institution, the College would have to be of a higher grade than academies or high schools. This would entail "a corps of professors equal in number and rank to

those employed in other New England Colleges.” The Board’s decision therefore rested upon which location should best guarantee such College “a reasonable prospect of success.”³⁶ According to the Board, Amherst ideally met these requirements in the following way:

(Amherst) offers a varied, fertile, well-watered farm, acknowledged by every one of our board who examined it, to be far superior to any other shown us; an agricultural neighborhood, remote from large towns; proximity to a village which may contribute board and rooms for the students, and to a college, which may unite its funds to ours, to some extent, in the support of teachers, with collections of natural history at our service, unrivalled, in some of its departments, in the country.³⁷

Why Amherst, rather than Lexington, Springfield, or Northampton? The Board of Trustees recognized Lexington as the major competitor of Amherst. Partly due to its proximity to Cambridge (which might extend its help in regard to necessary professors and natural history and other collections), Lexington “had many attractions for most of our number.” Yet, the Trustees found its land poor from the point of view of agricultural education, for it was “naturally hard and ungrateful for labor.” Moreover, the land was “of almost uniform character.” In spite of this, the sight from the proposed site did not show any “compensating charms of grandeur or beauty.”³⁸ Thus, the Board discarded Lexington in favor of Amherst. How did Springfield and Northampton compare with Amherst? As for the former, its farms were as good as those in Amherst. But, Springfield, unlike Amherst, was a “manufacturing rather than an agricultural region.” Furthermore, it was “remote from any literary association which can afford us sympathy or assistance.”³⁹ The isolation from the beautiful village or the town, as well as the poverty of land from agricultural perspectives, prevented Northampton from becoming Amherst’s rival. Moreover,

in the rivalry that then existed between Northampton and Amherst, the Trustees could "better rely upon a cordial cooperation of Amherst College with ours located in Amherst, than at Northampton."⁴⁰

In comparing four towns, the Trustees conspicuously neglected financial factors which held the key for the success in the early efforts to establish a first-rate college. In the evaluation of Lexington, the alleged deficiencies in the farm land, and even in aesthetic elements, constituted the major reasons for rejection. For Springfield and Northampton, the primary cause of their defeat lay in their alienation from literary institutions, more specifically, Amherst College. As might be expected, the Board of Trustees emphasized that the selected site was "so near to Amherst College that we may avail ourselves to some extent of the liberal offers by its trustees, of the use of their valuable libraries and museums, so essential to our success, yet impossible at once to obtain."⁴¹

After thus selecting Amherst, rather than other towns, for purely agrarian or academical reasons, the Board addressed its financial complaints to the Governor and his Council. The annual income of the Agricultural College from the federal grant would not be more than \$8,600; "less than one-half the annual expenses of Dartmouth or Amherst College, about one-eighth the annual expenses of Yale, and about one-seventeenth of the annual expenses of Harvard."⁴² How could the Board of Trustees maintain a college, much less a first-rate college of agriculture? Massachusetts should amply support the Agricultural College, "the child of the Commonwealth," by granting in aid as much as \$50,000.⁴³

In the 1863 address before the State legislature, Governor John Andrew fully argued for a necessary consolidation of existing and new scientific and educational institutions for the purpose of utilizing the Morrill grant wisely. His recommendations were in turn based on his

perception of the absolute scarcity of the federal grant from the point of view of the supply of annual expenses and of adequate academic personnel for an agricultural college. At that time the Board of Agriculture, which largely supplied members of the Board of Trustees, flatly rejected Andrew's plan and strongly advocated the establishment of an agricultural college separated from any collegiate institution. The Board of Agriculture followed this course consciously, even at the cost of financial merits which would have apparently derived from a combination with the Bussey farm. Now, after less than two years, the Board of Trustees claimed something almost diametrically the opposite. Small wonder that Governor Andrew is reported to have been unable to "refrain from reminding the trustees of their impassioned plea for a college independent of any other institution."⁴⁴

Was the Board of Trustees really contradicting its old position? The author believes that the Board in fact was consistent in its attitude, a point on which he would like to elaborate in the following within the broader context of the history of agricultural and collegiate education in nineteenth century Massachusetts.

II

Then what prompted the location of the Agricultural College in Amherst? How did the Trustees select the town somewhat against their earlier assertion of institutional independence? In order to obtain a clue to the query, we would first trace the pre-history of the Agricultural College with special reference to Edward Hitchcock's 1851 report on agricultural schools as well as to the abortive Massachusetts Agricultural School. Second, the author will try to organize some of the neglected aspects of the early history of the College to explain its foundation partly in terms of religious tradition.

The efforts to establish an agricultural school in Massachusetts seem to date back to well before the mid-nineteenth century. However, one of the earliest of such undercurrents surfaced in 1848 when the General Court incorporated "Massachusetts Agricultural Institute" as a private institution. This school was never founded. Two years later, Governor George Briggs organized a Board of Commissioners, including Marshall P. Wilder and Edward Hitchcock, for the purpose of reporting (at the next session of the General Court) "upon the expediency of establishing agricultural schools or colleges." Although nothing substantial ensued, the 1851 report of the Commissioners, largely prepared by President Hitchcock of Amherst, was comprised of guidelines for the later efforts to found the Agricultural College.⁴⁵

Hitchcock's 1851 report combined his observations of agricultural schools in Europe and realistic plans for implementing agricultural education on the college level in Massachusetts. Among the purposes of such education, Hitchcock included the following: "to test the value of supposed improvements in agriculture; to push their researches and experiments into unexplored regions; to improve the husbandry of Massachusetts."⁴⁶ Given these grand purposes, a superior institution for agriculture would be necessary. The college would be comprised of at least six professors, while its supposed clientele would entail as low a tuition as any existing college of the State.

For the Commonwealth, the proposed institution would be costly. Hence, three alternative plans for its organization with decreasing expenditures on the part of the State. The first plan, in which the Commonwealth would assume the sole responsibility at once for the entire system, might cost \$9,200 annually. In the second plan, the proposed agricultural institution should be located "so near some existing literary institution, and that the pupils could attend its scientific lectures and study its collections in natural history." Only two pro-

fessors would be needed, at least temporarily, which would reduce the State's annual expenditure thereon to \$3,800. The third plan, in which a Board of Agriculture was to play the key role, again proposed that the intended school could "be located near enough to some existing literary or scientific institution," bringing down the estimated annual cost for the State to as low as \$2,100.⁴⁷ In the second and third alternatives, Hitchcock had thus recommended establishing an agricultural college in the vicinity of an established literary institution. Ever since the publication of the 1851 report, the Board of Agriculture members, as well as the Board of Trustees, should have known Hitchcock's plans. Nevertheless, the Board of Agriculture rejected this idea in the face of Governor Andrew's consolidation proposals in January, 1863, while the Board of Trustees made recourse to the very same idea in the summer of 1864 when it selected Amherst as the location for the Agricultural College.

In the 1851 report, Hitchcock did not specify the geographical location of the proposed agricultural school. Although he referred to two recent donations for the cause of agricultural education, one at Roxbury (the Bussey Institution), and the other, at Northampton, by Oliver Smith of Hatfield, these did not have any direct bearing upon his proposals. As to the school's location, Hitchcock simply stated that it should "be established somewhere in the State."⁴⁸ The "somewhere" was by no means unqualified, though. For he seems to have precluded certain areas from the beginning. In explaining its curricular structure, he suggested that the addition of a professor of technology would make the institution almost a school of mines, commerce, and manufacture as well. However, inclusion of this element would diversify its aims too much. At least at the outset, even a single professor of technology should not be appointed.⁴⁹ When Hitchcock stated this in 1851, there was no definitive plan of an institute of technology.

Hence, unlike the 1860s, there was no possible division of labor between the two. Given this condition, Hitchcock's exclusion of the technological element signified automatically that the large cities of the Commonwealth such as Boston would not induce the agricultural school as conceived by the Amherst president.⁵⁰

While he thus remained unenthusiastic about technology, Hitchcock recommended that one of the professors might act "as chaplain of the establishment."⁵¹ Although a chaplain for a state agricultural college was not unusual (Pennsylvania Agricultural College, for instance, had annual expenses therefor), Hitchcock's suggestion smacked of his long-held ideas on the relation between scientific pursuits and Christian faith. In one of his systematic expositions of his stand on the subject, Hitchcock had stated that "in truth every fact of inductive science furnishes an argument for theism," and that "every new province that has been explored by the naturalist, only serves to enlarge our conceptions of the Creator's works, and to impress upon us more deeply with their unity and perfection."⁵² He apparently expected the proposed school to reconcile scientific pursuits as applied to agriculture and traditional religious faith.⁵³

This theme of the reconciliation of science and religion reappeared in the major offshoot of Hitchcock's 1851 report. By 1856, the Commonwealth chartered the Massachusetts Agricultural School, consisting of seven gentlemen from eastern Massachusetts led by Marshall P. Wilder. A more immediate predecessor of the Massachusetts Agricultural College, the proposed school aimed to rescue agricultural education from "its neglected condition," and to introduce a training with emphasis on "a combination of the education of the head and of the hands, the practical with the intellectual, by elevating agriculture to the rank of science."⁵⁴ This end-in-view to create a center of scientific agriculture in the State, however, was accompanied by another

aim. For its trustees pronounced that the investigations of the natural laws relative to the vegetable and animal systems and soils would also “demonstrate the wisdom and goodness of that Being who ordained these laws, and endowed man with faculties to discover and use them for the happiness and welfare of his creatures.”⁵⁵

Moreover, on selecting Amherst in the summer of 1864, the Board of Trustees of the Agricultural College partly explained its choice in terms of Edward Hitchcock. Referring to his 1851 report as “the wisest suggestions for the organization of a system at home, that have yet been presented to the public,” the Board bestowed special honors upon “the professor of geology and natural theology” who labored “in the cause of agricultural education” of the Commonwealth. “The memory of this good man a legacy of which Amherst may well be proud,” stated the Board, would “bring blessings upon our institution, should it be there established.”⁵⁶ This was more than a mere eulogy. For Hitchcock’s Amherst attracted the Agricultural College in a vital way.

Originally designed “to fill the gap created by the apostasy of Harvard,”⁵⁷ Amherst College under Hitchcock and immediately thereafter was especially religious-oriented. A series of religious revivals that had surged during the 1840s and 50s firmly re-established Amherst as the bulwark of orthodox faith in Massachusetts.⁵⁸ “These revivals,” one of the students is said to have stated, “stamped upon my mind the conviction that Amherst College believed in the reality of the religion of Christ.”⁵⁹ In this movement on the campus, the scientist-theologian could not but “summon himself and his associates to direct efforts for promoting Christian piety as the highest end and aim of a Christian College.”⁶⁰ Indeed, by 1854, when Hitchcock retired from the presidency, “the defense of Christianity was the prime concern” for Amherst College.⁶¹

Within such a religious atmosphere, Amherst College actually pro-

duced more preachers, both in terms of percentage and absolute number, than any other college in the Commonwealth. The following table shows the change over time in the percentage of ministers created among graduates by Amherst, Harvard, and Williams Colleges respectively:⁶²

	1831-1835	1836-1840	1841-1845	1846-1850	1851-1855	1856-1860	
Amherst	51%	54%	47%	47%	36%	44%	
Harvard	15%		11%		8%		1865
Williams	28%			22%			

In comparison not only with Harvard but also with Williams, Amherst consistently kept a higher percentage during the three decades prior to 1860. Similarly, up until 1860, Amherst created on average 17.5 preachers annually, while Yale sent out 10.3, Middlebury, 7.8, Williams, 7.2, and Harvard, 6.9 ministers per year.⁶³ Although under the Stearns administration the College gradually lost its “original theological character,” of the 1946 members who had graduated from Amherst before 1871, as many as 799 became ordained ministers and 79, missionaries. Seen against these figures, it was apparent that Amherst produced “more preachers than any other American college.”⁶⁴

The propinquity of the Agricultural College to Amherst College, therefore, implied strong influence from a religiously-oriented liberal education of the latter upon the former. The rapid alterations of the early presidents of the Agricultural College, from Henry F. French (Nov. 1864- Sept. 1866) through P. A. Chadburne (Nov. 1866- June, 1867) to William S. Clark (August, 1867-), reflected the gap between the purely agrarian idea and the more liberal one on education. In other words, even though they generally accepted Amherst as the site for the proposed institution, those who promoted the Agricultural

College diverged a little as to the desirable distance between the College and Amherst College. In his emphasis on practical aspects of agriculture, the first president, French, held that old colleges were no longer needed.⁶⁵ On the contrary, he saw it as the imperative of the new Agricultural College to make every graduate “a scientific and a practical farmer.”⁶⁶ Those in favor of a close relationship with Amherst College, including William S. Clark, partly opposed French’s idea.⁶⁷ As could be expected, P. A. Chadburne from Williams College, who replaced French, was definitely inclined to liberalize educational programs in the Agricultural College. Although he placed agriculture at the center of the curriculum, Chadburne interpreted it as a means rather than as an end. He aimed at a liberal education with focus on farming.⁶⁸ In thus emphasising liberal aspects of agricultural education, Chadburne could fully draw up plans of cooperation with Amherst College.⁶⁹

When William S. Clark succeeded Chadburne in August, 1867, the whole circle was completed. A former student and colleague of Edward Hitchcock at Amherst, Clark increasingly appreciated nature from the evangelical point of view.⁷⁰ In the Fifth Annual Report of the Agricultural College, Clark referred to the Botanic Garden as “one of the most attractive as well as instructive features of the College” which represented “efforts to educate in the most thorough manner its students in the delightful occupation of Eden.”⁷¹ Again, dealing with its course of instruction, Clark reported that “on Sunday all are requested to attend church, or Bible class,”⁷² though denominational views were to be avoided. Moreover, his rise to presidency had the effect of making all the members of “the germane Massachusetts Agricultural College . . . virtually Amherst related men.”⁷³ Both practically and philosophically, Clark made the Agricultural College and Amherst College friendly neighbors.

The foregoing might indicate that the founding of the Agricultural

College reflected religious problems in higher education in mid-nineteenth century Massachusetts. As shown in the previous table, during this period, Harvard College became less enthusiastic about preserving traditional faith. Its unitarian president in the 1850s, James Walker, even pronounced "a *living* skepticism better than a *dead* faith, as doing more to agitate and wake up a man's moral nature."⁷⁴ Indeed, Harvard was increasingly geared toward the secular purpose of creating an urban elite-class.⁷⁵ The religious problems involved science which, during the 1850s, polarized into two distinct entities: natural history and natural philosophy. A certain version of the former, catastrophism, vindicated, in a new guise, the Linnaean orders of the kingdom of plants and animals, while natural philosophy, notably experimental physics, interpreted the world from the point of view of its transformation through the application of physical laws. By the early 1860s, the split even produced distinct institutions. Massachusetts witnessed the development of Louis Agassiz's Museum of Comparative Zoology and William B. Rogers' Massachusetts Institute of Technology. The former tried to prove scientifically the authenticity of traditional religious faith by showing orders in the system of existing and extinct animals collected from all over the world. In contrast, the latter tried to help man transform the world around him by systematically training new generations in the application of the established laws of physics.⁷⁶

With its relative emphasis on biological sciences,⁷⁷ the Agricultural College seems to have been much closer to Agassiz's natural history. P. A. Chadburne and William S. Clark had long associated with Louis Agassiz who, in turn, actively supported the founding of the Agricultural College.⁷⁸ Agassiz not only attended the first commencement of the institution in 1871, but also frequently served, as one of the three members of the Examination Committee, on "the examinations conducted publicly in the Agricultural College."⁷⁹

To be sure, the Board of Trustees' selection of Amherst as the location of the proposed school will have to be explained in several, rather than a single, terms. Among others the founders stressed the superior qualities of the soils of Amherst, especially in comparison with those of Lexington. Again, by the summer of 1864, the Board of Trustees had many realistic concerns: staffing, the board for students, and the construction of necessary buildings and facilities. Although the author admits that these were not insignificant, he believes that these were in fact secondary by the side of the following. The real significance of the Agricultural College is that it was to be established, in the center of "a great agricultural region of *native* New England farmers,"⁸⁰ right next to Amherst College, as another bulwark of orthodox faith which would supplement the former to make a distinct center of learning in western Massachusetts.

In February, 1863, in reply to Governor Andrew's address on the Morrill Act, those committed to the proposed Agricultural College asserted its separation from large towns or cities as well as from any established institutions. When they thus stated their position, they anticipated its location in Boston or its vicinity as well as its consolidation with Harvard College and the Institute of Technology. By the summer of 1864, when the Board of Trustees selected Amherst, the circumstances were quite different. Formerly, the proximity to Harvard College and the Institute of Technology signified indifference, or even a sort of antagonism, to orthodox faith, which, they believed, tended to lead to immorality. In contrast, the adjacency to Amherst College meant a protection extended by the guardian of orthodox faith, in addition to a reliance upon its rich academic resources. Governor Andrew might have seen in the promoters' attitude a major shift between 1863 and 1864. The fact, the author believes, was quite contrary. In spite of apparent changes, the promoters of the Agri-

cultural College remained consistent throughout in their search for a religious atmosphere which would conduce agrarian youths to the morality of "native New England farmers." This also explains why the College started, unlike most of those in other states, as an agricultural institution independent from the Institute of Technology in Boston.

One of the early, and perhaps tangential, impacts of the Massachusetts Agricultural College upon the external world was upon Japan through the participation of William S. Clark and William Wheeler in the founding of the Imperial College of Agriculture in Sapporo (1876). Though invited for the promotion of agricultural education, their influence proved strongest in Christianity.⁸¹ Clark decisively helped to create a minor, but very significant, current of Christian liberal thought in the ideas and lives of Kanzo Uchimura and Inazo Nitobe, two of the most unique figures in the modern history of Japan. This outcome was natural when seen against the historical circumstances in which the Massachusetts Agricultural College was founded in Amherst as a purely agricultural institution.

Footnotes

1. W.S. Clark. *Fifth Annual Report of the Trustees of the Massachusetts Agricultural College*. (House No. 30, Jan. 1868), Boston, 1868, p.4. Cf. Earle D. Ross. *Democracy's College: The Land-Grant Movement in the Formative State*. New York, 1969 (1942), pp. 68-85; John S. Brubacher and Willis Rudy. *Higher Education in Transition*. New York, 1968, pp. 159ff; Richard Hofstadter and C. DeWitt Hardy. *The Development and Scope of Higher Education in the United States*. New York, 1952, pp. 38ff.
2. See Section I of this essay.
3. See Act of Incorporation of the Institute of Technology. In *Officers. Extracts from Act of Incorporation. Objects and Plan. By-laws*. Boston, 1862; *Objects and Plan of an Institute of Technology*. Boston, 1860, p. 29; *An Account of the Proceedings Preliminary to the Organization of the Massachusetts Institute of Technology*. Boston, 1861, pp. 8-9; Harold W. Cary. *The University of Massachusetts: A History of One Hundred Years*. Amherst, 1962, p. 16.
4. See Section I of this essay.
5. For the stipulations of the Land-grant of 1862, see "Circular from the Land Office, May 4, 1863." and "An Act donating Public Lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and the Mechanic Arts." In *Scrip for Agricultural College* (House-No. 6, Jan. 1864), pp. 4-9.
6. See *Address of His Excellency John A. Andrew to the Two Branches of the Legislature of Massachusetts, January 9, 1863*. Boston, 1863, p. 54.
7. See *Second Annual Report of the Massachusetts Agricultural College*. (House-No. 8, Jan. 1865), p. 7.
8. See *Address of . . . John A. Andrew . . .* p. 54.
9. *Ibid.*, p. 56.
10. *Ibid.*, p. 64.

11. *Ibid.*, p. 50.
12. *Ibid.*, p. 51.
13. See *Report of the Joint Special Committee*. (Senate-No. 108, Mar. 1863), pp. 29-30.
14. See *Ibid.*, p. 5.
15. *Ibid.*, p. 6.
16. *Ibid.*, p. 7.
17. *Ibid.*, p. 8.
18. *Ibid.*, p. 17.
19. *Ibid.*, p. 18.
20. *Ibid.*, p. 20.
21. *Ibid.*, p. 18.
22. See *Ibid.*, p. 30.
23. *Minority Report* by William D. Swan also repeatedly pointed to the scarcity of the congressional gift for an agricultural college. See *Ibid.*, pp. 44-47.
24. An Act to incorporate the Trustees of the Massachusetts Agricultural College. (Senate-No. 156, April, 1863), p. 6.
25. *First Annual Report of the Board of Trustees of the Massachusetts Agricultural College*. (House-No. 11, Jan. 1864), p. 2.
26. Petition of the Board of Trustees to the Senate and House of Representative, in General Court assembled. (House. No. 179, Mar. 1864), p. 2.
27. See *Ibid.*, pp. 4-5.
28. See *Report of the Joint Committee on Agriculture* and An Act concerning the Massachusetts Agricultural College. (House-No. 200, Mar. 1864), pp. 3-6.
29. See An Act concerning the Massachusetts Agricultural College. (Senate-No. 233, April, 1864), p. 3.
30. See *Agricultural College*. (Senate-No. 172, April, 1865), pp. 3-4.
31. See *Report of the Committee on the Judiciary on the Petition of the Selectmen of the Town of Amherst*. (House-No. 125, Mar. 1865), p. 4.
32. See *The Petition of the Town of Amherst, for Authority to Raise*

- \$50,000 for the Massachusetts Agricultural College.* Boston, n.d.
p. 3.
33. See *Ibid.*, p. 4.
34. See *Report of the Committee on the Judiciary . . .* pp. 4-5; *The Petition of the Town of Amherst . . .* pp. 4-5.
35. See *Ibid.*, pp. 8 and 13.
36. See *Agricultural College.* (Senate-No. 172), pp. 3-5.
37. *Ibid.*, p. 9.
38. *Ibid.*, pp. 9-10.
39. *Ibid.*, p. 10.
40. *Ibid.*
41. *Second Annal Report of the Massachusetts Agricultural College.*
pp. 4-5.
42. *Ibid.*, p. 7.
43. *Ibid.*, p. 8.
44. Cary, *op. cit.*, p. 28.
45. See *Ibid.*, Chapter 1; L.B. Caswell. *Brief History of the Massachusetts Agricultural College.* Springfield, 1917, pp. 1-2.
46. *Report of Commissioners concerning an Agricultural School.*
(House-No. 13, Jan. 1851), p. 76.
47. See *Ibid.*, pp. 81-87.
48. *Ibid.*, p. 78.
49. *Ibid.*, p. 81.
50. The Lawrence Scientific School of Harvard had its professor of engineering from 1849. See *Catalogue of the Officers and Students of Harvard College for the Academical Year, 1849-50.* (Second edition), 1849.
51. *Report of the Commissioners . . .* p. 80.
52. Edward Hitchcock. *The Highest Use of Learning: An Address Delivered at His Inauguration to the Presidency of Amherst College.* Amherst, 1845, pp. 21, 28-29.
53. It should be noted that Hitchcock's views of the relation between science and religion underwent major changes in the course of his life. Again, he did not see (late in his life, at least) any necessary

- connection between religion and agriculture itself. See Richard M. Foose and John Lancaster. "Edward Hitchcock: New England Geologist, Minister, and Educator," *Northeastern Geology*, Volume 3, Number 1, 1981, pp. 13-14; Edward Hitchcock. *Reminiscences of Amherst College*. Northampton, 1863, p. 368.
54. *Massachusetts School of Agriculture*. Boston, 1858, (A pamphlet prepared by its trustees), p. 2.
55. *Ibid.*, p. 4. The new version of the pamphlet which appeared in 1862 slightly modified the expression around the end of the sentence. The new one read like the following: ". . . and endowed man with faculties to discover and use them for his own happiness and the welfare of others."
56. *Agricultural College*. (Senate-No. 172), p. 11.
57. Thomas Le Duc. *Piety and Intellect at Amherst College: 1865-1912*. New York, 1946, p. 4.
58. See W.S. Tyler. *History of Amherst College During Its Half Century: 1821-1871*. Springfield, Mass. 1873, Chapters XVIII and XXI.
59. *Ibid.*, p. 354.
60. *Ibid.*, p. 344.
61. Le Duc. *op. cit.*, p. 9.
62. See Hitchcock. *Reminiscences of Amherst College*. p. 189; Colin B. Burke. *American Collegiate Populations: A Test of the Traditional View*. New York, 1982, p. 141; Frederick Rudolph. *Mark Hopkins and the Log: Williams College, 1836-1872*. New Haven, 1856, p. 127.
63. Claude Moore Fuess. *Amherst: The Story of a New England College*. Boston, 1935, p. 35.
64. *Ibid.*, p. 170.
65. *Third Annual Report of the Massachusetts Agricultural College*. (Senate-No. 39, Jan., 1866), p. 3.
66. *Ibid.*, p. 12.
67. See Cary. *op. cit.*, p. 30.
68. See *Fourth Annual Report of the Trustees of the Massachusetts Agricultural College*. (Senate-No. 39, Feb., 1867), pp. 6-8, 15.

69. See *Ibid.*, pp. 11-12.
70. Cf. Le Duc. *op. cit.*, pp. 80-81.
71. Clark. *Fifth Annual Report . . .* (House- No. 30, Jan., 1868), p. 11.
72. *Ibid.*, p. 12.
73. Cary. *op. cit.*, pp. 36-37.
74. James Walker. *Reason, Faith, and Duty*. Boston, 1890, p. 100.
75. See Ronald Story. *The Forging of an Aristocracy*. Middletown, Conn., 1980.
76. See my *The Two Sciences and Religion in Anti-Bellum New England: The Founding of the Museum of Comparative Zoology and the Massachusetts Institute of Technology*. Ph. D. diss., Univ. of Wisconsin, 1978. Especially chapters VII and VIII.
77. Of three science faculty of the early Agricultural School, two, Clark and Stockbridge, were botanists and agriculturalists.
78. See Cary. *op. cit.*, p. 32-33.
79. *Ibid.*, pp. 42 and 50. See also *Fifth Annual Report of the Trustees . . .* p. 18.
80. *Agricultural College*. (Senate-No. 172), p. 10. Emphasis added.
81. See Yuzo Ota ed. *Clark no Ichinen*. Kyoto, 1979.

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