

A Land-Grant University

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The logo consists of a solid black square with the word "CORNELL" written in white, uppercase, serif font, centered within the square.

CORNELL

SPECIAL TOPIC

THE LAND-GRANT UNIVERSITY

Cornell's founding in 1865 as New York State's land-grant university came at a unique confluence of four currents that swirled through the middle of the nineteenth century:

- a desire to reform higher education—broadening its focus and reach, increasing its flexibility, and releasing it from sectarian influences;
- a federal government that was cash poor but land rich, paying its debts and providing societal inducements by giving away public land;
- a state government with a history of providing limited support to private institutions of higher education prior to the emergence of state universities and systems; and
- a set of self-made philanthropists, including Ezra Cornell, who rose to a position of wealth and determined to reinvest some of those riches to benefit the common good.

The educational reforms, radical and controversial in their day, have since become the norm. While the financial circumstances of the federal and state governments have changed, both still devote significant resources to education. And the cycle of philanthropy endures at Cornell. Alumni and friends continue to provide substantial support for this institution. Still, it is worth reflecting on these generative forces, given the indelible mark they made on Cornell University's organization and character. To do so is to revisit what it means to be a land-grant university, what special mandate was conferred by that appellation, and how Cornell evolved into a premier liberal arts institution while remaining true to that land-grant spirit.

Educational Reform

The movement to reform higher education had several threads. First and foremost was the drive to create a new form of education that would provide instruction more in tune with the interests of the populace at large. Until the middle of the nineteenth century, higher education had been dominated by small, sectarian colleges where the curriculum, to quote Morris Bishop, "consisted of Latin, Greek, and mathematics, moral philosophy and Christian Evidences, and timid excursions into very elementary

science. The chief purpose of higher education was taken to be the disciplining of the mind, with some regard for the professional training of the clergy." For more than a hundred years there had been sputtering attempts to expand this curriculum. Then, in 1850, a Yale-educated scholar, Jonathan B. Turner, presented a blueprint for an entirely new form of higher education, making several arguments and proposals.

- American society of the time could be roughly divided into two classes, the *professional* class ("whose proper business it is to teach the true principles of religion, law, medicine, science, art, and literature") and the *industrial* class ("a much larger class, who are engaged in some form of labor in agriculture, commerce, and the arts").
- While the existing colleges served well the needs of the professional class, there was no system of colleges designed to support the educational needs of the industrial class.
- Higher education for the industrial class should be modeled after that given to the professional class, but tailored to a different need.
- This education should be based on science, intermingled with classical subjects. Key to a science-based curriculum would be "a National Institute of Science, to operate as the great central luminary of the national mind...."
- Access to these universities would be very broad. "The institution should be open to all classes of students above a fixed age, and for any length of time, whether three months or seven years, and each taught in those particular branches of art which he wished to pursue, and to any extent, more or less."
- These universities would be publicly financed but not under direct control of the executive and legislative branches of government. Instead, a set of trustees would direct these institutions, and "this board...would be...responsible to no legislature, sect, or party, but directly to the people themselves—to each and every citizen...."

This bold plan formed the basis, in language as well as detail, of the land-grant act passed by Congress twelve years later. The prime focus was to be agriculture and the mechanical arts—areas that had been largely ignored by traditional colleges. Such an agenda should come as no surprise. Agriculture was America's prime economic endeavor in the 1850's, and the Industrial Revolution had brought forth a

veritable cornucopia of mechanical devices—railroads, telegraphs, plows, harvesters, presses, firearms, steamboats, indoor plumbing—that transformed manufacturing and forever changed domestic life.

- According to the 1850 census, over half of America’s labor force was engaged in agriculture. (See table below.) Combined with manufacturing, almost 70 percent of all employable individuals were directly involved in “agriculture and the mechanic arts.”
- That same census showed that the value of agricultural products totaled \$1.327 billion in 1850, while products derived from manufacturing, mining, and the mechanical arts came to \$1.013 billion. Together, they accounted for over 80 percent of the gross national product.

There had been several attempts in New York State to create a college adapted to the concepts eventually articulated in Turner’s plan.

- A proposal was made in 1822 to introduce a course at Geneva College (Hobart) “by which the Agriculturist, the merchant, and the mechanic may receive a practical knowledge of what genius and experience have discovered, without passing through a tedious course of classical studies.” This proposal was never set in motion.
- In 1853, the People’s College, which was incorporated in what is now Montour Falls, pledged to “the dissemination of practical science, including chemistry, geology, mineralogy, and those sci-

ences most immediately and vitally essential to agriculture and the useful arts, and to make ample provision for instruction in the classics.” This college never fully developed because its primary benefactor, Charles Cook, withdrew his financial support.

- Also in 1853, a state charter was obtained for the Ovid Agricultural College. The college launched classes in 1860 but had to suspend them due to a loss of faculty and students, who enlisted to fight in the Civil War. Ezra Cornell became an *ex officio* trustee of the institution when he was elected president of the New York State Agricultural Society. While a trustee, Cornell identified the need for “a suitable provision of our country for the education of young men in agriculture and the mechanic arts.”

Open Access

A second reform was the opening of higher education to more than just America’s wealthy and elite. While Jonathan Turner’s proposal explored this concept from a class point of view (wealthy men versus poor men), women and minorities were largely excluded from higher education at the time. Several experiments in women’s higher education prior to 1865 included Emma Willard’s Troy Female Seminary, Mount Holyoke, Elmira College, and Vassar College. Also, Oberlin and the State University of Iowa were coeducational.

- In 1819, Emma Willard promoted her vision for a new form of publicly supported women’s education by publishing *A Plan for Improving Female Education*. She argued that “a reform, with respect to female education, is necessary; that it cannot be effected by individual exertion, but that it requires the aid of the legislature....”
- Proponents of higher education for women at the time had to advance their ideas carefully in a male-dominated society. For example, in defense of her Mount Holyoke Female Seminary project, Mary Lyon wrote in 1836 that it would be “desirable that the plans related to the subject should not seem to originate with us but with benevolent *gentlemen*. If the object should excite attention there is danger that many good men will fear the effect on society of so much female influence and what they will call female greatness.”

Labor Force and Employment by Industry 1850 Census, United States

(over the age of 10, free and slave)

	Labor Force	Percent of Total
Agriculture	4,520,000	54.9%
Construction	410,000	5.0
Domestics	350,000	4.2
Fishing	30,000	0.4
Manufacturing	1,200,000	14.5
Mining	102,000	1.2
Ocean Vessels (transport)	135,000	1.6
Railway (transport)	20,000	0.2
Teachers	80,000	1.0
Trade	530,000	6.4
Unemployed	<u>873,000</u>	<u>10.6</u>
Total Labor Force	8,250,000	100.0

The driving force that created better education for women was not fair play but economics. As states in the first half of the nineteenth century began to mandate primary public education, they found a dearth of well-educated teachers. Men were not always drawn to the profession. The pay, working conditions, and community status were often low. Women were recruited to fill the gap, and the new women's seminaries and other institutions trained them. However, this form of education was narrowly defined; women were not yet on par with men in their ability to access the full range of what higher education offered.

Higher education for minorities was almost nonexistent prior to the Civil War. The few examples include:

- The New York Central College, where one-half of the student body of was comprised of black students. This institution—located in McGraw, New York and sponsored by abolitionists—also had at least two minority faculty members.
- Bowdoin and Oberlin Colleges, which both admitted black students sporadically through the 1830's.

Both of Cornell's primary founders were much in favor of extending higher education's benefits to women and minority students.

- As a state senator, Ezra Cornell supported one of the bills involved in the chartering of Vassar College in 1862, and sent his daughter there in 1866.
- In 1862, Andrew D. White (who would eventually become Cornell's first president) wrote that it was his aim to help found "a new university, worthy of our land and time." The first principle governing this institution would be that it would be "a place where the most highly prized instruction may be afforded to *all*—regardless of sex or color." He further noted that to "admit women and colored persons into a pretty college would do good to the individuals concerned; but to admit them to a great university would be a blessing to the whole colored race and the whole female sex—for the weaker colleges would be finally compelled to adopt the system."

The Elective System

The third educational reform focused on relaxing the rigid and restrictive collar that had dominated the classical curriculum of most colleges by the 1850's.

- The spirit of a more liberal approach to higher education's curriculum sprang from the Enlightenment of the eighteenth century, when several colleges—including King's (Columbia), Yale, William and Mary, and the University of Pennsylvania—encouraged the study of the natural sciences and a more open look at history. According to Carl L. Becker, "the liberal movement...had largely spent its force before the end of the century. This was partly because the revolutionary war had weakened and impoverished the colleges as well as the country; but chiefly because the revolutionary upheaval, especially in France, had discredited the liberal philosophy of the pre-revolutionary period."
- The first half of the nineteenth century found most colleges, even those that had experimented with a more progressive curriculum, reverting to conservative approaches. At issue, Becker wrote, was "the traditional conception...of the purpose of learning and the function of colleges in the community...to preserve and transmit rather than to increase knowledge; and more especially to prepare a select group of young men, taken for the most part from the educated and governing classes, for the learned professions by giving them a limited command of the classical tongues, and transmitting to them the factual knowledge and ideas about man and the world...."
- The drive to reform the curriculum came from European and American scholars who had been trained in Germany and France, where liberal ideas and modern science were taking hold. As Becker noted, some were "interested in expanding the American college into centers of research and publication" while others wanted to liberalize "the course of study in the college itself, by giving more time and attention...to the modern languages, history, civil and constitutional law, and those physical sciences that have a practical application to the useful arts and trades."
- White was one of these scholars, energized by his studies abroad and excited by students' free election of courses. As Bishop noted, he "had seen free election [*Lernfreiheit*] in successful operation in Paris and Berlin and a marked loosening of the curriculum at Michigan," where he taught before coming to Cornell. Later, in his plan for the organization of Cornell University,

White would observe that “the usual imposition of a single fixed course is fatal to any true university spirit in this country; it cramps colleges and men....” Thus, White and others (primarily Charles W. Eliot, then the president of Harvard) began the process that brought about the elective system, whereby each student would chart a course of study that was particularly suited to that student’s needs and desires.

Nonsectarianism

The fourth higher education reform—freeing it from sectarian influences—was interwoven with the third. Today, nonsectarianism is associated with the absence of a particular religious alignment. In the mid-1850’s, however, nonsectarianism meant having no religious alignment among the various Christian faiths.

- The most obvious evidence of sectarianism took the form of divinity schools at various private colleges, each designed to educate ministers in a particular faith. Also, churches provided endowments for some colleges, and church members were often *ex officio* members of trustee boards.
- While the end of the eighteenth century saw a loosening of the church-college tie, private higher education remained Christian endeavor primarily. Perhaps the most revolutionary change occurred in 1779 at William and Mary College when the chair of divinity was eliminated because, as James Madison said, “an establishment in favor of any particular sect was thought to be incompatible with the freedom of a republic.”
- The creation of a number of state universities continued this trend as these institutions sought to maintain the constitutionally mandated separation of church and state.
- According to Morris Bishop, Ezra Cornell “was roundly accused of atheism.... The religion that Ezra Cornell made for himself was an uncritical deism, which dispensed with sin, the atonement, all formal Christian theology.” Ezra took a particularly dim view of organized religion. “The gospel as it is preached,” he wrote, “...falls more like a mildew upon a benighted world, and tries to shield the deformities of the dead and putrid carcass of ‘the Church’ from the penetrating eye of advancing science and enlightened humanity.... The steam engine, the railroad and the

electric telegraph are the great engines of reformation, and by the time we enter upon the twentieth century the present will be looked back to as we now look back to the dark ages.... A new era in religion and humanity will have arrived.”

- “A truly great university” was needed, White wrote in 1862, “to afford an asylum for Science—where truth shall be sought for truth’s sake, where it shall not be the main purpose of the Faculty to stretch or cut science exactly to fit ‘Revealed Religion.’” Further, such a university would “give a chance for instruction in moral philosophy, history and political economy unwarped to suit present abuses in politics and religion.”

Federal Land Policy

When the land-grant act was passed in 1862, the federal government had just instituted the first general income tax to help pay for the Civil War. Thus, the government was not well disposed toward funding a seed-grant effort to encourage the states to undertake a particular form of education. But as strapped for cash as it was, the nation was land-rich. The bounty derived from the Louisiana Purchase and other territorial negotiations with foreign governments had provided the United States with a huge reserve of public land under the federal government’s control. Accordingly, the nation looked to its “land bank” when it needed to discharge a particular debt.

- The first such land grants occurred with the Land Ordinance of 1785, which required that a portion of every new township created from public lands be set aside for maintaining an elementary school. The Northwest Territory Ordinance of 1787, which created a similar scheme for higher education, soon followed.
- According to Roger L. Williams, Congress altered this system slightly in 1836, “authorizing one township for establishment of a ‘seminary of learning’ within a given territory, and one other for the establishment of a first state university within any given state. The result was that the location of the seminary of learning often became the site of the first state university.”
- During the nineteenth century, the federal government routinely provided pensions for military volunteers of various wars in the form of land grants that could be converted to cash by being

- sold to speculators on the open market.
- To induce railroad companies to expand rail service in the West and to further aid in the settling of new territories, the government gave away vast amounts of public land.

Thus, the land-grant act that sparked Cornell's creation followed a well-established pattern of federal "granting" and inducement.

New York State and Higher Education

Historically, New York State was slow to assume direct responsibility for public higher education. For most of its history, the state left the business of post-secondary education to private institutions (with the exception of the state's normal schools, which were devoted to the specialized training of teachers). Even after the State University of New York (SUNY) was formed in 1948, state leaders wove this historical precedent into the state's education laws.

In the formulation of plans and recommendations under this article the state university trustees and board of regents shall recognize and foster the historical development of higher education in the state which has been accomplished through the establishment and encouragement of private institutions. [Education Law, sec. 351.]

New York had always managed to live with a very permeable boundary between public policy and private initiative.

- Long before the formation of SUNY, the state provided financial assistance directly to selected private institutions, although such support was sporadic and did not follow from an established policy. Private colleges that received such support from the eighteenth century up to the time of the Civil War included Kings (Columbia), Union, Hamilton, Geneva, Madison, St. John's (Fordham), Rochester, St. Lawrence, Elmira, and Genesee.
- Up to the time of the Civil War, the state provided outright grants to educational institutions. Beginning in the 1860's, however, these awards took the form of quid pro quo agreements, where the recipient institution was expected to contribute in some way as part of a joint enterprise (e.g., capital projects, where the institution was expected to raise matching funds, or operational grants, where the institution had to provide free scholarships to state residents).

- Support also took the form of extending credit to private educational institutions. Prior to 1846, the approach to such credit was quite liberal. However, several nineteenth century New York State constitutional conventions limited this activity, while making a specific exception for funds for nonsectarian educational purposes.

As New York State became the recipient of the proceeds from the land-grant act, its political leaders crafted a "New York solution" in answer to the question of how to handle the grant, imbued with this historical approach.

Philanthropy for the Common Good

Cornell University's founding depended totally on the philanthropy of several men. First among these was Ezra Cornell.

- Cornell was born in a family of modest means and spent a fair amount of his life trying to improve his economic condition. Through a combination of hard work and serendipity, he became connected with the installation of the emerging telegraph system. According to Becker, Cornell became wealthy in spite of himself for "the telegraph business turned out to be something very near a complete failure while [he] was actively engaged in promoting it, and became a phenomenal success only after he had retired from active connection with the enterprise." That retirement came when Western Union Telegraph Company bought out his business interests and left Ezra with significant shares in the new company. As those shares grew in value, Ezra found himself the recipient of a "golden stream." For example, his 1864 second-quarter stock payment was \$35,000 (roughly \$700,000 in today's dollars).
- He then faced an interesting dilemma—what to do with his excess wealth? As he wrote, "My greatest care now is how to spend this large income to do the greatest good to those who are properly dependent on me, to the poor and to posterity." Eventually, he would donate a substantial portion of his wealth to found Cornell University and would devote his final years to the cause of launching and stabilizing its wobbly beginnings.

Other founders who gave freely to Cornell included

John McGraw, Henry William Sage, and Hiram Sibley.

- According to Bishop, McGraw, who was born in Dryden Township near Ithaca, “began dealing in timber from the newly cleared countryside. The Lord prospered him. In partnership with Henry W. Sage, he bought and lumbered great tracts of land in New York, Michigan, and Wisconsin.” He participated in the founding of Cornell, donated the funding for McGraw Hall, and when the university faced potential bankruptcy in 1872, he and others advanced the funds needed to keep the institution afloat. (See page 16.)
- Sage started out as a merchant, then he joined McGraw as a partner in the lumber trade. White called him “the second great benefactor of this institution,” and Sage provided the funding to construct both Sage Chapel and Sage Hall, endowing the latter as Sage College. This college was to be, in Sage’s own words, the means by which “instruction shall be offered to young women by the Cornell University, as broad and as thorough as that now afforded to young men.”
- Sibley was an instrumental partner in the rise of Western Union Telegraph. Among other gifts to the university, he endowed the Sibley College of Mechanic Arts, providing funds for construction and ongoing support.

The Land Grant

The land grant that catalyzed the formation of Cornell was nothing more than a gift of the economic value of federal public lands by the federal government to the state governments. Land was simply the currency of the gift. The federal government could have made an outright grant of cash or even the mineral rights to the land. Had the latter occurred, Cornell and other land-grant institutions might have been called the “mineral-grant” colleges. In fact, one of the most valuable assets that Cornell received from the land grant was timber rights.

Justin Smith Morrill, a United States representative from Vermont, set the land grant in motion in 1857 when he introduced a bill to help higher education. The purpose of the bill was to provide for:

...the endowment, support and maintenance of at least one college in each state where the leading object shall be, without excluding other scientific or classical studies, to

teach such branches of learning as are related to agriculture and the mechanic arts, as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.

The bill had a bumpy ride through Congress, due mainly to sectional squabbles among representatives of the northeastern, southern, and western states. (Northeastern states were in favor of land grants as public policy, southern states mistrusted the motives of northeastern states as power-grabbing, and western states objected to the federal dominance of their territories.) The bill was eventually passed but then was vetoed by President Buchanan, who objected that it was too expensive, potentially unconstitutional, and might serve to confuse the federal-state relationship. Representative Morrill bided his time and reintroduced essentially the same bill in 1862. With the onset of the Civil War, many of the southern states were no longer represented in Congress and the bill was again passed but with stronger support. President Lincoln signed the measure on July 2, 1862. The act had the following provisions:

- Each state was to receive 30,000 acres of public land within its boundaries for each of its congressional senators and representatives. The land could be located, claimed, and sold for cash, which was then to be invested to create a permanent endowment to support higher education. If the state had no public land or if it had an insufficient amount, it would be given an equivalent amount of land scrip. The scrip could be sold on the open market to realize the value of the land. (The going rate for such land was \$1.25 per acre.)
- All management and investment expense had to be borne by the state, and not from the proceeds of the land sale. The endowment created had to be invested at a rate of not less than 5 percent, and the state had to make up any investment shortfall and replace any lost principal.
- Proceeds from the endowment, which could not be used for “the purchase, erection, preservation, or repair of any building or buildings,” had to be made available for:

...the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may

respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.

The inclusion of “military tactics” was in response to the dearth of qualified Union officers to fight in the Civil War.

- Each state and territory had two years to accept these conditions and five years to complete its sale and fund at least one college in the state with this mission. (These time limits were extended after the Civil War to allow all of the states to participate in the program.)
- Land grant designations eventually went to 17 institutions in existence in 1862:
 - five private (Brown, MIT, Rutgers, Vermont, and Yale);
 - eight state (in Delaware, Florida, Georgia, Louisiana, Minnesota, Missouri, Tennessee, and Wisconsin); and
 - four agricultural colleges (in Iowa, Maryland, Michigan, and Pennsylvania).
- Between 1862 and 1879 twenty-six land-grant institutions were founded:
 - one private (Cornell);
 - eleven state (in Arkansas, California, Illinois, Kentucky, Maine, Massachusetts, Nebraska, Nevada, New Hampshire, Ohio, and West Virginia);
 - eight A&M colleges (in Alabama, Colorado, Kansas, Mississippi, Oregon, Texas, and Virginia as well as Purdue in Indiana); and
 - six separate black colleges (in Alabama, Arkansas, Kentucky, Mississippi, Missouri, and Texas).
- The 1862 Morrill Act allocated 17.4 million acres of land, which when sold yielded a collective endowment of \$7.55 million. By comparison, the Homestead Act (also passed in 1862) allocated 288 million acres to promote the settlement of the South and West, the various railroad acts provided about 143 million acres to encourage the construction of rail lines across the continent, and military bounty grants to veterans totaled 61 million acres. Altogether the federal government gave away about 1.14 billion acres of its 1.4 billion acres of public land during this period.

The Founding of Cornell University

New York State formally accepted the conditions of the 1862 Morrill Act on May 5, 1863, and work commenced immediately to make use of it.

- New York, as the most populous state, received one-tenth of the total grant—about 990,000 acres in the form of scrip. If it could have been sold at \$1.25 per acre, the land scrip could have yielded an endowment with a principal of \$1.24 million and an annual payout of \$61,875.
- Already, advocates of the state’s twenty colleges were busy vying for this new funding. Chief contenders for the land grant were the People’s College and the Ovid Agriculture College. The People’s College won out and was authorized to receive the grant, provided it met certain state-imposed requirements.
- In November 1863, both Ezra Cornell and Andrew D. White were elected as state senators. As it did not appear that the People’s College would ever meet the terms to obtain the land grant, Cornell introduced a bill to split the grant between that institution and the New York Agriculture College (of which he was a trustee). Senator White, who was opposed to dividing (and diluting) the land grant, bottled up the bill in committee. Cornell invited White to a trustee meeting of the New York State Agriculture College in September 1864, at which Cornell announced his intention to donate \$300,000 and a working farm to the College if the trustees would relocate it to Ithaca. “I persisted in my refusal to sanction any bill dividing the fund,” he later said, “declared myself now more opposed to such a division than ever; but promised that if Mr. Cornell and his friends would ask for the *whole* grant—keeping it together, and adding his three hundred thousand dollars, as proposed—I would support such a bill with all my might.”
- During a chance meeting with White in January 1865, Cornell observed that he had about half a million dollars more than his family would need and wanted to do something beneficial with it for the state. White advised him “to establish or strengthen some institution of higher instruction.” White envisioned an institution where scientific and technical education would be married with studies in history and literature. As the two refined their plans, Cornell increased the size of his gift offer from \$300,000 to \$500,000.
- On February 7, 1865, White introduced a bill “to establish the Cornell University, and to appropriate to it the income of the sale of public lands

granted to this State.” The institution was to be nonsectarian and have a mixture of private individuals and public officials as trustees. The chartering of the institution was dependent on Cornell making his gift of \$500,000. The university had to “receive annually one student from each Assembly district...and give them instruction in any or all the prescribed branches of study...free of any tuition fee.” A fairly fierce battle ensued as some accused Ezra of being bent on a self-aggrandizing agenda. Eventually, the People’s College proved incapable of meeting the grant’s requirements, and Cornell University was launched. The university’s charter delineates its purpose:

The leading object of the corporation hereby created shall be to teach such branches of learning as are related to agriculture and the mechanic arts, including military tactics; in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life. But such other branches of science and knowledge may be embraced in the plan of instruction and investigation pertaining to the university as the trustees may deem useful and proper.

Those words were chosen purposely and carefully to fit the university’s mission entirely within the language of the federal land grant.

Managing the Land Scrip

In addition to all of the complicated tasks that demanded attention in founding a university, the Cornell trustees faced an immediate problem—how to derive the maximum benefit from the land scrip.

- New York State had been given the land scrip in trust but was prevented by law from directly possessing the land of another state. Instead, it had to sell the scrip to a land speculator who would carry out the function of locating public land in another state, laying claim to it (using the scrip as payment), and selling the standing timber (if any) and the land to realize the value of the grant. As the various states began to sell their scrip, they gradually flooded the market and depressed the price. When the New York State Comptroller first began selling scrip in 1864, he obtained 85 cents an acre. He ceased sales, however, when the price fell to 50 to 60 cents.
- The Cornell trustees could have purchased the scrip from the state and located the land directly.

However, they were unwilling to assume such a risk, given the very shaky financial condition of the embryonic university.

- Ezra Cornell stepped in and executed a contract with the state whereby he would purchase the remaining scrip at the market rate of 60 cents per acre. He would pay half down and supply the other 30 cents per acre upon the sale of the land. Then Cornell did a very clever thing—he proposed that, while the 60 cents per acre that the state would receive would join the funds already on deposit to form the corpus of the land-grant endowment as established by the federal act, anything in excess of 60 cents per acre that he could realize would be used to create a new and different endowment. The latter would be a gift to the university from Cornell, becoming the Cornell Endowment Fund. Cornell got the state to agree that this second, separate fund was not bound by the federal grant’s restrictions, especially the limitation that grant funds could not be used to construct buildings.
- The land scrip came in 160-acre denominations (one quarter of a square mile). Thus, New York received 6,187 pieces of scrip, accounting for 989,920 acres. Through a set of transactions, Ezra Cornell eventually purchased 532,000 acres of this scrip. He then set up a land management operation centered in Wisconsin, where most of what would be called the Western Lands were located. His goal was to hold the land until it appreciated. The cost of this intentional delay (in terms of recording fees, management, and taxes) was great, and Cornell bore the negative cash flow from his own resources. When Cornell turned the operation over to the university in 1874, his cumulative expenses (\$720,438) exceeded revenues (\$146,584) and the university had to reimburse him for the resulting loss (\$573,854) by selling some of the Western Lands and dipping into the Cornell Endowment Fund.
- During the 1870’s and 1880’s, the burden of having much of the endowment tied up in a nonproductive asset was huge, and the university faced the possibility of bankruptcy several times. By 1872, the university was \$155,000 in debt. “The interest upon which,” observed President Jacob Gould Schurman in hindsight, “was a serious drain upon the annual income of the University,

and the principal of which it seemed impossible to meet.” Only an emergency loan from trustees saved the institution. In 1880, the university had to decapitalize its endowment to fund its operating budget. By 1882, Cornell had used over \$215,000 of Western Lands principal to fund operations as it waited for land prices to rebound.

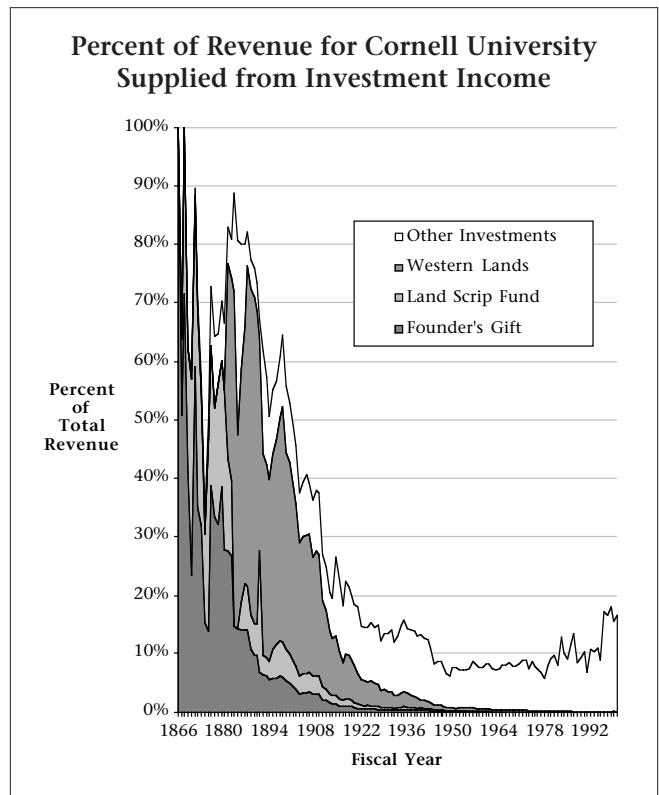
- Through careful management by Cornell’s second trustee chair, Henry W. Sage, the Western Lands were eventually made profitable. When all of the timber and land had been sold and the administration of the Western Lands was closed in 1935, the university had generated a gross of \$6.8 million and a net of \$5.1 million. While New York had received one tenth of the 1862 land grant, the university’s management of the scrip yielded one third of the total grant revenues generated by all the states.
- Aided by emergency aid during hard times, the sequential combination of income from Ezra Cornell’s original founding gift, the Western Lands, and the Land Scrip Fund fueled the operation of the university through most of the nineteenth century. (See figure below at right.)

In the 1870’s and 1880’s, several disagreements arose between Cornell and New York State over the handling of the two trust funds—the Land Scrip Fund and the Cornell Endowment Fund—that were held and invested by the state comptroller.

- The land-grant act specified that investment management costs associated with a land-grant trust were not to be recovered from the trust but were to be paid by the state. However, the comptroller charged premiums to the Land Scrip Fund contending, as he wrote in 1876, “in the administration of the various Trust Funds [by the state], it has been the uniform practice to charge the income with the cost of all investments in excess of the face value of the securities....”
- The act also specified that the state had to invest the trust so as to yield at least 5 percent annually, make that income available for the purposes of the grant, and make up any deficiency. Yet, in 1882 the comptroller announced that no land-grant payments would be made to Cornell from the fund “until after the revenue therefrom shall have first made good the revenue accounts for the drafts made upon it...for interest, premiums and commissions on investments already made.”

- Finally, it was unclear whether the Cornell Endowment Fund, which derived its assets from the management of the land scrip by Ezra and the university above and beyond what the state could achieve, belonged to the state or the university.

The first issue was settled in 1890 when a mandamus procedure instituted against the comptroller was ruled in Cornell’s favor, and the state legislature appropriated the \$89,384 that had been wrongfully withheld from the university to cover investment management costs. The famous McGraw-Fiske estate case settled the second and third issues by: a) finding that the Cornell Endowment Fund belonged exclusively to the university, to be used at the discretion of the trustees and b) noting that the state had a duty to pay the 5 percent, no matter what it earned on the underlying investments. As a result, the state converted the Land Scrip Fund from a separate trust to part of the state’s general fund and issued Cornell a certificate guaranteeing that the state would pay the university the correct amount “annually thereafter.” So, to this day, Cornell receives a separate payment from the state of \$35,100 as its 1862 land-grant income, an amount virtually unchanged since 1896 and slated to remain so in perpetuity.



The Concept of a Contract College

Cornell's founding charter contained no requirement for New York State to support its land-grant institution. The university's founders envisioned that the university would be amply funded via the land grant, its other endowments, and various student charges. Two realities quickly changed this view.

- The provision of the charter that obligated Cornell to provide 128 free scholarships to state residents was successfully reinterpreted by state officials to be an obligation of 512 scholarships (128 for each entering class). It was estimated that this free education cost Cornell \$150,000 per year by 1892, or about one-quarter of its annual budget.
- In the 1860's, there was little experience in the teaching of agriculture and the mechanic arts and no cadre of trained scholars versed in these disciplines from which to draw faculty. Luckily, Hiram Sibley endowed the mechanic arts, providing capital and annual support to launch that discipline. Soon there was also a department in civil engineering, which proved very popular with students, generating ample tuition revenues. The university created an agriculture department and had a working farm, but both proved anemic for the first twenty years of the university's existence, with little student interest and meager faculty scholarship. No donor comparable to Sibley stepped forward to underwrite agriculture.

When Jacob Gould Schurman became Cornell's third president in 1892, he proposed to address these issues by persuading the state to provide the needed support. He hinged his claim on three arguments.

- Cornell was chartered by the state and was subject to the state's ultimate supervision.
- In accepting the land grant, the state was obliged to aid the institution receiving proceeds from the grant (as was done in other states).
- The free education provided to over 500 New York State students per year far exceeded the income from the land grant.

In essence, Schurman noted, the state had become the beneficiary of the university rather than the university being the beneficiary of the state. Sensing that Cornell's disciplines in greatest need of financial support coincided with economic interests of the state that enjoyed broad popular appeal—agriculture and veterinary medicine—Schurman launched a

crusade to garner state funding for these activities.

- Schurman's first success was securing a \$50,000 one-time state appropriation in 1893 for a dairy husbandry building.
- He next obtained funding to create the New York State College of Veterinary Medicine, including an initial \$50,000 (in 1894) for needed facilities, to be followed by a subsequent \$100,000 (in 1895) to complete the building program and \$20,000 of annual maintenance (beginning in 1896) to support the college.

Schurman then drafted the structure that was eventually adopted by the state legislature governing the administration of a state supported college by Cornell University. This design, which became the management blueprint for other contract colleges that would follow at Cornell, contained the following provisions:

- that the Cornell Board of Trustees would act as the *ex officio* board of control for the college;
- that while the state would maintain ownership of all property, facilities, and equipment purchased by the state, Cornell would have custody and control of these assets;
- that Cornell would maintain sole authority to appoint faculty and staff and would have control over programs and the curriculum;
- that the university would receive no compensation for administering the college, and state appropriations would be paid directly to the university's treasurer upon the presentation of satisfactory vouchers from Cornell; and
- that no tuition would be charged to state residents pursuing a veterinary degree, but Cornell would determine the fees paid by other students so enrolled and all of the college's other fees.

Schurman's argument in obtaining state support was anchored to the principle that Cornell, as New York's land-grant institution, had a right to such funding.

"There exists an objection, and in my opinion a very just objection against rendering state aid to denominational and private colleges," he wrote in 1892.

"But it is different with a University like Cornell, of which the State is the author, the patron, and the proprietor." Thus Cornell, in close cooperation with the state, could carry out the state's objectives in the most efficient and economical manner possible. Schurman saw Cornell as an unusual model in higher education—a private university with a public mission.

The Contract Colleges Bloom

Liberty Hyde Bailey soon emulated Schurman's success by leading the effort to establish the third contract college at Cornell, dedicated to agriculture. (Cornell's second contract college was the College of Forestry, established in 1898. Through a misunderstanding over the management of an Adirondack forest tract, the college raised the ire of local residents and state legislators. It was effectively closed in 1903 when Governor Odell vetoed its support bill.)

- According to Malcolm Carron, Bailey had "a full-blown philosophy of agricultural education and its relation to the needs of farm life. With a critical eye he observed the status of agriculture at Cornell, which appeared to him...to have only minimum trustee support and little prestige among the colleges of the University." The trustees reinforced this view, using \$65,000 of the \$89,384 state Land Scrip Fund lawsuit appropriation to build the Law School at Cornell.
- Bailey was appointed dean of Cornell's endowed agriculture college in 1903, and he launched a crusade to garner state funding for the college. He rallied the support of legislators and New York State's farm organizations. Farmers throughout the state, "probably influenced by the extension work, had come to look upon Cornell University as a friend and the 'one institution that is trying to do something for the farmer,'" according to Carron. Through a somewhat tumultuous process that involved opposition from a number of New York's other higher education institutions, a bill creating the New York State College of Agriculture at Cornell was finally signed in 1904.
- As Carron noted, "The law founding the new college was modeled on the act for the establishment of the Veterinary college, but went one step further in requiring the University to convey to the state the land on which the buildings were to be erected." An administration act to govern the management of the college, patterned after the law enacted for the Veterinary College, was passed in 1906.

The fourth and fifth contract colleges were the College of Home Economics (later Human Ecology) and the School of Industrial and Labor Relations.

- Home Economics, in some sense, began with a conference in Lake Placid, New York in 1899 that

focused on the need for education and outreach in the household arts. In order to generate statewide interest (and state support) in this field, Liberty Hyde Bailey hired Martha Van Rensselaer in 1900 to create a home-study course in the College of Agriculture aimed at assisting rural women and families. The program achieved departmental status and then was designated as a school within the College. In 1925, a bill to create a separate College of Home Economics was signed by Governor Smith.

- According to Carron, the School of Industrial and Labor Relations "grew out of the recommendations made by the...State Joint Legislative Committee on Industrial and Labor Conditions," which was "created in 1938 to study and investigate problems connected with labor and industry." In making its recommendation, the committee noted that Cornell "is the nearest equivalent in New York to a state university." New York officials approached Cornell about the feasibility of creating a school focused on this agenda at Cornell and received a favorable review. While other higher education institutions in New York were interested in locating this new school on their campuses, the bill siting the school at Cornell was signed in 1944 by Governor Dewey.

What might have been the sixth contract college at Cornell never came to be.

- In 1920, at the request of the State Hotel Association, the College of Agriculture obtained permission to offer courses in hotel management. This program migrated with the College of Home Economics when the latter split from Agriculture and then coalesced into a department within Home Economics in 1930. The program was kept fiscally separate, with state resources paying for facilities and student tuition largely paying operating costs. In 1954, the state requested a clarification of Hotel Administration's status, proposing, according to Cornell's controller, that it "be made either a state contract college or that it be entirely separated from...Home Economics." While as a contract college Hotel Administration's tuition revenues would decline, SUNY was unwilling to request offsetting state appropriations. As a result, the university removed Hotel Administration from Home Economics and established it as a separate endowed college.

New York, late in the game, finally established a state university system—SUNY—in 1948, largely in response to a flood of students from a growing population and the return of thousands of war veterans.

- SUNY was initially a consolidation of existing state teachers' colleges, two-year vocational institutions, and specialized, baccalaureate colleges.
- As SUNY developed, several once-private institutions were added, teachers' colleges were converted to liberal arts institutions, and community colleges and new campuses developed. Today, SUNY is the largest comprehensive public university system in America, with 64 institutions, including Cornell's four contract colleges.
- Cornell joined SUNY early on, although the arrangement was initially viewed as a marriage of administrative convenience. Unlike the SUNY state operated colleges Cornell, rather than SUNY, retained responsibility for the administration of these contract colleges. In time, a mutually beneficial relationship developed between SUNY and Cornell, with Cornell playing an important role in graduate education (awarding 17 percent of all SUNY-conferred Ph.D. degrees), research, and outreach within the SUNY umbrella.
- Each contract college has also enjoyed immense success in its own right. All four have become respected leaders in their areas of expertise, educating thousands of students, creating a better understanding of the environment and human society, and extending that knowledge throughout New York State, the nation, and the world.

The Land-Grant Mission

Justin Morrill, the author of the land-grant legislation, once remarked that he regretted having the word "agriculture" embedded in the land-grant act. "It is perhaps needless to say that these colleges were not established or endowed for the sole purpose of teaching agriculture.... Obviously, not manual but intellectual instruction was the paramount object.... Classical studies were not to be excluded, and therefore, must be included." Despite this admonition, the land-grant mission of many institutions narrowed gradually to an agricultural emphasis. This change arose, curiously, from the initial lackluster performance of agricultural departments at most land-grant colleges (including Cornell). Waning student interest,

a lack of trained faculty, and a paucity of state support for agriculture caused engineering to dominate. The pendulum shifted in the 1880's due to the efforts of the land-grant institutions (which had formed a national association in 1872) and the U.S. Department of Agriculture. According to Roger Williams, the agenda of the association's first meeting was "the expediency of asking Congress for additional land grants for the struggling colleges; the establishment of experimental farms and stations for the promotion of agricultural knowledge...and the best methods of cooperating with one another and with the Department of Agriculture." These efforts led to a series of federal initiatives (most notably the Hatch Act of 1887 and the Smith-Lever Act of 1914) that unleashed a flow of federal funding for agriculture. While the 1862 land-grant act had instruction at its core, the Hatch and Smith-Lever Acts were especially effective as lenses, refocusing the land-grant spotlight on agricultural research and extension. The Cornell Cooperative Extension system evolved from the Smith-Lever Act, while the Hatch Act stimulated the growth of the two experiment stations at Cornell. Today, all four contract colleges have in place significant programs of basic and applied research and outreach, including the Industrial and Labor Relations Extension program.

Despite these swings in emphasis, Morrill as the author of the land-grant act and Cornell's founders shared a view that it was the applicability rather than the specificity of the legislation that was paramount. Land-grant institutions were asked to deploy a liberal and liberating education for a broad swath of society, an education that had practical value. In itemizing the perceived deficiencies of the day—education in agriculture, engineering, and military science—the act was not intended to limit institutions in adapting curricula to meet evolving needs. A glance at current employment patterns demonstrates why that adaptability is necessary. (See table on page 21.) While agriculture is still a major industry, it engages less than 3 percent of the population. Where 70 percent of U.S. workers were engaged in "agriculture and the mechanic arts" in 1850, that combination employed less than one-fifth by 1990. America's economy is now service-based, highly dependent on information and communications. The educational needs and interests of students and society have likewise been transformed, and these changes are mirrored in

Labor Force and Employment by Industry 1990 Census, United States

(16 years of age and over)

	Labor Force	Percent of Total
Agriculture & Fishing	3,115,372	2.5%
Construction	7,214,763	5.8
Personal Services	3,668,696	3.0
Health Services	9,682,684	7.8
Manufacturing	20,462,078	16.7
Mining	723,423	0.6
Transportation	5,108,003	4.1
Public Utilities	3,097,059	2.5
Financial Services	7,984,870	6.5
Business Services	5,577,462	4.5
Entertainment	1,636,460	1.3
Public Administration	5,538,077	4.5
Educational Services	9,633,503	7.8
Trade	24,556,692	19.9
Other Professional Serv.	7,682,060	6.2
Unemployed	<u>7,792,248</u>	<u>6.3</u>
Total Labor Force	123,473,450	100.0

Cornell's curriculum, scholarship, and outreach.

At Cornell, the existence and success of the four contract colleges has created a misconception that the university's land-grant mission has been concentrated in those colleges exclusively. This perception has been reinforced by their specialized state funding arrangement, creating an artificial boundary between them and the balance of the university. Yet prior to the creation of the first contract college, all of the university's colleges and departments viewed themselves as part of a land-grant mission. In fact, with the passage of the Second Morrill Act in 1890, the director of the Sibley College petitioned the Cornell trustees to have the new \$15,000 of land-grant funding directed to that college instead of the department of agriculture. As he argued, "the demands for instruction and legitimate expenditure being greater by far in this direction." In reality, the land-grant mission has always been diffused throughout Cornell. It is as much a part of that mission to offer a course in "Race, Gender, and Organization" as it is to teach "Animal Domestication and Behavior." In a very real sense, Cornell's motto of being "an institution where any person can find instruction in any study" is an elegant restatement of that land-grant mission—a proposition that in its simplicity argues that a land-grant university should be expansive, endlessly adaptable, and always relevant.

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