WHENCE WE CAME: THE LAND-GRANT TRADITION—ORIGIN, EVOLUTION, AND IMPLICATIONS FOR THE 21ST CENTURY

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Abstract

Almost all aspects of our lives are continuously affected by the results of what has come to be known as the “Land-Grant Tradition” of teaching, research, and extension. However, in light of the current philosophical trends surfacing in many land-grant universities, it is essential that educational leaders address and define the role of these institutions in the 21st century. Using historical research methods, including the review of primary and secondary sources, this study described the contexts, circumstances, actors, and legislation that affected the genesis and evolution of land-grant institutions, and proposed selected questions about the future role and purpose of these institutions in the 21st Century.

Introduction

The concept of the land-grant university is quickly approaching its sesquicentennial. During the last one and a half centuries, every state in the Union, the District of Columbia, and selected U.S. territories, commonwealths, and protectorates (present and past) have reaped the benefits of land-grant universities. Millions of students have completed undergraduate, graduate, and professional degrees, and then entered the work force, and have subsequently enriched and enlightened their communities, regions, states, and our society at large.

In commenting on the 125 research universities in the U.S. (i.e., Doctoral/Research Universities—Extensive and Doctoral/Research Universities—Intensive), a fraternity to which most land-grant universities belong, the report Reinventing Undergraduate Education: A Blueprint for America’s Research Universities (Boyer Commission on Educating Undergraduates in the Research University, 1998) stated that,

“their graduates fill the legislatures and board rooms of the country, write the books we read, treat our ailments, litigate our issues, develop our new technologies, and provide our entertainment. To an overwhelming degree, they have furnished the cultural, intellectual, economic, and political leadership of the nation” (p. 5).

Moreover, as a result of the efforts of land-grant institutions, American agriculture and related life sciences have developed into one of the great marvels of the modern world.

From the economic perspective of cost-benefit alone, state-supported universities, including land-grant institutions and other state universities, return an average of $5 for every $1 of state money that is invested (National Association of State Universities and Land-Grant Colleges, 2001). Further, “for every $100 spent directly by a NASULGC member institution, its employees, visitors, and students spent another $138 of their personal funds [in their university’s resident community and state]” (National Association of State Universities and Land-Grant Colleges, 2001, p. 3). And, regarding their role as employment incubators, for each on campus worker employed by these institutions, they generate “1.6” (p. 4) additional jobs outside
the borders of their campuses. In addition, it is estimated that two-thirds of the graduates “of NASULGC institutions remain in their states for a significant period of time after” (p. 4) graduating; thus, further amplifying the “return on investment” contributed by these graduates to the states supporting the colleges and universities at which they matriculated.

However, the noted British scientist and academician Sir Eric Ashby posited that,

“Today, universities everywhere face a common peril: the peril of success. . . . They are living through one of the classical dilemmas of systems in evolution: they must adapt themselves to the consequences of success or they will be discarded by society: they must do so without shattering their integrity or they will fail in duty to society” (as cited in Bonnen, 1998, p. 26).

Arguably, or for many unarguably, America’s land-grant universities are an unqualified success story. Yet, much debate and conjecture exists within the academy and without about the current status, and future direction, of America’s land-grant institutions. Thus, mindful of Sir Winston Churchill’s admonition that, “the longer you look back, . . . the farther you can look forward” (as cited in Hayward, 1997, p. 9), this manuscript seeks to renew our understanding of the actors, times, and circumstances that surrounded the birth of the “land-grant idea” as well as the formative steps that it undertook during its evolution and fruition, whilst casting a speculative eye toward its future.

Purpose and Research Questions

The purpose of this study was to examine the historical actors and contexts surrounding passage of the founding legislation for land-grant universities, to identify related legislative acts that followed, and to suggest important implications related to the role and purpose of modern-day land-grant institutions. The following questions guided this study: (1) Who were the key actors that influenced the rationale for, and conception of, land-grant institutions? (2) What were the significant historical contexts surrounding passage of federal legislation that created land-grant institutions? (3) What were other legislative acts that significantly influenced formation of the land-grant institutional mission of teaching, research, and extension? (4) What are some of the important implications related to the future role and purpose of land-grant institutions?

Methods and Procedures

Historical research methods were used to answer the questions that guided this study. Davis (1991) suggested seven guidelines to follow when researching and writing curriculum history: authority, interpretation, significance, context, representativeness, perspective, and style (p. 79-80). These and related principles were followed in the production of this manuscript. Historical information was derived from primary and secondary sources. Primary sources included Congressional records, such as texts of federal legislation and speeches, as well as conference proceedings and on-line publications. Secondary sources included selected books and on-line publications. The information was collected at various land-grant university libraries and from the World Wide Web. All references were subjected to internal and external criticism.

Findings

Rationale for, and Conception of, the Land-Grant University

Passage of the founding land-grant legislation—the Morrill Land-Grant College Act of 1862—was accomplished amid what is considered one of the darkest periods in our nation’s history—the American Civil War. During that year (1862), the nation realized that the newly begun “War Between the States” was not to have a quick resolution but rather was to evolve into a bitter, desperate, and bloody conflict. Yet, in the midst of the passion and strife of those
horrific times, federal legislation was passed that was to have a healing effect on post-war society by bringing education and prosperity to a nation that would badly need it when the fighting ended. The bill’s passage marked the culmination of a five-year effort to bring about the creation of a university in every state that would serve the needs of common people and teach the practical skills required by an increasingly industrialized economy, including that portion comprising the agricultural sector.

However, disagreement remains among historians as to who conceived the original idea for establishing land-grant universities. Some believe that is was the “brain child” of Illinois college professor Jonathan Baldwin Turner and that the bill’s author, representative, Justin Smith Morrill of Vermont, was merely reflecting Turner’s views (Carriel, 1961). Other scholars have contended that Morrill developed the idea on his own (Parker, 1924). Concerning who should receive “credit” for the genesis, refinement, and eventual fruition of the land-grant concept, Herren and Hillison (1996) concluded that, “two such individuals stand above the others” (p. 30-31)—Jonathan Baldwin Turner and Justin Smith Morrill.

Other supporters of the concept, such as Thomas Clemson, Ezra Cornell, and Horace Greeley, were also instrumental in focusing the nation’s attention on the need for a new type of university, one that could fulfill the needs of a rapidly changing and growing society (Nevins, 1962). In fact, the land-grant college “movement” had been gaining momentum for several years prior to the introduction of Morrill’s bill. The impetus had come about primarily for two reasons: (1) a growing need existed to educate the “industrial class” of the United States; and (2) an escalating societal “backlash” over the value of a classical education that, heretofore, had been reserved for the wealthy elite.

An Education for the Industrial Class
The land-grant concept involved not only a movement for educational reform but also the desire of common people for social change (Bonnen, 1998; Kerr, 1987). Many Americans, who were only two or three generations removed from “old world” Europe, regarded “education” as synonymous with an opportunity for “upward mobility,” a condition that would have been nearly impossible for most “commoners” to attain in nineteenth century Europe. Further, education was viewed as a means of preventing the “segmentation” or “stratification” of American society based on national origin (Butts, 1978). Until the latter half of the 1800s, a university education was generally reserved for affluent, white males who comprised the “upper class” of society. However, as the relatively new concept of a “self-governing” people matured, Americans’ perceptions about who should be educated began to change. During this time, east of the Mississippi River, the wilderness was rapidly disappearing, and with that disappearance came a desire on the part of many Americans to shed the image that they were a society of “uneducated pioneer people.” Thus, the idea began to coalesce that only through an educational system, one where the lower socio-economic classes had access to a college education, could class lines be dissolved and a “true” democracy then be achieved (Anderson, 1976; Campbell, 1995; Campbell, 1996; Smith, 1998).

In order for “common” Americans to take their place in what they considered “the proper society,” they had to first gain access to an education. In addition, the American people were beginning to realize that the time was right to cast off traditional European influences and norms and to begin to chart their own course of nationhood. To this end, educational leaders began to proclaim that the present system of higher education would not be sufficient to accomplish these aims. Jonathan Baldwin Turner, an ardent supporter of a new form of education, declared,

“How absurd it would seem to set a clergyman to plowing and studying the depredations of blights, insects, and the growing of crops, etc., in order to give him habits of thought and mental discipline for the pulpit; yet, this is not half as ridiculous, in
reality, as the reverse absurdity of attempting to educate the man of work in unknown tongues, abstract problems and theories, and metaphysical figments and quibbles” (as cited in Eddy, 1957, p. 25).

Further, prior to the middle of the nineteenth century, methods of production—agricultural and industrial—had changed very little. Yet, the hand fabrication of nearly all of life’s necessities were giving way to machines of the industrial and agricultural revolutions. This new reality called for an education that was different from that of one from parent to child. For the first time, a growing populist demand championed the need to educate the “working class.”

The Classical Approach to Education

The traditional university education of the 1850s was a study of the classics, such as Greek, Latin, literature, Roman and ancient history. The aim of the curriculum was to expand and “discipline the mind,” rather than to prepare one for a specific occupation with the notable exceptions of lawyers and theologians. Religion and theology represented most of the knowledge of the day; therefore, most colleges were founded for the purpose of furthering religious doctrine and practice (Bonnen, 1998). This rigid curriculum was designed to maintain tradition and the status quo rather than to entertain new concepts and advance new ways of thinking. To a very great extent, existing knowledge and practices went unquestioned and were considered to be infallible (Eddy, 1957). For example, Professor Carl Becker stated that a Yale professor was accustomed to remarking that he had “rather have ten settled opinions with nine of them wrong” than to have “none of the ten settled” (as cited in Eddy, 1957, p. 4). Professor Turner of Illinois College described a “Classical” education as follows:

“A classical teacher . . . who has no original, spontaneous power of thought, and knows nothing but Latin and Greek, however perfectly, is enough to stultify a whole generation of boys and make them all pedantic fools like himself. . . . before he knows how to plant his own beans, or harness his own horse, or can tell whether the functions of his own body are performed by a heart, stomach, and lungs, or with a gizzard and gills. . . . [And, thus this approach to education] contravenes the plainest principles of nature and common sense” (as cited in Parker, 1924, p. 279-280).

The press of the day also joined in criticizing the contemporary educational system. Accordingly, Solon Robinson wrote in the Albany Cultivator of the need “in every county and principal town in the United States [for] a well-founded agricultural school in which young men and girls can acquire such an education as will be USEFUL” instead of a “piano, French, Spanish, or flower daub education” (as cited in Madsen, 1976, p. 26).

Industrialization of the Nation’s Business and Manufacturing Sectors, Including Agriculture

Even though the mid-1850s was the dawning of the industrial revolution in America, many leaders realized that the United States was in danger of being left behind by what they considered the more advanced countries of Europe (Smith, 1998). In 1850, the president of Brown University, Francis Wayland, told his university’s trustees that, “lands were to be surveyed, roads were to be constructed, ships [were] to be built and navigated, soils of every kind, and under every variety of climate, were to be cultivated, manufactures were to be established which must soon come into competition with those of more advanced nations; and [.] in a word, all the means which science has provided to aid the progress of civilization
must be employed” (as cited in Nevins, 1962, p. 16).

Concern that the soil was rapidly being depleted led to the call for measures to remedy the problem before it was too late. To this end, Justin Morrill wrote of the problems of cheap land bringing about bad farming practices that stripped away and wasted the soil. In his opinion, the only solution was a “more thorough and scientific knowledge of agriculture and a higher education of those who were devoted to its pursuit” (as cited in Parker, 1924, p. 262).

The Bill and Its Challenges
In December of 1857, representative Justin Morrill of Vermont introduced legislation calling for the establishment of colleges for the benefit of agriculture and the mechanic arts (Kerr, 1987). According to the bill, its purpose was to provide:

“the endowment, support, and maintenance of at least one college in each State where the leading object shall be, without excluding other scientific or other 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” (as cited in Eddy, 1957, p. 31).

The final version of Morrill’s bill provided that each state was allocated 30,000 acres of public land for each of its Congressional representatives and senators (Kerr, 1987). Because many of the eastern states no longer had public land in this quantity, the bill called for “land scrip” to be issued to those states to finance the purchase of land needed for a college (Morrill Land-Grant Act, 1862). In the western states, large tracts of land remained that had never been homesteaded; frequently, the land was still owned by the federal government. Consequently, an eastern state that had no available, suitable land was issued scrip for land in a western state that had vast acreages of unsettled land. The eastern state would then sell the western property and use the money to finance the purchase of land on which the new college would be built (Herren & Hillson, 1996). This provision of the bill caused considerable opposition. Some lawmakers opined that the issuance of land scrip would open the door to land speculators who then would take advantage of the process to reap huge profits. In arguing against the bill, Senator Pugh of Ohio exclaimed that,

“Every particular scrip will be thrust on [to] the market by all the States at once; and what will be the price of it in the market? Nominal. Each of the States will derive a mere pre-tense, no valuable consideration from her grant; she will never be able to establish any college by it; she will never be able to get any land; but the speculators, who buy in a falling market, will get hold of it, and will locate the scrip by empires on your public domain. There never will be an agricultural college under this bill” (as cited in The Congressional Globe, 1859, New Series No. 45, p. 715).

Moreover, the greatest opposition came from senators and representatives from the South. In the 1850s, the raging debate in government was over power of the federal government versus the power of states (i.e., states’ rights). Southerners had long been vocal about what they considered encroachment by the federal government and the usurping of powers that they believed were constitutionally delegated to the states. To this end, the “reserve clause” or Tenth Amendment to the United States Constitution, i.e., “the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively . . .” (as cited in Burrup, Brimley, & Garfield, 1993, p. 163), was cited by many to support their states’ rights positions. Further, because the United States constitution made no provision for any type of nationally funded education, southern Congressmen
considered the bill not only unconstitutional, but another means by which proponents of a strong central government could seize more power. Arguing before the senate, Senator Clement Clay of Alabama said:

“The people do not favor this measure. They may have been beguiled into the advocacy of land grants for agriculture, but they have never consented to surrender the supervision, control, and direction of their education to the Federal Government. . . . It will unlimit all the limitations of the powers of Congress; [it] will efface all the lines that define the boundaries between Federal and States [sic] rights; [it will] confound all the separate and distinct duties of State governments, and [it] will be a long step towards the overthrow of this truly Federal [government] and the establishment of a really National government” (as cited in The Congressional Globe, 1859, New Series No. 54, p. 852).

Although vigorous opposition to the measure existed, many Congressmen favored the bill. Legislation aimed at improving both agriculture and education naturally drew strong support. In February of 1859, the bill narrowly passed both Houses of Congress and was sent to President Buchanan for his signature. However, citing some of the same arguments presented by the Congressmen who had opposed the bill, President Buchanan vetoed the measure (Kerr, 1987).

Passage of the Morrill Act of 1862 and Related Legislation That Followed

Justin Morrill and his supporters were determined that their measure should become law. In 1861, Morrill reintroduced the bill in much the same form as the legislation that was vetoed previously by President Buchanan. This time, however, three important differences in the political climate were at work. First, the southern lawmakers who had strongly opposed the bill on constitutional grounds were no longer a part of Congress (Madsen, 1976). Earlier that year, nearly all of the representatives and senators of the southern states had withdrawn from Congress to join the newly formed Confederate States of America (CSA).

Second, by the time the measure had reached the floors of both houses for a vote, several battles of the Civil War had been fought and the superiority of the South’s military leadership was evident. Heretofore, the U.S. Military Academy at West Point, New York was the primary source of the nation’s military (i.e., army) officers, and it was one of the very few institutions of its kind north of the Mason-Dixon Line (Association of Military Colleges and Schools of the United States, 2001). However, southerners, who had a long tradition of pursuing military careers, comprised the majority of Academy graduates. Frequently, these officers were leading armies of the CSA to victories. So, an addition to the new bill, introduced by Morrill, called for the teaching of military tactics at all land-grant institutions. Thus, the revised bill was also viewed as a means of strengthening the military leadership of the North (Madsen, 1976). Third, the new president, Abraham Lincoln, was a strong proponent of education and agriculture; therefore, he supported the bill. On July 2, 1862, following passage of the bill by Congress, President Lincoln signed it into law. Accordingly, a full year before the Battle of Gettysburg and nearly three years preceding Lee’s surrender at Appomattox, the Morrill Land-Grant College Act of 1862 became law.

After the Civil War ended in 1865, land-grant colleges began to spring up around the country; and, concomitantly, a significant flaw in the plan to educate students in agriculture soon became apparent. The problem was fundamental. Essentially, a very limited knowledge base in agriculture existed, especially knowledge and learning that was scientific in its basis (Madsen, 1976). Dr. S.W. Johnson, a professor at then Yale College in New Haven, Connecticut, addressed the problem in 1873:

“We are simply grinding over the old grist [...] which our fathers have given [to] us. I can go to my shelves and take down a
Almost immediately, the movement was launched that resulted in passage of the Hatch Act in 1887. The Hatch Act provided for agricultural experiment stations that, with few exceptions, would become components of each state’s land-grant university system (Kerr, 1987).

Soon thereafter, the Morrill Act of 1890 (Second Morrill Act) was finally passed after its initial introduction in 1872 (Campbell, 1995). Although, fundamentally, the legislation was an appropriations bill that provided annual federal support for existing land-grant colleges, the Second Morrill Act also “forbade racial discrimination in admission to colleges receiving the funds” (Kerr, 1987, p. 9). According to Kerr, “A state was allowed to escape this provision, however, if separate institutions were maintained and the newly available funds were divided in ‘a just and equitable,’ but not necessarily equal, manner” (p. 9). Thus, the “1890 Colleges” (p. 9) were created.

In 1914, the Smith-Lever Act brought about the Cooperative Extension Service as a means of disseminating newly acquired information, knowledge, and innovations to agriculturists, who then could put the new methods into practice (Rasmussen, 1989). These practices frequently resulted in improved efficiency and greater productivity. Further, in 1917, the Smith-Hughes Act was enacted, i.e., legislation that formalized the need for systematic post-secondary preparation of agriculture teachers, instructors who would teach secondary level agriculture. Accordingly, this “generally meant departmental establishment in land-grant colleges of agriculture” (Herren & Hillison, 1996, p. 30) of vocational agriculture teacher preparation units, and stimulated the formation of “closer ties [by these units] to the other parts of the land-grant university,” i.e., “agricultural experiment station research and the cooperative extension system” (p. 31).

The complete tripartite land-grant model—education, research, and extension—was then in place, an educational system that has subsequently evolved to become one that is envied by much of the world. To this end, Arnold Toynbee, a distinguished British historian, “observed that the land-grant idea is the one original contribution [italics added] of American higher education” (as cited in Bonnen, 1998, p. 4) to the universe of institutional systems around the globe that are devoted to higher learning.

Further, during the last decade of the twentieth century, Native Americans conspicuously “noted that their reservations, held in trust for American Indian tribes, were the only areas under the U.S. flag that had not participated in the land-grant college program” (Campbell, 1995, p. 24). Consequently, as a part of the Elementary and Secondary Reauthorization Act of 1994, the 29 (now 30) tribal colleges (i.e., the American Indian Higher Education Consortium or “1994 Institutions”) located in 12 states were granted “land-grant status,” including special dispensation for funding as well as resources to support collaboration with their state’s existing Cooperative Extension Service (Campbell, 1995).

In addition, through passage of other legislative acts such as the Bankhead-Jones Act of 1935 that provided “for the more complete endowment and support of the [land-grant] colleges in the several States, Puerto Rico, the Virgin Islands, and Guam” (University of Florida, 2000), the federal government has systematically “adjusted” and “broadened” (e.g., the National Sea Grant College and Program Act of 1966) the land-grant mission. Essentially, “Congress, in effect, recommits to the federal-state land-grant partnership every time it passes the appropriation for the U.S. Department of Agriculture” (University of Florida, 2000).

Consequently, many developing countries undertaking the creation of universities, especially institutions that will include
significant agricultural components, study closely the American land-grant model. These nations frequently send students to land-grant universities in the United States to receive education and training as well.

Conclusions

The concept for the land-grant model was an evolutionary process that developed out of the need for a maturing nation to educate its citizens to cope and excel in a world that was changing faster than it had ever changed before. The outcome of the Civil War settled the question of federal power in government; that is, arguably, the issue of federal power over state power was no longer an open question. Subsequently, little doubt remained about whether the federal government should be involved in education; thus, the role of the federal government began to form. Moreover, education came to be viewed as completion of the idea of a truly “democratic” society. A society in which it was a right of the many and not a privilege reserved for the few. That is, just as America’s government was designed “of the people, by the people, and for the people,” with the emergence of land-grant universities, education was now also of, by, and for the people.

Henceforth, a college education was no longer only a domain of the upper classes, whose comparatively higher level of formal learning and accumulated wealth had perpetuated social and economic class lines for centuries. Higher education was now for the common people as well; who, armed with an education, could realize their dreams of a better place in society.

Optimistically, the new concept of higher education in agriculture and the mechanic arts ushered in the need to create new knowledge that then could be applied to making life better for all citizens. However, the great issues of racial and gender equality were far from fully vetted and even farther from redress and remedy. Over time, they evolved into controversies that unfolded during the second half of the twentieth century. Even today, they continue to foment the political, social, and economic tenor of our country. Accordingly, the United States remains a society that is still attempting to cope with change, a rate of change whose velocity continues to accelerate.

Discussion and Implications

Land-Grant universities have been criticized for losing sight of their original mission (Campbell, 1996; Iowa State University, 2001). Such notable scholars as Dr. Russell G. Mawby, former chairman of the board of the Kellogg Foundation, expressed the concern of many when he said that, “most land-grant Universities of today are losing the distinctiveness of the balance or blend of teaching, research, and Extension which epitomizes the land-grant tradition. . . . I sense that the unique role envisioned for the land-grant university is in jeopardy” (Mawby, 1987).

Moreover, Dr. Samuel H. Smith, former president, Washington State University, in his United States Department of Agriculture Justin Smith Morrill Lecture (1998), encouraged those who are interested in the future of land–grant universities to “step back” (p. 8) and to re-examine the historical roots of these institutions while contemplating their future course. Smith also posited that, “The question is not whether we will change, but what we will become and which stakeholders will we serve” (p. 8). Mindful of these admonitions, several implicative questions about the future role and purpose of land-grant universities appear most pressing.

First, are the concerns expressed by many educational leaders (Campbell, 1996; Iowa State University, 2001; Mawby, 1987; Smith, 1998) valid? Are land-grant universities losing their historic commitment to the tripartite mission, and, thus, are they becoming “elite institutions,” especially as many embrace stronger research agendas frequently at the expense of teaching and extension? Further, is this “evolution,” to a very great extent, tantamount to a form of 21st century “elitism”? A condition that, fundamentally, is the very antithesis of what was diligently nurtured and championed by Jonathan Baldwin Turner, Justin Smith Morrill, and their supporters (Bonnen, 1998; Campbell, 1995; Herren & Hillison, 1996; Smith, 1998), that is, the land-grant idea of educational opportunity and social mobility for the common man and woman.

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Second, does the United States still have an “industrial class” of people, or its modern-day equivalent, such as many of the newly arrived immigrants, the endemic poor, and other potentially disenfranchised citizens? Essentially, Americans who need the kind of higher education opportunities provided historically by land-grant institutions. And, if these people exist, are contemporary land-grant universities sufficiently committed to offering them educational opportunities comparable to those afforded to earlier Americans? Or, if not, what segment of higher education should or will assume that role? For example, should it be the community colleges (Cohen & Brawer, 1989), the state universities, the smaller non-land-grant universities, a combination of these agencies, or other institutions entirely, e.g., the emerging for-profit-universities (Knudson, 2001), that will meet this need? If so, are these educational entities destined to assume the teaching and outreach roles that heretofore comprised two-thirds of the land-grant mission? And, will they be equipped with the resources and wherewithal to do so effectively? Further, what will be the eventual role and magnitude of distance education technologies (Jones, Kirkup, & Kirkwood, 1993) and other innovative education delivery systems as all educational institutions (van der Horst, 1998), and land-grant universities in particular (Campbell, 1996; Smith, 1998), seek to define their mission, scope, and clients in the 21st century? 

Finally, what should be the future position and practice of existing Agricultural Education and Extension departments, including allied Leadership and Communication programs, as “champions” and “arbiters” of the social science components of our colleges of agriculture? Importantly, will this role be peripheral or seminal as land-grant institutions renew and reconfigure themselves for the challenges that lie ahead (Thompson, 1998)? These and related questions must be faced candidly, deliberated carefully, and answered thoughtfully, if the United States is to retain the land-grant tradition of education of, by, and for the people in the 21st century and beyond.

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