

JAMES PATRICK MCCARTHY, JR.

Commerce and College: State Higher Education and Economic Development in North Carolina and Georgia, 1850-1890

(Under the Direction of EMORY M. THOMAS)

From 1850 to 1890, the Universities of Georgia and North Carolina undertook significant structural and curricular reform in an effort to hasten the economic development of their states and region.

Led by trustee William Mitchell, the University of Georgia adopted a reform plan in the 1850s that was both comprehensive and far-reaching. The plan did not survive the Civil War, but Mitchell and his supporters used it as their guide in expanding the university in the 1860s, obtaining the Morrill Land Grant funds in the 1870s, and continuing to expand and diversify the university's offerings against opposition in the 1880s.

The trustees and faculty at the University of North Carolina began more modest reforms in the 1850s that survived the war. Deterred considerably by Reconstruction, Kemp Battle and the trustees grew the university's curriculum immensely in the late 1870s and early 1880s, alongside other state institutions designed to improve the economy through education. The Watauga Club and the North Carolina Farmer's Alliance took the Morrill Funds away from the university, but it had already taken the rough form of a modern university and consequently become a font of Southern Progressivism.

The shifting educational policies and practices at these two universities between 1850 and 1890 reveal several things about these schools and Southern higher education. Substantial curricular reforms began quite early; they continued through the Civil War, Reconstruction and beyond; and they were just as diverse and comprehensive as reforms

elsewhere in the nation. Despite dismal funding and enrollments compared to other universities more commonly associated with nineteenth century reform, the trustees were determined to offer students as many educational options as at any other university—options that would serve what the trustees hoped was a new, emerging economy in the South.

INDEX WORDS: Southern higher education, College reform, University reform, Southern colleges, New South, Southern culture, University of Georgia, University of North Carolina, Nineteenth century colleges, Curriculum reform, William Mitchell, Kemp Battle

COMMERCE AND COLLEGE:
STATE HIGHER EDUCATION AND ECONOMIC DEVELOPMENT IN NORTH
CAROLINA AND GEORGIA, 1850-1890

by

JAMES PATRICK MCCARTHY, JR.

B.A., The University of Virginia, 1993

M.A., The University of Georgia, 1996

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Approved:

Major Professor: Emory M. Thomas

Committee: Thomas G. Dyer
William F. Holmes
James C. Cobb
John C. Inscoe

Electronic Version Approved:

Gordhan L. Patel
Dean of the Graduate School
The University of Georgia
May 2002

PREFACE

My interest in the relationships between Southern higher education and economic development in the nineteenth century began with an interest in Progressivism and the economic changes from roughly the 1880s to 1920. In preparing several seminar papers, however, my research took me farther back into history. Rather than studying the generation that thrived and was in power around the turn of the century, I ended up studying their fathers and grandfathers whose adult lives straddled the Civil War. My attention focused on how their antebellum hopes for higher education and the southern economy persisted through the Civil War, grew to become a part of the economic boosterism of the 1870s and 1880s, and helped form the intellectual basis of change in the Progressive era.

While finishing research in the Spring of 2000, I had the opportunity to hear Zell Miller speak at the Institute of Higher Education in Athens, Georgia. As Governor of Georgia, he championed the Hope Scholarship program that is being closely watched by other states and the federal government for its impact on state education. Georgia's most recent "education governor," Miller's views on higher education offer as good an example as any of the opinion that modern state politicians and higher educators have on the roles and goals of state-sponsored higher education. Miller confidently claimed that "the universities are the basic infrastructure of economic development." In the digital, knowledge economy this may seem self-evident. Like any point of view or idea,

however, this notion that the state can and must supply the training and knowledge requisite for economic growth and change has a history. In *Universities and the Capitalist State*, Clyde Barrow asserted that this relationship was essential in the development of universities, the industrial economy, and the capitalist state in the very late 1800s and early 1900s. Civic and business leaders, according to Barrow, ensured that universities would provide a great deal of the training and the research and development demanded by a capitalism hungry for knowledge and growth.¹ Before this could occur, though, another important and related change had to take place. A slower transformation began before the Civil War in which higher education went from being perceived as preparation for the literary and omni-competent leaders of society (clerics, lawyers, doctors, and politicians) to training for specialized, scientific professionals in several areas of business.

All three of these conceptions about the relationship between higher education and economic development closely followed shifts in the very notion of economic development. It has meant different things to different people at different times. In 2000, Zell Miller referred to preparing Georgia's youths for the so-called New Economy that puts a premium on computer skills and literacy and the nimble-mindedness required of a constantly educating and re-educating population. Clyde Barrow referred to economic development in terms of the industrial/capitalist society that put a premium on order and a populace able to make itself one more part of the production machine. In the late nineteenth century South, it meant improving agriculture by diversifying and intensifying

¹ Clyde W. Barrow, *Universities and the Capitalist State: Corporate Liberalism and the Reconstruction of American Higher Education* (Madison: University of Wisconsin Press, 1990). See also Edward C. Kirkland, *Dreams and Thoughts in the Business Community, 1860-1900* (Ithaca, NY: Cornell University Press, 1956), 83-114.

it, laying more and better railroads, developing chemical and extractive industries, and jump-starting a manufacturing sector that had languished (despite potential) under slavery.

“Commerce and College” will trace the origins and development of this third notion of economic development through the educational policies it inspired at the Universities of Georgia and North Carolina from 1850 to 1890. In the process, it will explore several themes. It will demonstrate the early nature and character of university reforms at these two schools and in the South; the continuity of those reforms through the Civil War, Reconstruction and beyond; and how those reforms were just as comprehensive (though woefully underfunded and underpatronized) as those elsewhere in the nation. Furthermore, it will demonstrate that these reforms in Southern higher education policy were one aspect of the economic boosterism of the era, stretching back into the 1850s and that the universities and their reformers interacted with other state institutions to serve what they hoped would be the region’s developing economy. “Commerce and College” is a policy study, concerned primarily with the men, ideas, and experiences that shaped the changing educational policies at these two schools, but it addresses these within their economic, social, and political contexts, pointing out where those contexts shaped the nature and success of the policy implementation.

The Introduction, “Higher Education in the Nineteenth Century South,” explores the important historical and historiographical issues of nineteenth century higher education in the United States and the South and how “Commerce and College” will contribute to them. Chapters one through six tell the story of curriculum reforms in some detail, focusing on the individuals behind them, their motivations, and their state-level

political and economic contexts. By going into such detail with only two schools, these chapters can better explore internal nuances and external relationships with other institutions than by fleetingly addressing numerous schools through speeches and rhetoric.

Chapter one looks at the reforms designed by William L. Mitchell at the University of Georgia in the 1850s. It traces how they stemmed from a growing movement for agricultural education, culminating in an endowment for the university in 1854, and from Mitchell's own business experiences, particularly as chief engineer of the state's railroad. The separation of the freshman and sophomore classes from the university into a preparatory Collegiate Institute and the creation of a series of professional schools around what remained of the liberal arts college did not survive the Civil War, but they did provide blueprints for future reforms.

Chapter two explores the creation of the School for the Application of Science to the Arts at the University of North Carolina in the 1850s. It emerged from the president and trustees' involvement in the North Carolina railroad and a trip North by several faculty members. A more conservative reform than the one attempted by Mitchell at the University of Georgia, North Carolina's curricular changes were based on those at Yale, Harvard, and Brown and drew on the experiences of professors who traveled to and studied at these schools in preparation for the North Carolina reform. The Civil War cut short attempts to expand the school in 1859, but it remained open throughout the war.

Chapter three begins by exploring the resumption of reforms at the University of Georgia in 1866. Within a six-year period, Mitchell, new Chancellor Andrew Lipscomb, and their trustee allies reopened the law school, made a pre-existing medical school a part

of the university, opened a new professional engineering school, created two business certification programs and two new bachelor degrees, and adopted a partial elective system. The chapter then looks at the changing university as one manifestation of New South boosterism. The chapter concludes with the successful efforts by the university's trustees to secure funding from the 1862 Morrill Land Grant.

Chapter four explains how the University of North Carolina, despite remaining open throughout the duration of the Civil War, was beset by perpetual turmoil in the years that followed. Led by Charles Phillips and Kemp Battle, the faculty and trustees of the University of North Carolina also tried to resume reforms after the war. Their motivations for a university that would serve a changing economy and Battle's business background were quite similar to William Mitchell's and his allies at the University of Georgia. With Congressional Reconstruction, however, came a new Republican-appointed president, faculty, and board of trustees who tried to carry out their own curricular reforms. These too failed, as the local and state elite failed to patronize the school and it closed in 1871. It took another four to five years for Kemp Battle to reopen the university and become its new president.

Chapter five explores the creation of the State Agricultural College at the University of Georgia (once the faculty and trustees had secured the Morrill land grant funds) and the creation of the university's first branch college in Dahlonega. After this growth, the university faced three challenges. A new Chancellor in 1874—Henry Tucker—tried to reverse the university's reforms of the previous decades. The State Agricultural Society advocated taking the Morrill funds away from the university. The movement to create the Georgia Institute of Technology further threatened to take the

Morrill funds away and undermine the University of Georgia. The chapter then explains how the trustees fired Tucker and resumed their plans under a new Chancellor, longtime faculty member Patrick Mell, and created a series of branch colleges to deflect the criticisms leveled by the agricultural society that the university was not serving the farmers or the wider populace. Despite the desire for continued growth and diversification at the university, the movement to create the Georgia Institute of Technology and its eventual success was a major setback that slowed university reforms until the turn of the century and the renewed vigor of the Progressive Era.

Chapter six details the re-opening of the University of North Carolina in 1875 and its successes and defeats in the fifteen years that followed. After a trip North in 1876, Kemp Battle, now as president of the university, and faculty member Carruthers Kerr again redesigned the university and oversaw a continual expansion and diversification of the curriculum. As the numerous reforms indicate, the university was, in their minds, one of three state educational institutions that would help improve the economy. The other two—the North Carolina Department of Agriculture and the North Carolina Agricultural Experiment and Fertilizer Control Station—were also educational institutions in that they were in the business of the production and dissemination of knowledge. By the 1880s, the University of North Carolina's curriculum was considerably diverse, but just as at the University of Georgia, successes were soon followed by challenges. The Watauga Club, an organization of New South-promoting editors, businessmen, and educators, convinced the state legislature to create an Industrial school that, like the Georgia Institute of Technology, would be a rival to the University of North Carolina and might take away the Morrill funds. The creation of the State Farmer's Association turned this challenge

into a defeat. Led by Leonidas Polk, the Association ensured that the Morrill funds would go to the new school and that it would become the North Carolina Agricultural and Mechanical College. The University of North Carolina continued its own reforms, however, building upon the changes of the 1870s and 1880s.

Both the University of Georgia and the University of North Carolina exhibited harried but persistent curricular diversification and reform from 1850 to 1890. Led by men who had taken part in the their states' maturing market economies, some of the faculty and trustees at each institution tried to augment and organize their schools to accommodate both the growth of knowledge and its expanding practical, economic uses. They faced immense setbacks and challenges, ranging from the very structure of the Southern political economy to the opposing views of a few prominent educators, but they continually groped for ways to structure higher education that were perhaps more fitting to the developing economy that they saw in the rest of the nation and hoped would soon take hold in the South.

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INTRODUCTION

HIGHER EDUCATION IN THE NINETEENTH CENTURY SOUTH

Benjamin H. Hill stepped in front of an expectant audience on Monday morning. It was the last day of July, the traditional time for Commencement at the University of Georgia, and Hill was the keynote speaker. Sitting alongside the class of 1871 were the political and economic leaders of the state who had traveled to Athens for an annual social and political event as much as for a graduation. They listened intently, often responding aloud, as Hill clearly outlined his vision for the South's economic future and the place that the University of Georgia, in particular, and higher education, in general, would have in realizing it. Hill had been a trustee of the University of Georgia since the 1850s. As such, he had participated in several nascent efforts to bring science-based utilitarian and professional education into the University's curriculum, changes he believed were necessary for the economic diversification, and consequently the economic survival and progress, of the state.¹

Hill's speech did not mark the advent of some new conception of economic diversity in the South, the uses of higher education, or the relationship between the two. His speech, rather, was one of the more clear articulations of a set of ideas that partially shaped the curricular reforms of southern institutions of higher education over most of

¹ Benjamin H. Hill, Jr., *Senator Benjamin Hill of Georgia: His Life Speeches and Writings* (Atlanta: n.p., 1893); E. Merton Coulter, "A Famous University of Georgia Commencement, 1871," *Georgia*

the nineteenth century. Southern college and university leaders, like Hill, began to transform the curriculum and administrative structures of their institutions amid pressures from politicians, newspaper editors, and agricultural societies before the Civil War and continued their reform efforts both during and after the conflict. They hoped to keep their schools abreast of changes in local and regional economies and, in some cases, to influence their development. The contours of this relationship and a more scientific and utilitarian curriculum evolved over the course of the nineteenth century in the South, slowed by both an acute lack of funds and a shortage of well-prepared students. Toward the end of the century, however, these long-standing, gradual reforms provided the basis for the quickened expansion of utilitarian and professional education that, in part, created the modern university.

While economic development is only one lens through which to view the diverse ideas and reforms that brought about the modern university, it is particularly suitable for studying this phenomenon in the southern United States. The economy of the American South remained in some respects a colonial one over the decades covered in this study—with Northern capital, industry, and institutions in some cases dominating the region—but it mutated in other, vital ways. The rise and fall of slavery, Reconstruction and New South economic boosterism, a persistent depression in the 1870s, and the agrarian reaction that evolved into Populism shook the southern economy over the years. Amidst these changes, the curricula of the South's colleges and universities were significant bellwethers of change and sometimes highly contested ground in the battle over the region's economic future. At issue were the construction of the role of higher education

Historical Quarterly 57 (Fall 1973): 347-60; Coulter, "The New South: Benjamin H Hill's Speech Before the Alumni of the University of Georgia, 1871," *Georgia Historical Quarterly* 57 (Summer 1973): 179-99.

and the validation and organization of knowledge in a region experiencing economic transformation.

The rise of the sciences and their increasing applications in a growing market economy were two important engines of curricular and structural change in nineteenth century higher education. With each proposed and actual addition or adjustment to the curriculum, debates ensued among trustees, faculty, politicians, and newspaper editors over the role of higher education, the relationship between preparatory schools and colleges, and a suitable organizational structure for colleges or universities. These discussions, controversies, and reform efforts are windows through which to see motivations for shaping higher education and the youths who experienced it. These motivations and ideas, in turn, speak volumes about perceptions of society and beliefs about what that society must do or become in order to survive and flourish.

By analyzing these discussions, their ideological underpinnings, and their practical outcomes for public higher education reform in Georgia and North Carolina between 1850 and 1890, “Commerce and College” will explore several aspects of the intellectual, cultural, and economic history of the American South and the history of American higher education. In particular, it will investigate the gradual transformation of higher education in the nineteenth century Southeast. Utilitarian reforms were a central and dynamic aspect of Southern higher education in the decades after the Civil War, but those changes were not new phenomena inspired by war, generational change, or Northern influence. They had deep, indigenous roots stretching back to the 1830s and 1840s, thus making for a halting, but consistent evolution in Southern higher education over the course of the nineteenth century.

These gradual changes in the curriculum registered efforts to improve and diversify market economies based on land, slaves, and staples and were one aspect of early industrialization in the antebellum South. After the Civil War, Reconstruction-era administrators and faculty continued these reforms, further organizing and consolidating them, regardless of political party or affiliation. When the Southern states returned to the union in the 1860s and 1870s, many politicians and university leaders were eager to claim a share of funding from the 1862 Morrill Land Grant Act that promised higher education in agricultural and mechanical pursuits for all social classes. Winning and spending the funds, however, provoked considerable debate and dissention. Economic boosters like Benjamin H. Hill in Georgia and Walter Hines Page in North Carolina whose vision of a self-sufficient New South called for the development of local capital and industry, continued and strengthened the calls for a more scientific and utilitarian curriculum into the 1870s and 1880s. While many of the changes that were enacted in southern universities at this time were simply a shifting around of all too meager resources, the ideas those changes reflect were a significant underpinning to the emergence of the “modern” Southern universities by the turn of the century. The schools were both the results of changing social and political attitudes, increased funding, *and* the realizations of ideas pursued with some success over the previous decades. Unfortunately, Southern universities like the Universities of Georgia and North Carolina faced repeated setbacks and obstacles—most notably the Civil War, Reconstruction, the economic depression of the 1870s, little public funding and student demand for the new degrees, and the farmer unrest of the 1880s—causing the pace of reform to ebb and flow rather than move steadily forward.

Historians of higher education have generally obscured the slow nature and the inherent continuities of change in American colleges and universities. They have also largely dismissed southern institutions of higher education as conservative latecomers to any meaningful reform. Over the past twenty-five to thirty years, several small, but interrelated choruses of scholars have challenged these two notions. The traditional view of antebellum colleges and universities is one of institutions aspiring in some respects to be monasteries where rowdy students chafed under rigid order and the study of mathematics and dead languages trained and disciplined their mental faculties through rote memorization. Added to this negative image is the “Great Retrogression” thesis which asserts that after a brief flirtation with the sciences in the Revolutionary and early National eras, most colleges and universities fully entrenched themselves in the classics, disdaining overt scientific and utilitarian education. The South was supposedly one of the worst offenders in this “Retrogression.” With most of its creative energies geared toward the defense of slavery and the spread of conservative denominational schools, there was even less desire or drive for modernizing the curriculum than in other parts of the country.²

²For works that express this view of antebellum colleges see R. Freeman Butts, *The College Charts Its Course* (New York: McGraw-Hill, 1939); Walter P. Rogers, *Andrew D. White and the Modern University* (Ithaca, New York: Cornell University Press, 1942); Richard Hofstadter and C. DeWitt Hardy, *The Development and Scope of Higher Education in the United States* (New York: Columbia University Press, 1952); Richard Hofstadter, *Academic Freedom in the Age of the College* (New York: Columbia University Press, 1955); Walter P. Metzger and Richard Hofstadter, *The Development of Academic Freedom in the United States* (New York: Columbia University Press, 1955); R. Freeman Butts and Lawrence A. Cremin, *A History of Education in American Culture* (New York: Knopf, 1962); and Richard Hofstadter, “The Revolution in Higher Education,” in *Paths in American Thought* eds., Arthur M. Schlesinger, Jr., and Morton White (Boston, 1963), 269-290. See, in particular, Hofstadter, *Academic Freedom*, Chapter Five; Metzger and Hofstadter, *Development of Academic Freedom*, Chapter Five; Allan M. Cartter, “The Role of Higher Education in the Changing South,” in *The South in Continuity and Change*, eds. John C. McKinney, and D. T. Thompson (Durham, North Carolina: Duke University Press, 1965), 282; and Howard W. Odum, *The Way of the South: Toward a Regional Balance of America* (New York: Macmillan, 1947), 215.

More detailed research has shown that the image of a rigid, inert antebellum college is incorrect, even for the South. Several books and articles have demonstrated that colleges embraced the sciences and began the long process of forging a more utilitarian curriculum as early as the 1830s and 1840s—well before the Civil War and the 1862 Morrill Act. James Axtell condemns the notion of a static antebellum college followed by a dynamic post-bellum university as “Whig history of the most blatant kind” in which “the past teems with revolutionary turning points.”³ Many scholars have failed to appreciate the nuances of the history of higher education and the continuities reflected in both nascent reforms before the Civil War and persistent traditions afterward. They have instead too often mirrored the rhetoric of the university builders of the 1870s, 1880s, and 1890s who criticized and condemned an image of the antebellum college as everything antithetical to how they intended to shape their own institutions.⁴ Buttressing the critique of the traditional view, Colin B. Burke and Stanley Guralnick demonstrate

Frederick Rudolph's, *The American College and University* (Athens, Georgia: University of Georgia Press, 1990, c. 1962) and John S. Brubacher and Willis Rudy's *Higher Education in Transition: A History of American Colleges and Universities* (New Brunswick, New Jersey: Transaction Publishers, 1997, c. 1958) are the two long-popular histories of American colleges and universities. They both credit a small number of Northern schools with embracing reforms before the Civil War, inspired, in part, by “the quickening pace of industrialization,” (Brubacher and Rudy, 105) but they fail to draw the direct connection between antebellum changes and the more visible postbellum reform, while neglecting southern institutions at every turn.

³ James Axtell, “The Death of the Liberal Arts College,” *History of Education Quarterly* 11 (Winter 1971): 339-52, quote on page 341. Axtell starts his article with an obituary of the liberal arts college on the day in which the Morrill Land Grant Act of 1862 passed—a “revolutionary turning point” that was the culmination of a process begun in the 1840s. Earle D. Ross, *Democracy's College: The Land-Grant Movement in the Formative Stage* (Ames, IA: Iowa State University, 1942), 14-45; Rudolph, *American*, 248-9. See also Robert T. Blackburn and Clifton F. Conrad, “The New Revisionists and the History of US Higher Education,” *Higher Education* 15 (1986): 211-230.

⁴ Scholars correcting these views and errors include Hugh Hawkins, “The University-Builders Observe the Colleges,” *History of Education Quarterly* 11 (Winter 1971): 353-362; James McLachlan, “The American Colleges in the Nineteenth Century: Towards a Reappraisal,” *The Teacher's College Record* 86 (December 1978): 287-313; David B. Potts, “American Colleges in the Nineteenth Century: From Localism to Denominationalism,” *History of Education Quarterly* 11 (Winter 1971): 363-380; Nathan Reingold, “Form, Function, and Fecundity in American Institutions,” *Minerva* 35 (1997): 226-227. For an example of a book that notes continuity forward in time see W. Bruce Leslie, *Gentlemen and Scholars: College and Community in the "Age of the University," 1865-1917* (University Park, PA: Pennsylvania University Press,

that antebellum colleges were more interactive and dynamic settings than previously believed and that science uninterruptedly increased its role in the college curriculum starting in the 1830s.⁵ Surveying the secondary literature, Terry S. Reynolds shows that colleges and universities in every part of the country incorporated engineering (albeit sporadically and at the whims of any given institution's economic health and faculty composition) into their curriculum well before the 1862 Morrill Act.⁶ Robert J. Norrell and J. Patrick McCarthy study this phenomenon in two southern universities in greater detail, finding that railroads, manufacturing, and other economic changes in the South led, in part, to curricular adjustments at the Universities of Alabama and Georgia in the

1986). McLachlan rightly asserted that "over the course of the nineteenth century, the American university grew by a process of gradual accretion various institutional elements" (304).

⁵ Colin B. Burke "The Quiet Influence: The American Colleges and Their Students, 1800-1860" (Ph.D. diss., Washington College, 1973); Colin B. Burke, *American Collegiate Populations: A Test of the Traditional View* (New York: New York University Press, 1984); Stanley Guralnick, *Science and the Antebellum American College* (Philadelphia: American Philosophical Society, 1975); Stanley Guralnick, "The American Scientist in Higher Education, 1820-1910," in *The Sciences in American Context: New Perspectives*, ed. Nathan Reingold (Washington, DC: Smithsonian Institute, 1979), 99-141; Stanley Guralnick, "Sources of Misconception of the Role of Science in the Nineteenth Century American College," *Isis* 65 (1974): 352-366. George H. Daniels, *American Science in the Age of Jackson* (New York: Columbia University Press, 1968), 233 asserts that by 1820 the most important scientists were connected with colleges and that the demand for science professors far outstripped the supply. There are several articles about science in the antebellum curriculum and extracurriculum. Thomas K. B. Cherry, "Bringing Science to the South: The School for the Application of Science to the Arts of the University of North Carolina," *History of Higher Education Annual* 14 (1994): 73-100; Deborah Jean Warner, "Commodities for the Classroom: Apparatus for Science and Education in Antebellum America," *Annals of Science* 45 (1988): 387-397; Sally G. Kohlstedt, "Curiosities and Cabinets: Natural History Museums and Education of the Antebellum Campus," *Isis* 79 (1988): 405-426; Paul Lucier, "Commercial Interest and Scientific Disinterestedness: Consulting Geologists in Antebellum America," *Isis* 86 (1995): 245-267; Thomas G. Dyer, "Science in the Antebellum College: The University of Georgia, 1801-1860," in *Science and Medicine in the Old South*, eds. Ronald L. Numbers and Todd L. Savitt (Baton Rouge: LSU Press, 1989), 35-54; John H. Warner, "A Southern Medical Reform: The Meaning of the Antebellum Argument for Southern Medical Education" in *Science and Medicine in the Old South*, eds. Ronald L. Numbers and Todd L. Savitt (Baton Rouge: LSU Press, 1989), 226-255. For discussions of the relationship between religion and science in the curriculum see Theodore Dwight Bozeman, "Science, Nature, and Society: A New Approach to James Henley Thornwell," *Journal of Presbyterian History* 50 (1972): 306-325; Lester D. Stephens, *Joseph LeConte: Gentle Prophet of Evolution* (Baton Rouge: Louisiana State University Press, 1982); and Douglas Sloan, "Harmony, Chaos, and Consensus: The American College Curriculum," *Teachers College Record* 73 (1971): 236. See also Joe L. Kinchloe, "The Battle for the Antebellum Southern Colleges: The Evangelicals vs. The Calvinists in Tennessee," *Journal of Thought* 18 (Fall 1983): 119-133 for a discussion of the role of religion in founding and controlling antebellum Southern colleges in general.

1850s.⁷ Even the Yale Report of 1828—the celebrated theoretical bastion of antebellum curricular conservatism embraced by many colleges and universities—has undergone historical revision. Rather than a reactionary document shunning science and utilitarian education, the Yale Report depicted a college education as the proper foundation for future professional training. This pragmatic, conservative response to the economic changes of the 1820s proclaimed that the classics, mathematics, *and* the sciences would better prepare a young man for “an unspecified career in an undifferentiated competitive society” than would shallow, purely practical studies.⁸ In a similar vein, Wayne K. Durrill reinterprets the apparent growth in classical studies at South Carolina College. Rather than an example of an increasingly backward-looking and conservative institution, he proves that the shift embodied a more diversified, modern approach to the curriculum and that the use of the classics was in step with romanticism, utilitarianism, and the changing socio-political environment of the state and the age.⁹

These scholars revising the false dichotomy between the antebellum college and the postbellum university indirectly address the larger issues of the validation and organization of knowledge in society. The higher education curriculum is a fluid representation of currently valid knowledge as constructed by trustees, faculty, students, parents, politicians, and literati. Changes in the curriculum reflect changes in either the

⁶ Terry S. Reynolds, "The Education of Engineers in America before the Morrill Act of 1862," *History of Education Quarterly* 32 (Winter 1992): 459-82.

⁷ Robert J. Norrell, *A Promising Field: Engineering at Alabama, 1837-1897* (Tuscaloosa: University of Alabama Press, 1990), 1-32; J. Patrick McCarthy, "Commercial Development and University Reform in Antebellum Athens: William Mitchell and Entrepreneur, Engineer, and Educator," *Georgia Historical Quarterly* 83 (1999): 1-28.

⁸ Jack C. Lane, "The Yale Report of 1828 and Liberal Education: A Neorepublican Manifesto," *History of Education Quarterly* 27 (Fall 1987): 325-338, quote page 336.

⁹ Caroline Winterer reaches similar conclusions in "The Humanist Revolution in America. 1820-1860: Classical Antiquity in the Colleges," *History of Higher Education Annual* (1998): 111-130. Wayne K.

relative power of one of these groups, or, more likely, alterations in what these social groups shaping the curriculum consider legitimate knowledge—knowledge worth transmitting.¹⁰ In the early nineteenth century, the rise of science, the spread of the market economy, and the intimations of industrialization created new forms of knowledge that some hoped to make a part of the curriculum.¹¹ The more important new

Durrill, "The Power of Ancient Words: Classical Teaching and Social Change at South Carolina College, 1804-1860," *Journal of Southern History* 65, 3 (August 1999): 469-498.

¹⁰ There are several works that address the socially constructed nature of the college curriculum and its socialization function. The two most immediately relevant are Patricia Gumpert, "Curricula as Signposts of Cultural Change," *Review of Higher Education* 12 (1988): 49-61 and Oscar and Mary Handlin, *The American College and American Culture: Socialization as a Function of Higher Education* (New York: McGraw, 1970). See also Phyllis Vine, "The Social Function of Eighteenth Century Higher Education," *History of Education Quarterly* 16 (Winter 1976): 409-24; Frederick Rudolph, *Curriculum: A History of the American Undergraduate Course of Study since 1636* (Washington: Jossey-Bass, 1977); Herbert Kliebard, *Forging the American Curriculum: Essays in Curriculum History and Theory* (Boston: Routledge, 1992); Janice Ducote, "Curriculum in Higher Education: Historical Influences and Curricular Models," *Proceedings of the Mid-South Educational Research Association*, 1985, ERIC Microfiche Document ED264795; the several essays in I. Goodson, *International Perspectives in Curriculum History* (Wolfeboro, NH: Routledge, Chapman and Hall, 1987); Abraham Flexner, *Universities: American, English, and German* (London: Oxford University Press, 1930); Charles Heller and William Stofft, eds., *Foundations of Curriculum Making* (New York: Arno Press, 1969); Clifton Conrad, *The Undergraduate Curriculum: A Guide to Innovation and Reform* (Boulder, CO: Westview Press, 1978); Al Smith and Clyde Clements, eds., *Meeting the Changing Needs: Undergraduate Curriculum and Instruction* (Port Washington, New York: Associated Faculty Press, 1984); James Atlas, *Battle of the Books: The Curriculum Debate in America* (New York: W.W. Norton, 1990).

¹¹ Collegiate education did not perfectly mirror socio-economic changes, but was a "lagging" indicator of change that did echo "the social patterns that emerged in the wake of the market/transportation revolution." Roger L. Geiger "The Era of Multipurpose Colleges in American Higher Education, 1850-1890." *History of Higher Education Annual* 15 (1995): 51-92, quote on page 85 note 35. For discussions of the market revolution in early America, the beginnings of the industrial revolution, and the social and cultural impacts and ramifications of the two, see Charles B. Sellers, *The Market Revolution: Jacksonian America, 1815-1846* (New York: Oxford University Press, 1991); Melvin Stokes and Stephen Conway, eds., *The Market Revolution in America: Social, Political, and Religious* (Charlottesville, University Press of Virginia, 1996); Paul A. Gilje, ed., *Wages of Independence: Capitalism in the Early American Republic* (Madison: Madison House, 1997); James C. Henretta, *The Origins of American Capitalism* (Boston: Northeastern University Press, 1991); Robert C. Heilbroner, *The Economic Transformation of America to 1865* (San Diego: Harcourt, Brace, and Jovanovich, 1994). See also Glenn Porter, *The Rise of Big Business, 1860-1910* (New York: Crowell, 1973) and the first chapters of Alfred D. Chandler Jr., *The Visible Hand: The Managerial Revolution in American Business* (Cambridge: Belknap Press, 1977). For treatments of formal economic thought for the period see Paul K. Conkin, *Prophets of Prosperity: America's First Political Economists* (Bloomington: Indiana University Press, 1980) and Joseph Dorfman, *The Economic Mind of American Civilization* (New York: Viking Press, 1961). Economic growth and change was a leading cause of political crisis in this turbulent period. See William W. Freehling, *Prelude to Civil War: The Nullification Controversy in South Carolina, 1816-1836* (New York: Oxford University Press, 1992), Harry L. Watson, *Liberty and Power: The Politics of Jacksonian America* (New York: Hill and Wang, 1990); Daniel Walker Howe, *The Political Culture of the American Whigs* (Chicago: University of Chicago Press, 1979); James R. Sharp, *The Jacksonians Versus the Banks: Politics in the States after the Panic of 1837* (New York: Columbia University Press, 1970); Bray Hammond, *Banks and Politics in America from the*

forms of scientific and utilitarian knowledge seemed to the economic survival of the region, state, or locale, the more likely the social and political leaders of those areas were to influence colleges to include that knowledge in the course of study. Beginning in the decades before the Civil War and with renewed vigor in his 1871 commencement address, Benjamin H. Hill encouraged the University of Georgia to offer more courses and degrees in engineering and chemical sciences to train leaders in new, economically viable areas. Hill was not alone. Often spurred by trustees who were active agricultural reformers and urban, railroad, or industrial promoters, many Southern schools offered courses, and in a few cases certificates or degrees, in areas such as agricultural science and civil engineering by the 1850s. The practical and scientific offerings of the region's institutions of higher education further support the contention of several authors in *Science and Medicine in the Old South* that the antebellum South, while unique in many ways, had a vibrant intellectual tradition and scientific community.¹²

These developments were part of a national pattern. As the curriculum expanded with new scientific and utilitarian courses around the nation in the 1830s and 1840s,

Revolution to the Civil War (Princeton: Princeton University Press, 1957) and John McPaul, *The Politics of Jacksonian Finance* (Ithaca, NY: Cornell University Press, 1972).

¹² For a discussion of nineteenth century colleges as "broadly based local enterprises, deeply rooted in the economic and cultural life of towns, counties, and surrounding areas" (p. 150), see David B. Potts, "College Enthusiasm!" as Public Response: 1800-1860," in *The History of Higher Education*, eds. Lester F. Goodchild and Harold S. Wechsler (Simon and Schuster: Needham Heights, Massachusetts: 1997). Reprinted from *Harvard Educational Review* 47 (1977). There are no general works specifically about the relationship between the business community and the higher education curriculum in the early nineteenth century. "Realizing a University: The University of Georgia from 1854 to 1882," (Master's Thesis, University of Georgia, 1996) and "Commercial Development," McCarthy draws the connection between the business community of north Georgia and the curriculum of the state university through the career of one particularly active trustee. David Potts calls for closer studies of trustees in "Trustee Demography and Shifts in Institutional Identity: Wesleyan University, 1831-1993," *History of Higher Education Annual* 17 (1997): 97-112. See also Theodore Raouon Crane, *Francis Wayland: Political Economist as Educator* (Providence, RI: Brown University Press, 1962). For the late nineteenth century see Clyde W. Barrow, *Universities and the Capitalist State: Corporate Liberalism and the Reconstruction of American Higher Education* (Madison: University of Wisconsin Press, 1990) and Edward C. Kirkland, *Dreams and Thoughts in the Business Community, 1860-1900* (Ithaca, NY: Cornell University Press, 1956), 83-114.

university leaders realized that they would have to make certain choices. Each new science, field, or newly validated area of knowledge could not become yet another course in a mandatory, already bloated curriculum. Every student might take Latin or chemistry, but would and should every student take mechanical engineering? The commitment by college and university leaders to include scientific and practical courses whenever they had the personnel and funds to do so validated the new knowledge. Yet, they continued, for the most part, to organize that knowledge in the same fashion as all other elements of the curriculum—as new courses in the list of prescribed studies. A number of educators realized, however, that that list would grow and diversify beyond all usefulness in a short while. Consequently, they experimented with new ways to organize knowledge in the curriculum, implementing structural changes, prefiguring reforms that originated the modern university—separate polytechnic schools, electives and parallel courses, professional certificates and degrees, and multi-school and multi-campus organization. Emulating the Government School of Mines in England and the polytechnic schools in France, Rensselaer Polytechnic Institute opened in New York in 1824. The United States Military Academy was also one of the few schools devoted to engineering in the United States, but engineering was not the only scientific skill in demand.¹³ During the 1840s and 1850s American farmers became an increasingly self-aware political force, creating a number of agricultural associations across the country and contributing to the growing sentiment for colleges that would teach useful skills. This movement influenced the founding of the New York State Agricultural College in 1853, Pennsylvania's Farmers'

¹³ Until 1838 the army lent engineers to the Baltimore and Ohio and other railroads before Congress forbade it. For more on the army and early civil engineering, see Forest G. Hill, *Roads, Rails, and Waterways: The Army Engineers and Early Transportation* (Norman: University of Oklahoma Press, 1957).

High School in 1854, and the Michigan State College of Agriculture in 1857.¹⁴ The demands for both industrial and agricultural education attained their antebellum height when the Morrill Land-Grant Act reached President James Buchanan's desk in 1859.¹⁵

Cognizant of these pressures, administrators of traditional colleges made structural changes as well. Many liberal arts colleges and universities began offering certificates of achievement to students who took courses in mathematics and the sciences for two or three years. These students usually avoided ancient language courses, making them ineligible to receive the Bachelor of Arts degree. By the late 1840s and 1850s some educators added new departments and Bachelor degrees to their institutions. Harvard and Yale in the late 1840s and Dartmouth and Brown in the early 1850s started scientific schools, and the University of Pennsylvania created a department of mines and manufactures in 1855. Harvard and Yale also adopted two new degrees—the Bachelor of Science and the Bachelor of Philosophy—that theoretically elevated scientific and practical skills to the level of traditional studies.¹⁶ The pursuit and validation of new forms of knowledge in the early to middle 1800s, then, were the inexorable beginnings of a process that gave rise to new ways of organizing knowledge that falteringly began in the 1850s and emerged in full force by the end of the century.¹⁷

¹⁴ Ross, *Democracy's College*, 14-45; Rudolph, *American College*, 248-9.

¹⁵ Buchanan vetoed the bill, fearful of straining the sectional crisis that was leading the nation to civil war.

¹⁶ See Reynolds, *Education of Engineers*, for a discussion of partial courses in engineering. Brubacher and Rudy, *Higher Education*, 63, 389-93; Ross, *Democracy's College*, 46ff; Rudolph, *American College*, 230, 248-53. For the variety of earlier experiments with a more flexible and responsive curriculum see Butts, *The College Charts Its Course*, 131-143. For the views of Henry Tappan at the University of Michigan and Francis Wayland at Brown University, see Henry Tappan, *University Education* (New York: George P. Putnam, 1851); Francis Wayland, *Thoughts on the Present Collegiate System in the United States* (Boston: Gould, Kendall, and Lincoln, 1842) and Francis Wayland, "The Education Demanded by the People of the United States" (Boston: Phillips, Sampson, and co., 1855).

¹⁷ For the expansion of knowledge and the eventual specialization of its pursuit, see the essays in two excellent works: Alexandra Oleson and Sanborn C. Brown, eds., *The Pursuit of Knowledge in the Early American Republic: American Scientific and Learned Societies from Colonial Times to the Civil War*

In this context, not all opposition to the “university movement” and support of the prescribed classical curriculum of the college was necessarily opposition to the sciences, a changing economy, or a utilitarian education. One might believe it worthy, and even necessary, for society to retain, develop, and pass on certain knowledge, but that belief does not imply any particular way of organizing it. Like the authors of the Yale Report, many nineteenth century conservative trustees, faculty, and politicians wanted to ensure that colleges provided society’s leaders with a sufficient general education through prescribed studies. They were concerned that popular demands to transform the college into a different kind of institution by diversifying course offerings with blatantly utilitarian education would dilute this fundamental role. In many cases the defenders of the prescribed, heavily classical curriculum merely wanted to protect the traditional function of the college, rather than allow it to become a wholly new kind of institution by appropriating tasks perhaps more suited to professional and polytechnic schools or the informal education provided by agricultural and other scientific societies or apprenticeships. They had no objections to scientific or practical education, just to making them an integral part of the college. When analyzed in this way, the lines tend to blur between “reformers” and “reactionaries.” Some of the most ardent defenders of the classics, such as James H. Thornwell, president of South Carolina College, wanted to accommodate utilitarian studies by offering advanced degrees beyond the Bachelor of Arts, while many practical-minded reformers, such as William L. Mitchell, trustee and temporary president of the University of Georgia, hoped secondary schools would

(Baltimore: Johns Hopkins University Press, 1976) and Alexandra Oleson and John Voss, eds., *The Organization of Knowledge in Modern America, 1860-1920* (Baltimore: Johns Hopkins University Press, 1979). Brubacher and Rudy, *Higher Education in Transition*, 105, 107, 148; Rudolph, *American College*, 234, 238, 239.

assume the task of classical training so that the colleges could shift their focus.¹⁸ These were two among many organizational approaches to the problem of maintaining general, classical studies in formal education while adjusting to the economy by offering formal utilitarian training. The various reforms to include science and utilitarian courses in the curriculum were, nevertheless, one essential step in turning colleges with their limited functions and aims into quite different multipurpose institutions that would not only train the mind and provide a general education but would impart new, practical knowledge. By the 1850s the American college was well on its way toward transformation. It was no longer a traditional college with its prescribed curriculum but not quite a university the way the term is used to describe the multi-faceted institutions that emerged around the turn of the century.¹⁹ These evolutions in the social construction of knowledge and the

¹⁸ Thornwell, often cited as a curricular conservative, actually hoped to reduce the college studies of South Carolina College to three years and offer polytechnic studies toward Master's degrees in the fourth year. Conversely, the founders of Rensselaer—the first true polytechnic school—defended the importance of a collegiate education, claiming that a student “would be much better prepared if he should first receive a collegiate education” before attending their school. This was the same assumption that Thomas Jefferson had made. Advanced and utilitarian studies must be studied only after or in conjunction with a general education based on the classics. James H. Thornwell, “Barnard on American Colleges,” *Southern Quarterly Review* New Series (1856): 176-178, 186-188; B. M. Palmer, *The Life and Letters of James Henley Thornwell* (Richmond: Witten and Shepperson, 1875), 355; Trustees of the Rensselaer School, *The Constitution and Laws of Rensselaer School in Troy, NY* March 11, 1825, Article Four. Roy J. Honeywell, *The Educational Work of Thomas Jefferson* (Cambridge, MA: Harvard University Press, 1931).

¹⁹ See Douglas Sloan, “Harmony, Chaos, and Consensus: The American College Curriculum,” *Teachers College Record* 73 (1971): 221-251 for a discussion of the fundamentally different roles of the college and the university and how the obfuscation of that distinction has contributed to the false dichotomy and misconstrued historical development of the two institutions. Roger L. Geiger has proposed that a specific type of institution emerged on the higher education landscape in the 1850s. Growing out of the traditional college, the multipurpose college was a response to the expansion of knowledge and the demand for practical skills, offering alternative Bachelors degrees as well as non degree courses in subjects like teaching and commerce and appealing to a “proto-middle-class constituency.” It faded away in the 1890s amid university reform. This is a compelling argument that is generally upheld by the findings of this study if one assumes the anachronistic periodization that Geiger has created. While reformers of the middle to late nineteenth century in fact created multipurpose colleges as measured against 20th century universities, the reformers intended to create universities and referred to their institutions as universities. Labeling this transitional period as a finite institutional type might ease the task of historians, but it does not reflect the intentions and actions of the historical actors. Roger L. Geiger “The Era of Multipurpose Colleges in American Higher Education, 1950-1890.” *History of Higher Education Annual* 15 (1995): 51-92, quote on page 63. See the first two chapters of Laurence Veysey, *The Emergence of the American University* (Chicago: University of Chicago Press, 1965) for a discussion of the faculty psychology and

higher education curriculum continued through the Civil War, gained funding with the 1862 Morrill Act, and later accelerated and settled into nationwide patterns to forge the modern university by the 1890s.

These developments also paralleled and reinforced the spread of the professions, expanding beyond the traditional lawyer, doctor, and cleric. As the growth of knowledge engendered ever more specialization and Americans lived and traveled more frequently beyond the bounds of their “island communities,” the professions changed in several ways. New ones emerged to legitimate the activities of those in new knowledge industries like engineering; professional associations and schools worked to order the older professions like medicine and law; and there were concerted efforts to forge scientific professions in agriculture. By and large, these were adjustments in long-standing professions and pursuits already followed by elites or the creation of new professions for elites to pursue in a changing economy and society.²⁰ Often originally

mental discipline underpinnings of the curriculum in the antebellum period. The later chapters of Veysey explore the development of the university in the late nineteenth century, asserting (p.337ff) that only after the notions of faculty psychology and mental discipline were over-turned and higher education institutions assumed multiple roles and functions could the university emerge. Veysey did, however, recognize utilitarian reform as a primary mechanism of this change. See also Julie A. Reuben, *The Making of the Modern University: Intellectual Transformation and the Marginalization of Morality* (Chicago: University of Chicago Press, 1996). For a discussion of the role of college as provider of general education and similarities between antebellum colleges and “preparatory” academies, see Robert L. Church and Michael W. Seldak, “The Antebellum Academy and College,” in *The History of Higher Education*, eds. Lester F. Goodchild and Harold S. Wechsler (Needham Heights, Massachusetts: Simon and Schuster, 1997), 131-148 and Joseph F. Kett, *The Pursuit of Knowledge Under Difficulties: From Self-Improvement to Adult Education in America, 1750-1990* (Stanford, CA: Stanford University Press, 1994), 90-95. For information on societies see Ralph S. Bates, *Scientific Societies in the United States* (Cambridge: The MIT Press, 1965); Carl Bode, *The American Lyceum* (New York: Oxford University Press, 1956); and Lester D. Stephens, “Scientific Societies in the Old South: The Elliot Society and the New Orleans Academy of Science,” in *Science and Medicine in the Old South*, eds. Ronald L. Numbers and Todd L. Savitt (Baton Rouge: LSU Press, 1989), 55-78.

²⁰ Rudolph, *American College*, 244, 293-294, 341-3; Veysey, *Emergence*, 60, 68; Brubacher and Rudy, *Higher Education in Transition*, 100, 111, 116, 198-218; Oscar and Mary Handlin, *The American College and American Culture*, 4, 44, 63. A number of works treat the rise of professions in the nineteenth century. Burton J. Bledstein’s *The Culture of Professionalism: The Middle Class and the Development of Higher Education* (New York: W. W. Norton and Company, 1976) is the most often cited. Bledstein defines a middle class mentality as one of aspiration and notes the role of the university in helping originate and

founded for the training of ministers and political leaders, institutions of higher education found themselves engaging in more formal alliances and ties with the older professions and embracing the emergent professions through new courses and degrees.²¹

While education for new and old professions served the social elite, colleges and universities came under considerable pressure in the nineteenth century to open their doors to wider segments of society. Advocates of utilitarian reform were generally of two types. They first perceived themselves to be expanding the professional options (hence the choices of culturally honorable pursuits) for the upper classes. Other promoters of practical higher education believed that the middle and lower classes should

shape that mentality as well as being gatekeeper and handmaiden to the professions. Thomas L. Haskell's review of *The Culture of Professionalism* "Power to the Experts," *New York Review of Books* (13 OCT 1977): 28-33 asserts, however, that the rise of the professions was more the result of "a small, cultivated forward-looking gentry elite" (p. 32) than an amorphous, less powerful middle class. "Commerce and College" assumes this view of the professions. Bruce A. Kimball's *The "True Professional Ideal" in America: A History* (Cambridge: Blackwell, 1992) looks at the late nineteenth century professions in the context of the growth of the professional idea over the last three centuries. Nathan O. Hatch, ed., *The Professions in American History* (Notre Dame: University of Notre Dame Press, 1988) is an excellent collection of essays concerning specific professions and the elitist and democratic nature of the professions. Thomas L. Haskell, ed., *The Authority of Experts: Studies in History and Theory* (Bloomington: Indiana University Press, 1984) is a similar collection whose essays take a more theoretical approach. For the transition from apprenticeships to formal professional education see Brubacher and Rudy, *Higher Education in Transition*, 198-219. "Island communities" is an expression used by Robert Wiebe in *The Search for Order, 1877-1920* (New York: Hill and Wang, 1967) to characterize the social and cultural make-up of nineteenth century America before industrialization hastened the transportation revolution into connecting them.

²¹ America had inherited two university ideas from Europe that informed much of the thinking about the eventual shape and function of formal higher education. The first idea was an institution for professional preparation in law, medicine, and the ministry. Most American schools claiming university status did so based upon affiliation with a school of law or medicine or by having a theology department which trained ministers. Often the university title simply proclaimed a college's hopes to fulfill these functions in the future. New professions expanded this definition and vision. The second idea was that of the new European universities, first developed in Germany in the 1810s and 1820s, that focused upon research in a range of subjects—including the new sciences—and allowed students to choose their own courses and programs. Rather than clear-cut modeling, American colleges and universities borrowed selectively from European ideas. Brubacher and Rudy, *Higher Education in Transition*, 105, 107, 148; Rudolph, *American College*, 234, 238, 239; Virginus Dabney, *Mr. Jefferson's University* (Charlottesville: University of Virginia Press, 1981), 10; Lawrence Cremin, *American Education: The National Experience, 1783-1886* (New York: Harper and Row, 1980), 275-80. For more on early American definitions of the university and education see Frederick Rudolph, *Essays on Education in the Early Republic* (Cambridge: Belknap, 1965); Allen Oscar Hansen, *Liberalism in American Education* (New York: McMillan, 1926); David W. Robson, *Educating Republicans* (Westport: Greenwood, 1985); and E. W. Knight, *A Documentary History of Education in the South before 1860* (Chapel Hill: University of North Carolina Press, 1944).

be able to forego classical training—which required expensive schooling to even begin at the college level—and receive utilitarian training in colleges and universities.²²

This dynamic took on added emphasis when the 1862 Morrill Land Grant Act promised to fund higher education in agriculture and engineering for the “industrial classes” and schools began receiving and allocating the proceeds. The federal government had awarded each state land proportional to the number of representatives it had, and the states then sold the land and gave the proceeds to whichever educational institutions they wished. State legislatures distributed the funds in different ways, giving them to established institutions, issuing them to a number of schools, or creating new schools altogether. These land-grant colleges underscored two controversies within higher education—should the new schools prepare students for an agricultural economy or an increasingly urban and industrial one and should they train the lower classes or educate the middle and upper classes? Debates over using land-grant monies reflected the economic transformation of the nation that had begun in earnest with the spread of industrialization in the 1870s and 1880s. Business and industry advocates contested (but sometimes colluded) with agricultural groups to shape the college and university curriculum in their interests, and the colleges drew fire nationwide from state agricultural

²² This notion was combined with the increasingly popular idea of seeing every business activity, rather than an exalted few, as a profession. See David F. Allmendinger, *Paupers and Scholars: The Transformation of Student Life in Nineteenth Century New England* (New York: St. Martin's Press, 1975); Allmendinger, “New England Students and the Revolution in Higher Education, 1800-1900,” *History of Education Quarterly* 11 (Winter 1971): 381-389; Richard Angelo, “The Social Transformation of Higher Education,” in *The Transformation of Higher Learning, 1860-1930*, ed. K. H. Jarusch (Chicago: University of Chicago press, 1983), 261-292; and Burke, *Collegiate Populations* for challenges to the view that antebellum colleges were the preserves of the elite and discussions of the growth of egalitarianism in higher education. See also Richard N. Wright, “Planters and Scholars: The Common Bonds of Higher Education in Georgia,” (Master's Thesis, University of Georgia, 1996) for a comparison of the social origins of students in public and private colleges in one state. He found that college students were overwhelmingly sons of the elite at both types of schools.

societies and the Grange when they spent more of the federal money on engineering than on agriculture.²³

Land-grant college leaders also wrestled with the alternative aims of training farmers and mechanics versus educating agricultural scientists and engineers. They hoped to provide a sound scientific basis to either industrial or agricultural education, but that little benefited the farmers who attended the schools when they first opened. Weak public school systems had left many with meager preparatory education, and nineteenth century colleges—particularly the land-grant colleges—found themselves having to provide it. Political advocates of farmers and the lower classes consequently criticized the land-grant colleges for not consciously better serving their constituents. Pre-existing state universities that had become land-grant colleges received the most criticism for not offering a more egalitarian, basic education, since many were already perceived as preserves of the elite. Several groups proclaiming agricultural and egalitarian interests promoted the creation of new, separate institutions to receive the land-grant funding, taking the money away from the original recipients. Like a few other institutions across the country, the University of North Carolina lost the money to a new institution—the North Carolina College of Agricultural and Mechanical Arts—whose political patrons promised to serve the interests of farmers and the lower classes in general, while the University Georgia held onto the funds by creating branch colleges ostensibly to serve farmers and more local needs. Besides these dramatic changes, there were some accommodations to the viewpoint that a student could get by in life without a solid general education—then defined as courses in Latin and Greek language and culture—

²³ Burke, *Collegiate Populations*, 214; Ross, *Democracy's College*, 95-6, 155; Rudolph, *American College*, 257-8.

even in the schools most heavily criticized as bastions of elitism. The partial courses, certificates of proficiency, and alternative Bachelor degrees that had allowed students to focus upon scientific, utilitarian studies also made room for students who had been unable to afford adequate preparatory education. Yet, American and Southern colleges generally remained the preserve of the upper classes, despite these efforts and the creation of independent agricultural and mechanical colleges. Land-grant colleges and universities—like other colleges across the country—ultimately prepared their graduates for the professions and business. It is tempting to see this time in the history of American higher education as the emergence of institutionalized meritocracy in American society, yet “only 3.9 per cent of the college-age population was attending (let alone graduating from) college” by 1900.²⁴

It is particularly interesting to explore these developments—curricular and structural adjustments before the Civil War, the continuity of those transitions through the war and Reconstruction, and the ensuing conflicts over the acquisition and uses of Morrill funds—in the South. Slavery and the cotton economy tended to slow economic change in the southern United States, and they helped shape a hierarchical society with its own cultural peculiarities. If there were a “revolutionary turning point” in the history of

²⁴ Haskell, “Power to the Experts, 32, n. 8. Roger L. Geiger, “The Rise and Fall of Useful Knowledge: Higher Education for Science, Agriculture, and the Mechanical Arts, 1850-1875,” *History of Higher Education Annual* 18 (1998): 47-66. For more on the Morrill Land-Grant Act see the several articles in the 18th edition of *History of Higher Education Annual*, (1998), titled, *The Land-Grant Act and American Higher Education: Context and Consequences*. See also Ross, *Democracy’s College*; J. B. Edmond, *The Magnificent Charter: The Origin of the Morrill Land-Grant Colleges and Universities* (New York: Exposition Press, 1978); and Allen Nevins, *The Origins of the Land-Grant Colleges and Universities* (Washington, DC: Civil War Centennial Commission, 1962). For a list of sources see Alice H. Songe, *The Land-Grant Idea in American Higher Education* (New York: Sauer, 1980). For a general analysis of agricultural colleges see Richard S. Kirkendall, “The Agricultural Colleges: Between Tradition and Modernization,” in Gilbert C Fite, ed., *Agricultural Education*, Special Issue of *Agricultural History* 60 (Spring 1986): 1-21. See, in particular, Rudolph, *American College*, 248-253; Veysey, *Emergence of the American University*, 15, 70-71; Brubacher and Rudy, *Higher Education in Transition*, 62-4, 389-393;

higher education, one would expect to find it amidst the physical, political, and psychological destruction wrought by the Civil War and Reconstruction in the South. The South also experienced a New South movement in which economic boosters from various walks of life—business, journalism, politics, and education—promoted several ways to improve the Southern economy. This was soon followed and challenged by a conservative, agrarian reaction that later developed into Populism. These unique economic and cultural factors provide contexts in which to study the history of higher education not present in other regions of the country.²⁵

The South was slow to embrace a more diverse economy. “Safe” investments in land and slaves had a stronger appeal for the region’s capitalists who traded in people and staple crops. They had little incentive to invest in developing land as long as it was readily available in the West and as long as so much capital was movable slaves. Agricultural productivity generally grew over the antebellum period, and some scholars have asserted that land and slaves were more profitable than any other alternatives. Social barriers further checked economic diversification, as the South culturally valued the planter who dabbled in medicine or the law over the entrepreneur and businessman.²⁶

Oscar and Mary Handlin, *The American College and America Culture*, 53; Ross, *Democracy’s College*, 46ff, 86, 113-4; and Edmond, *Magnificent Charter*, 29, 33-5.

²⁵ Also, the study of higher education as one institution in Southern society can be a focal point for examining broad economic, intellectual, and cultural trends. If the curriculum and efforts to shape it reflect in any way the aspirations of a society, what do changes in the curriculum of Southern institutions of higher education say about the South in the nineteenth century? The continuities revealed in “Commerce and College” regarding Southern higher education imply continuities in southern society. Antebellum efforts to keep state college and university curriculums abreast of changes in science and the marketplace register a strong desire on the part of some social and political elites to keep the South economically viable. This is especially true since the curriculum is generally a “lagging” indicator. Paul H. Mattingly, “Structure Over Time: Institutional History,” in *Historical Inquiry in Education*, ed. John H. Best (Washington D.C.: American Educational Research Association, 1983): 34-55.

²⁶ Fred Bateman and Thomas Weiss, *A Deplorable Scarcity: The Failure of Industrialization in the Slave Economy* (Chapel Hill: University of North Carolina Press, 1977), 160-163; Gavin Wright, *The Political Economy of the Cotton South: Households, Markets, and Wealth in the Nineteenth Century* (New York: Norton, 1978), 4, 109ff, 126, 132; Gavin Wright, *Old South, New South: Revolutions in the Southern*

Many planters and other southern capitalists were likely aware of the potentially higher investment returns of southern industry over agriculture, and most market signals indicated that more than sporadic industrialization should have occurred in the South in the second quarter of the nineteenth century, but it did not. As Fred Bateman and Thomas Weiss have argued and others have concluded or implied, southern capitalists, therefore, must have “attached unagreeably high social costs to industrial diversification.” Perhaps more importantly, industrial investment also seemed like a greater risk than the well-worn paths of land and slave ownership.²⁷

Despite these social costs, the apparently greater comparative risk of manufacturing investment, and the overwhelming agrarian nature of the southern economy in the middle decades of the nineteenth century, a viable minority of planters and town-building professionals—often times being the same people—called for changes to the southern economy. They hoped to strengthen the economies of their counties, states, and region by scientifically improving and diversifying agriculture; building more

Economy since the Civil War (Baton Rouge: Louisiana State University Press, 1986), 17-28; Eugene Genovese, *The Political Economy of Slavery* (New York: Pantheon, 1965), 189, 221, 233. See Robert W. Fogel and Stanley L. Engerman, *Time on the Cross: The Economics of American Negro Slavery* (Boston: Little, Brown, 1974) for the argument that slavery was economically vibrant and generally profitable.

²⁷ Bateman and Weiss, *Deplorable Scarcity*, 158-62. The Southern planter enjoyed prestige atop a social hierarchy based upon his wealth measured in land and slaves. Why would he jeopardize that position by shifting his activities and investment patterns to pursuits that might produce profits and capital, but would certainly diminish his prestige? He was torn between the capitalist impulse and the more traditional social arrangements that praised land, leisure, and the ownership of labor. With their slaves as dependents and their ownership of land providing much of their identity, planters “still clung to a two-thousand-year-old prejudice against manual labor.” Anything hinting of manual work or overseeing non-planting manual work like the tasks of a small shipper or merchant would deny them their high status. (quote) Gordon S. Wood, “The Enemy is Us: Democratic Capitalism in the Early Republic,” in *Wages of Independence: Capitalism in the Early American Republic*, ed. Paul A. Gilje (Madison: Madison House, 1997), 143; Marc Egnal, *Divergent Paths: How Culture and Institutions Have Shaped North American Growth* (New York: Oxford University Press, 1996), 53ff; Carl Degler, *Place Over Time: The Continuity of Southern Distinctiveness* (Baton Rouge: Louisiana State University Press, 1977), 56; William Freehling, *Prelude to Civil War: The Nullification Controversy in South Carolina, 1816-1836* (New York: Oxford University Press, 1992), 304; Thomas H. Naylor and James Clotfelter, *Strategies for Change in the South* (Chapel Hill: University of North Carolina Press, 1975), 14; Laurence Shore, *Southern Capitalists: The Ideological Leadership of an Elite, 1832-1885* (Chapel Hill: University of North Carolina Press, 1986), 11.

and better roads, canals, and railroads; and expanding into manufacturing, shipping, and finance. They believed that such changes would make them less dependent on the North for the goods and services that these industries provided and keep “at home” the profits that these industries generated.²⁸

²⁸ As Tom Downey has argued in one recent, comprehensive review of the literature on the antebellum Southern economy, beginning in the 1830s and 1840s and certainly by the 1850s, a transition was occurring in the southern political economy. It was altering “to favor men of capital over men of property.” “Riparian Rights and Manufacturing in Antebellum South Carolina: William Gregg and the Origins of the ‘Industrial Mind,’” *Journal of Southern History* 65 (February 1999): 77-108, quote on page 107. Downey draws from the discussions of the penetration of capitalism into the Old South in Mark M. Smith *Mastered by the Clock: Time, Slavery and Freedom in the American South* (Chapel Hill: UNC Press, 1997): 94-127 and 154-176. For the classic accounts of early industrialization, see C. Vann Woodward, *Origins of the New South* (Baton Rouge: LSU Press, 1951), 107-141, 292-320; James C. Cobb, *Industrialization of Southern Society, 1877-1984* (Lexington: University Press of Kentucky, 1984), 17-26; and Wright, *Old South, New South*, 124-197. For a survey of antebellum industrial plans in the South see Herbert Collins, “The Southern Industrial Gospel before 1860,” *Journal of Southern History* 12 (August 1946): 386-402. More recent studies include Mary A. DeCredico, *Patriotism for Profit: Georgia's Urban Entrepreneurs and the Confederate War Effort* (Chapel Hill: UNC Press, 1990); David Goldfield, *Urban Growth in an Age of Sectionalism: Virginia, 1847-1861* (Baton Rouge: LSU Press, 1977); T. Mills Thornton, *Politics and Power in a Slave Society, Alabama, 1800-1860* (Baton Rouge: LSU Press, 1978); John R. deTreville, *The Little New South: Augusta, Macon, and Columbus, 1840-1865* (PhD Dissertation, University of North Carolina, Chapel Hill, 1985); Christopher Morris, *Becoming Southern: The Evolution of a Way of Life, Warren County and Vicksburg, Mississippi, 1770-1860* (New York: Oxford Press, 1995); James Michael Russell, *Atlanta, 1847-1890: City Building in the Old South and the New* (Baton Rouge: LSU Press, 1988). Frances Taliaferro Thomas, *A Historic Portrait of Athens and Clarke County* (Athens: University of Georgia Press, 1992) portrays nineteenth century Athens, Georgia (home of the University of Georgia) as a regional business and manufacturing center rather than a sleepy college town as does Michael Gagnon, “Transition to an Industrial South: Athens Georgia, 1830-1850,” (Ph.D. Dissertation, Emory University, forthcoming). For North Carolina, see David L. Carlton, “The Revolution from Above: The National Market and the Beginnings of Industrialization in North Carolina” *The Journal of American History* 77 (1990): 445-475. For a discussion of colonial themes in Southern economic thought, see Joseph J. Persky, *The Burden of Dependency: Colonial Themes in Southern Economic Thought* (Baltimore: Johns Hopkins University Press, 1992), 62ff.

The vision of a changing southern economy held by some in the antebellum South is best displayed in the conventions to promote direct trade with Europe and the general stimulation of Southern commerce that lasted from 1830 to the 1870s. They have added relevance since one of the actors of educational reforms in Georgia, William Mitchell, took part in some of the first conventions. Many who attended the conventions hoped first to strengthen the growing market economy and then to diversify and industrialize it. All but a few of these conventions discussed the need for education to take up the banner of economic change. There are three works about the Antebellum trade conventions: William Watson Davis, *Antebellum Southern Commercial Conventions* (Montgomery: Alabama Historical Society, 1905); John G. Van Deusen, *The Antebellum Southern Commercial Conventions* (Durham: Seeman, 1926); and Herbert Wender, *Southern Commercial Conventions, 1837-1859* (Baltimore: Johns Hopkins University Press, 1930). See Davis, *Antebellum Southern*, 200 and Wender, *Southern Commercial*, 111, 144, 155-8, 167, 181 for the place of education in the economic ideas of the convention delegates. Vicki Vaughn Johnson's *The Men and the Vision of the Southern Commercial Conventions, 1845-1871* (Columbia: University of Missouri Press, 1992) looks at the movement as a whole but skips over the Direct Trade Conventions of the 1830s to focus her analysis upon the participants of the formal Southern Commercial Conventions from 1845 to 1871. Johnson admits the conventions were “friendly” to manufacturing but that the conventions

These visions of a manufacturing and industrial South, or at least a more economically diverse South, continued through the destruction of the Civil War and the turmoil of Reconstruction. Men like Henry Grady, Walter Hines Page, Benjamin Hill, and countless others spoke and wrote at length in the 1870s and 1880s about what came to be called the New South. Page and Hill's ideas about creating a New South most closely followed those often expressed by boosters before the war. They hoped the South could develop its own capital and industry and train its own people to be the engineers and artisans who would create and run them. Henry Grady, on the other hand, advocated that the South should work to attract Northern investment and Northern immigrants who would become part of the region's skilled labor force.²⁹ These two means to economic development were not mutually exclusive, but the economic structure and the political milieu of the South in the 1870s and 1880s tended to favor Grady's New South approach that would deepen rather than remove the South's economic ties to the North. The South

emphasized commercial agriculture, nurturing a staple-crop economy. She asserts the conventions were not the voice of any New South boosterism, calling for widespread industrialization, urban growth, and diversified agriculture (6-7, 245). Johnson does state, however, that the conventions became more urban-focused over time and always heavily represented the interests of town professional. By skipping over the Direct Trade conventions of the late 1830s, however, she fails to see just how early that change began and the importance of manufacturing and industry as a *final* goal of the convention movement. The difference is ultimately a question of emphasis. Harold Woodman, *King Cotton and His Retainers: Financing and Marketing the Cotton Crop of the South, 1800-1925* (Lexington: University of Kentucky Press, 1968), 143; Degler, *Place Over Time*, 52; Fred Bateman and Thomas Weiss, *A Deplorable Scarcity: The Failure of Industrialization in the Slave Economy* (Chapel Hill: University of North Carolina Press, 1977), 132; and Michael Kruger-Charle, *Modernisierung und Sklaverei: die industialisierungdebatte im alten Suden der USA 1840-1860* [*Modernization and Slavery: The Industrialization Debate in the Old American South, 1840-1860*] (Munich: Fink, 1988); see the conventions as actively supporting and promoting manufacturing, rather than being passively "friendly." See also Robert Royal Russel, *Economic Aspects of Southern Sectionalism, 1840-1861* (New York: Russell and Russell, 1960). Drew Gilpin Faust's essay "The Peculiar South Revisited: White Society, Culture, and Politics in the Antebellum Period, 1800-1860." in *Interpreting southern History: Historiographical Essays in Honor of Sanford W. Higginbotham*, eds. John B. Boles and Evelyn Thomas Nolen (Baton Rouge: Louisiana State University Press, 1987) provides a good overview of the debate concerning manufacturing and the capitalist nature of the South.

²⁹ Numan V. Bartley, *The Creation of Modern Georgia* (Athens: University of Georgia Press, 1983), 84-85; Harold E. Davis, *Henry Grady's New South* (Tuscaloosa: University of Alabama Press, 1990); Benjamin H. Hill, Jr., *Senator Benjamin H. Hill of Georgia: His Life, Speeches and Writings* (Atlanta,

lacked a capital goods sector and relied on importing machinery and tools from Northern manufacturers. The imported technology made it easier to use unskilled labor in the labor surplus economy and decreased incentives to train Southern labor or to develop the technological community needed to support indigenous higher-wealth-producing industries or a southern capital goods sector. Contrary to Grady's vision, however, few Northern immigrants followed Northern investment capital and technology South the same way they did in the West. This lack of immigration only deepened the South's dependence of Northern technology and capital. Northern investment capital was essential for economic change, since the southern economy was intensely capital scarce and the prevailing credit system encouraged single crop agriculture and rarely backed manufacturing or industry beyond the most basic levels of agricultural processing. Southern capitalists and entrepreneurs, therefore, "were perfectly happy to become, in effect, franchisees of the already developed technological community of the manufacturing belt." Similarly, Southern politicians were far more interested in keeping taxes low in their states than they were in funding education for a skilled workforce or the higher education that might be needed to develop an indigenous technological community.³⁰

1893); John Milton Cooper, Jr., *Walter Hines Page: The Southerner as American, 1855-1918* (Chapel Hill: University of North Carolina Press, 1977), xx-xxi, 69-71.

³⁰ David L. Carlton and Peter A. Coclanis, "The Uninventive South? A Quantitative Look at Region and American Inventiveness" *Technology and Culture* 36 (1995): 303, 311-312, 322-325. Quote on page 325. Wright, *Old South, New South*, 37-38, 62-63, 78-80. Paul Gaston's *The New South Creed: A Study in Southern Mythmaking* (New York: Knopf, 1970) discusses the various forms of postbellum boosterism, coalescing them into one nebulous New South Creed. The economic boosterism of the 1870s and 1880s took many forms for many local or particular reasons. The structural changes in higher education at the Universities of Georgia and North Carolina were one manifestation of that boosterism. See also Woodward, *Origins of the New South*, 145ff.

Despite the continued and new obstacles to industrialization and economic diversification after the Civil War in the South, the efforts by some boosters to create a "commercial revolution...fostering an industrial revolution" continued and strengthened, and was increasingly embraced by planters. *Thinking Back: The Perils of Writing History* (Baton Rouge: LSU Press, 1986), 74. See also James C. Cobb's "Beyond

The fortunes of the curriculum in colleges and universities reflect this ongoing struggle in the Southern economy and society over the course of the nineteenth century. Many of the southern higher educators who advocated educational reform tended to be advocates of economic change as well. Before the Civil War they hoped for an economically independent and diverse South, and like the boosters of the 1830s, 1840s, and 1850s, their vision was contrary to the prevailing slave and plantation economy. In the 1870s and 1880s, Benjamin Hill, Walter Hines Page and other boosters were directly involved in higher education reform. Postbellum higher education reformers sought to forge an independent Southern economy, in part, by helping to develop a Southern technological community, but here again, they were working at odds with the prevailing political and economic environment of the period. They also had to struggle with the Farmers' Alliance and burgeoning Populist movement led by men like Tom Watson in Georgia and Leonidas Polk in North Carolina. In the late 1870s and early 1880s, such agrarian organizations tried to remove state funding from the established universities and directly train the farmer and the laborer rather than develop a more highly skilled technological community through scientific education.³¹ This movement stirred

Planters and Industrialists: A New Perspective of the New South" *Journal of Southern History* 54 (February 1988), 45-68.

³¹ This conflict over state funding for higher education and the shape state higher education would take was a part of the wider struggle by the Alliance and Populism against those in power in most Southern state's over the general shape of economic and political relationships. For a general history, see Robert C. McMath, *Populist Vanguard: A History of the Southern Farmer's Alliance* (New York: W. W. Norton, 1975); Lawrence Goodwin, *Democratic Promise: The Populist Moment in American History* (New York: Oxford University Press, 1976); Woodward, *Origins of the New South*; and William F. Holmes, "Populism: In Search of a Context," *Agricultural History* 64, 4 (1990): 26-58. For Georgia, see C. Vann Woodward, *Tom Watson: Agrarian Rebel* (London: Oxford University Press, 1975 (first printed in 1938); Bartley, *Creation of Modern Georgia*, 87-100; William F. Holmes, "The Southern Farmer's Alliance: The Georgia Experience," *Georgia Historical Quarterly* 72 (Winter 1988): 636-639; Steven Hahn, *The Roots of Southern Populism: Yeoman Farmers and the Transformation of the Georgia Upcountry, 1850-1890* (New York: Oxford University Press, 1983); Ferald J. Bryan, *Henry Grady or Tom Watson?: The Rhetorical Struggle for the New South, 1880-1890* (Macon, GA: Mercer University Press, 1994). For North Carolina, see Stuart Noblin, *Leonidas Lafayette Polk: Agrarian Crusader* (Chapel Hill: UNC Press, 1949); Adolph

considerable debate among the reformers within the state universities, led to the shifting of some alliances, inspired some interesting defensive measures, and eventually helped start new state schools in Georgia and North Carolina. These schools, however, ultimately shared the same goals that reformers within both universities had been pursuing since the 1850s—add new courses and degrees that would train men in new skills for a hopefully more diverse economy and socially elevate new professions for the upper classes to pursue in a changing world.³²

The general literature of higher education has neglected these developments and other reforms among colleges and universities in the South. Frederick Rudolph even claims for the years after the Civil War that “only in the desolated, abandoned Southland was there an absence of these dynamic movements” and that postbellum colleges looked back to and mirrored their Old South, traditional antecedents.³³ Many studies specifically about southern higher education place the beginnings of reform very late in the nineteenth century. The most often cited is by Joseph Stetar who looked at six Southern colleges and universities between 1865 and 1910. He admits that these schools attempted some utilitarian reform after the Civil War but that they did so only half-heartedly. As his beginning and end dates indicate, Stetar places southern higher education reform

Jenkins Honeycutt, “The Farmer’s Alliance in North Carolina,” (M.A. thesis, North Carolina State College, 1925), 1-5, 12; Lala Carr Steelman, *The North Carolina Farmer’s Alliance: A Political History, 1887-1939* (Greenville, North Carolina: East Carolina University Publications, Department of History, 1985); John D. Hicks, “The Farmer’s Alliance in North Carolina,” *North Carolina Historical Review* 2, (April 1925): 171.

³² In Georgia, the Georgia Institute of Technology was not directly affiliated with the Populist movement, but it became possible in many respects because of the criticisms leveled against the University of Georgia. The various branch colleges of the University of Georgia that were intended to deflect agrarian criticisms did not educate scientists and professionals, but they did provide the more academically based education that had drawn criticism at the University of Georgia. The North Carolina State College of Agriculture and Engineering was originally designed to train the working classes, but quickly mutated to educate engineers and other professionals.

³³ Rudolph, *American College*, 244; Metzger and Hofstadter, *Development of Academic Freedom*, 256. Veysey, *Emergence*, 283 only mentions southern colleges and universities in a footnote.

much later than the stories of the Universities of North Carolina and Georgia indicate.³⁴

Michael Dennis demonstrates the connections between the New South movement and Progressivism, as he explores reform efforts at four southern universities in the late 1880s and 1890s.³⁵ Other studies similarly assert that serious reforms only began after the Civil War and that the South generally resisted change in higher education.³⁶ The most recent survey of nineteenth century Southern higher education makes a similar claim but links reforms back to the Civil War itself. Dan R. Frost demonstrates the active efforts to bring science and practical education to the curriculum in the late 1860s, 1870s, and 1880s, asserting that reforms were the result of Civil War experience—defeat to a better educated and technologically adept foe—and were led by former Confederate officers. By focusing on speeches at a large number of schools, however, Frost fails to analyze the actual course offerings and the specific impacts of the Morrill Act and other politicized

³⁴ Joseph M. Stetar, "Development in Southern Higher Education, 1865-1910: Selected Case Studies of Six Colleges," (Ph.D. diss., State University of New York, Buffalo, 1975); Stetar, "In Search of a Direction: Southern Higher Education After the Civil War," *History of Education Quarterly* 25 (Fall 1985): 341-67. Stetar applies the schema devised by Laurence Veysey in which utilitarian reform, coupled with the drive for research, challenged the mental discipline ideology of the college and created the modern university. In the process, however, a mission of instilling a liberal culture in students asserted itself as a third function of the university besides service and research. This liberal cultural ideal was in some respects a resurgence of the mental discipline and faculty psychology of the traditional college. Stetar claims that Southern colleges and universities wholly rejected research, enacted weak and uninterested utilitarian/service reforms, and focused their energies on liberal culture with a certain Christian tinge. The focal point of change that Stetar borrows from Laurence Veysey, then, is the rejection of the mental discipline philosophy and the acceptance and attempted implementation of an educational philosophy based on utility and research. As chapter one demonstrated and chapter two will show, the educators at the Universities of North Carolina and Georgia were revising their educational philosophies and policies throughout the 1850, 1860s, and 1870s.

³⁵ Michael Dennis, *Lessons in Progress: State Universities and Progressivism in the New South, 1880-1920* (Chicago, University of Illinois Press, 2001); Michael Dennis, "Educating the 'Advancing' South: State Universities and Progressivism in the New South, 1887-1915," (Ph.D. diss., Queen's University, 1996).

³⁶ Cartter, *Role of Higher Education in the Changing South*, 281-289; Cartter claims that all Southern colleges and universities but Washington University under Robert E. Lee were backward-looking and that there was little enthusiasm for the land-grant idea or colleges. "Commerce and College" will demonstrate nearly the opposite. Charles Reagan Wilson, *Baptized in Blood: The Religion of the Lost Cause, 1865-1920* (Athens, GA: University of Georgia Press, 1986): 68, 81-86; Harvey Neufeldt and Clinton Alison, "Education and the Rise of the New South: An Historiographical Essay," in *Education and the Rise of the New South*, eds. Ronald K. Goodenow and Arthur O. White (Boston, MA: G. K. Hall and Co., 1981): 259.

issues that a more focused study can do. He also neglects how these late nineteenth century reforms grew directly out of the expansion of the curriculum in the antebellum period and the early structural reform efforts of the 1850s.³⁷ As with the history of American higher education in general, scholars have only slowly overturned this late reform thesis that begun with histories written by some of the progressive reformers of the 1880s and 1890s. One of the earliest scholars to study Southern education and one of the starting places for any modern scholar of southern education is Charles Dabney.³⁸ Dabney focused upon the late nineteenth century reforms because he had been a part of them himself. He castigated earlier educators as too slow in their reforms and those who resisted his ideas as reactionary.

Several scholars have explored the antebellum origins of scientific and utilitarian education in the South at individual institutions, but there is no comparative work that analyzes these changes as well as their impact through Reconstruction and the 1870s and

³⁷ For a discussion of the fate of Southern colleges and universities in the Civil War, see Wayne Flynt, "Southern Higher Education and the Civil War," *Civil War History* 14 (1968): 211-225. Flynt recognized that just before the war there were improvements to Southern higher education, but he limits his comments to physical facilities and financial support. Frost devoted an entire chapter to southern higher education in the antebellum period but dismissed calls for reform and actual curricular and structural adjustments as wishful thinking. The 1850s was in fact the beginning of reforms in southern higher education. It was often the leaders of the 1850s and their changes that laid the groundwork for the (admittedly accelerated) changes of the 1860s and beyond. The Civil War has assumed such a large presence in all thinking about the nineteenth century that scholars are predisposed to finding abrupt change. Frost claims that southern academics "introduced scientific and technical curricula" after the war. He fails to note the massive influx of scientific education before the war and the fair amount of technical education offered by the South's antebellum colleges. This is because the curricular changes of the 1830s, 1840s, and 1850s mostly assumed a different structure and organization than those after the war that were inspired by the innovations of the 1850s all over the nation. Other ways "Commerce and College" differs from Frost's work include the types of material used and the depth of study. By focusing on a small number of schools this work explores the intricacies and nuances of Southern higher education. Also, this work looks more at official university records that reflect the actual practice of the schools rather than rhetoric. Frost used academia as a lens through which to note the emergence of the idea of progress in the South, whereas this work looks at the perceived relationship between higher education and economic development and the actual steps taken to alter school curricula. Dan R. Frost, *Thinking Confederates: Academia and the Idea of Progress in the New South* (Knoxville, University of Tennessee Press, 2001); Dan R. Frost, "A Confederate Education in the New South: Southern Academia and the Idea of Progress in the Nineteenth Century," (Ph.D. diss., Louisiana State University, 1994): 2, 5, 14-17, 137.

1880s. Edgar W. Knight, one of the first students of Southern education, did claim that educational reforms were indigenous to the South and that they originated before the Civil War. Knight had minored in history at Columbia University under William A. Dunning, whose “Dunning School” of thought depicted Reconstruction as a rude intrusion into the South’s self-rule and development.³⁹ More recently, and assumedly with less bias, scholars have supported Knight’s general claims. Writing in the 1970s, Jane G. Weyant first identified a wide-scale Southern reform effort in the 1850s but offered little analysis. Others, including Thomas G. Dyer, Robert J. Norrell, Thomas K. B. Cherry, and Wayne K. Durrill, have identified the scientific, utilitarian, and modern nature of those reforms at individual Southern state universities.⁴⁰ Since Weyant’s 1974 article, however, there have been no works specifically addressing antebellum changes in southern institutions of higher education as the beginnings of meaningful reform. Also, very few works have explored the direct connections between those changes and higher education policy and practice in the late 1860s, 1870s, and 1880s. Most histories tend to address either antebellum or postbellum reforms as independent phenomenon.

³⁸ Charles W. Dabney, *Universal Education in the South* (Chapel Hill: University of North Carolina Press, 1936).

³⁹ Edgar W. Knight, *Public Education in the South* (Atlanta: Ginn and Co., 1922), 306-309, 380; , Clinton B. Allison “The Appalling World of Edgar Wallace Knight.” *Journal of Thought* 18 (Fall 1983): 7-14.

⁴⁰ Jane G. Weyant, “The Debate of Higher Education in the South, 1850-1860,” *Mississippi Quarterly* 29 (1974): 539-558; Forrest David Matthews, “The Politics of Education in the Deep South: Alabama and Georgia 1830-1860,” (Ph.D. diss., Columbia University, 1965); Thomas G. Dyer, “Science in the Antebellum College: The University of Georgia, 1801-1860,” in *Science and Medicine in the Old South* eds. Ronald L. Numbers and Todd L. Savitt (Baton Rouge: LSU Press, 1989) 35-54; Robert J. Norrell, *A Promising Field: Engineering at Alabama, 1837-1897* (Tuscaloosa: University of Alabama Press, 1990), 1-32; J. Patrick McCarthy, “Commercial Development and University Reform in Antebellum Athens: William Mitchell and Entrepreneur, Engineer, and Educator,” *Georgia Historical Quarterly* 83 (1999): 1-28; Wayne K. Durrill, “The Power of Ancient Words: Classical Teaching and Social Change at South Carolina College, 1804-1860,” *Journal of Southern History* 65, 3 (August 1999): 469-498; Thomas K. B. Cherry, “Bringing Science to the South: The School for the Application of Science to the Arts of the University of North Carolina,” *History of Higher Education Annual* 14 (1994): 73-100. See also Clement Eaton, *Freedom of Thought in the Old South* (Durham; NC: Duke University Press, 1940), 196-217 for

“Commerce and College” will demonstrate both the early nature and the continuity of reforms.

This study will also show that Southern higher education reform was a part of the New South boosterism of the 1870s and 1880s. Few have challenged the assertion by Paul Gaston in *The New South Creed* that education had little to do with the call for industrialization and economic development by the 1870s and 1880s. Robert McMath’s book on the Georgia Institute of Technology does make a clear and strong connection between that school founded in the 1880s and New South boosterism but adopts the traditional view that the state university—the University of Georgia—was conservative and backward looking. As “Commerce and College” will show, reformers at the University of Georgia and the University of North Carolina were active economic boosters calling for diversification and industrialization not only the 1880s, but as early as the 1850s. Furthermore, no one has investigated how the ideas and policies that transformed Southern higher education came to the men who devised and executed them. As “Commerce and College” will show, the original 1850s reform plans at both the University of Georgia and North Carolina drew from reforms in Northeastern universities and educational reforms in Germany.⁴¹

The central institutions of the study are the state universities of these states, but in the later chapters several others will share the stage—North Carolina State College of Agriculture and Engineering and the various branch colleges of the University of

academic freedom and political controversies regarding professors in the antebellum period and the efforts to keep southern students at home and not have Northern professors or textbooks.

⁴¹ Paul Gaston’s *The New South Creed: A Study in Southern Mythmaking* (New York: Knopf, 1970) McMath, Robert C., Jr. *Engineering the New South: Georgia Tech, 1885-1985*. Athens: University of Georgia Press, 1985

Georgia—as funding from the Morrill Land Grant Act of 1862 and the Hatch Act of 1887 became politically contested. Also figuring into the study will be the Georgia Institute of Technology. Since the aim is to closely follow the university reform of these two institutions, demonstrating that the South had university reform on par with the rest of the nation, “Commerce and College” will not look at the various normal colleges and other schools that were parts of state higher education but not directly affiliated with the universities. By focusing on two schools that had considerable reforms from the 1850s to the 1890s, “Commerce and College” will be focused enough to explore the motivations and interactions of individual historical actors and the relationship of the schools and their curriculums to the surrounding societies.

Several reasons support selecting these two states and their public universities. State-funded institutions purport to serve the interests of the whole state or society. Studying developments in state schools will better reveal the thoughts and actions of leaders of state politics and society rather than defenders of limited denominational and local interests. This larger scope also permits the study to register the voices of multiple social and political groups, as well as the state legislatures as their members each tried to shape the curriculum in their interests. Furthermore, the acquisition and use of the Morrill Act funds brought out many of these different opinions about college education, prompting significant debate and exchange. Rather than focusing on new schools that would clearly reflect new ideas, these schools were old enough to have traditions underway by the 1840s and were the same institutions both before and after the war, so tensions ran deeper and have left clearer evidence for the historian.⁴² The two state

⁴² The University of Tennessee, for example, changed names several times during the period studied, and the Universities of Mississippi and Texas started too late in the antebellum period. The University of

universities had different experiences in the 1860s and 1870s. The University of Georgia closed during the war; the University of North Carolina did not. The University of Georgia felt Congressional Reconstruction rather lightly; the University of North Carolina was taken over by a Republican board of trustees and forced to close by an uncooperative local elite. The University of Georgia held onto the Morrill funds by temporarily opening branch colleges; the University of North Carolina lost the Morrill funds to a separate school in 1889. Both schools were at the forefront of higher education reform in the 1870s, but the University of North Carolina became an acknowledged fount of Southern intellectual and Progressive traditions and a national university while the University of Georgia languished and became a regional university.

“Commerce and College” is a study of educational policy. It does not analyze how many students took which courses, the ambiguous class backgrounds of students’ parents, or the unmeasurable direct impact of students on the economy—nor does it solely focus upon successful (permanent) reforms. Students did appear in the story of policy development at these two schools. It was students, afterall, that the universities trained to lead society and transform the region’s economy. As election or choice in the curriculum increased, students chose one course over another or one degree over another. “Commerce and College” assesses student behavior and reaction to policy changes in the form of course-taking patterns (when the information was available) and points out when policy makers themselves used student behavior as justifications for their actions or ideas. Additionally, “Commerce and College” presents new policies from the students’ perspective, assessing what new courses, degrees, and programs were open to them and

Virginia had a very different heritage and unique ambitions from too early a date to be a participant in this study.

the choices they confronted over the years. “Commerce and College” is primarily a study of the often slow and frequently stillborn reforms that nevertheless make cultural statements. The central actors are politicians and educators; the dominant issue is higher education policy; and the primary question is how and why certain policies took the shapes that they did when they did.

As the stories of these two schools will indicate, university reform in nineteenth century Southern higher education was not the result of a defeated South finally coming to terms with its dearth of technical expertise, a new generation of Southerners breaking from the past, or well-meaning Northern philanthropists and carpetbaggers spawning a new kind of University in the 1870s and 1880s. Rather, the growth of scientific and utilitarian elements in the curriculum was a longstanding indigenous movement that received impetus from the Confederate defeat in 1865, drew strength in the 1870s and 1880s from efforts to diversify and industrialize the South and both borrowed and independently arrived at educational innovations in other parts of the country and the world. By the 1850s, a new kind of college or would-be university had emerged in the South that was far from the traditional college with its single class locked in a prescribed, classical curriculum. They were, indeed, besieged by numerous setbacks and suffered from an acute lack of students and funding compared to their Northern and Midwestern counterparts that were driven by the South’s unique economic and political situation, but the Universities of Georgia and North Carolina exhibited a halting, but continuously diversifying and expanding, curriculum. As reforming universities of the middle and late decades of the nineteenth century, they may not have been the universities that appeared

in the 1890s and 1900s, but they signaled the reformer's attempt to keep the South and higher education apace with economic change.

CHAPTER ONE

REFORM AT THE UNIVERSITY OF GEORGIA IN THE 1850s

As with most schools in antebellum America, the University of Georgia embraced the mental discipline philosophy of education, and its curriculum represented that belief. It was the role of college instructors to exercise the mental faculties of their students, so that when they graduated they would have minds able to master the numerous tasks demanded by their chosen professions and their leadership role in society. Students consequently took heavy amounts of Latin, Greek, and mathematics. They studied the classic languages and mathematics in order to have a command of logic and language, and they learned about the classical cultures to better understand society and politics. So that every student had the benefit of the same training, they progressed together as a class through four years of required courses, recitations, and examinations. Other courses such as astronomy, natural philosophy and moral philosophy rounded out the curriculum, so that they could learn about the world around them and become better citizens and moral men. Over the course of the antebellum period, however, the faculty and trustees of the University of Georgia—as at other schools around the country—increased the number of courses in the curriculum. New sciences and higher levels of mathematics were the primary source of growth, but some of the new courses included modern languages and practical subjects like engineering that students would need to know in the changing economy. This expansion of knowledge and the curriculum naturally stressed the mental

discipline philosophy and the traditional curricular structure. Were modern languages or ancient languages better at developing the mind? Were the modern languages not more useful to the leaders of business and society? Was learning French better mental discipline than learning German, and should students learn both or have a choice? Was learning the practical applications of chemistry on the farm or the uses of mathematics and physics in young factories and railroads better or worse than learning pure chemistry and mathematics? With the number and level of academic subjects ever increasing, could or should the student train his mind for every new discipline?¹

The general literature of higher education gives the impression that only a few schools were doing anything about these questions and that they were predominantly in the North and Midwest. The curricular experiments by Francis Wayland at Brown, Henry Tappan at the University of Michigan, and the faculty at Yale and Harvard in the 1840s and 1850s did several things. They created separate schools within their universities to educate those uninterested in the classics and more interested in the sciences or they permitted some curricular freedom to the students within the colleges, allowing them to modify slightly the amounts of Latin and Greek they took in favor of newer, more scientific or practical courses. Invariably, the reforms included alternative degrees for these non-traditional students. Sometimes the students only received certificates, while in other cases they received one of the two new Bachelors degrees—the Bachelor of Science and the Bachelor of Philosophy. The reforming universities also

¹ For a discussion of mental discipline and the challenge to it by practical education in a later period see the first two chapters of Laurence R. Veysey, *The Emergence of the American University* (Chicago: University of Chicago Press, 1965). For a general view of the antebellum changes to the University of Georgia curriculum, see Thomas G. Dyer, *The University of Georgia* (Athens: University of Georgia Press, 1985), 72-77. For a more detailed study, see J. Patrick McCarthy, Jr., “Realizing a University: The University of Georgia from 1854 to 1882,” (Master’s Thesis, University of Georgia, 1996): 14-24.

began awarding earned Masters degrees, indicating more advanced levels of study. This was a significant change from the old practice of simply awarding a Master's degree to any student who requested it three years after graduation.²

These reforms, however, were not unique to the universities of the North and Midwest. The University of Georgia underwent reforms in the 1850s that matched and in some ways surpassed them. In the late 1850s, trustee William L. Mitchell transformed the university by removing the entire freshmen and sophomore classes and creating several new graduate professional schools. Far more radical than the reforms at Harvard and Yale, Mitchell was able to have more of his plans accepted by the university's trustees than had either Wayland or Tappan. By 1859, the University of Georgia's faculty and trustees were creating a completely new kind of American university in response to the growth of knowledge and the inadequacy of the simple four-year college structure to handle the educational demands of an expanding and diversifying economy and society. Mitchell's efforts grew out of two factors. Since the 1840s, several planters and editors had been agitating for agriculture-specific education either at the university or

² One scholar has noted that all a "Harvard man had to do for his Master's degree was to pay five dollars and stay out of jail." Lawrence Cremin, *American Education, the National Experience 1783-1886* (New York: Harper and Row, 1980), 273, 275, 279-80; John Brubacher and Willis Rudy, *Higher Education in Transition: A History of American Colleges and Universities, 1636-1976* (New York: Harper and Row, 1976), 105-7; Frederick Rudolph, *The American College and University* (Athens: University of Georgia Press, 1990), 231-234, 239; Francis Wayland, *Thoughts on the Present Collegiate System in the United States* (Boston: Gould, Kendall, and Lincoln, 1842) 105-8; Francis Wayland, "The Education Demanded by the People of the United States" (Boston: Phillips, Sampson and co., 1855), 26-7; Francis Wayland, *Report to the Corporation of Brown University on Changes in the System of Collegiate Education* (Providence: George H. Whitney, 1850), 51; Henry Tappan, *University Education* (New York: George P. Putnam, 1851), 92; Thomas Deiner, *Growth of an American Invention: A Documentary History of the Junior and Community College Movement* (New York: Greenwood Press, 1986), 26; John Fulton, *Memoirs of Frederick A. P. Barnard* (New York: McMillan, 1896), 179, 207, 211-13, 216. See Terry S. Reynolds, "The Education of Engineers in America before the Morrill Act of 1862," *History of Education Quarterly* 32 (Winter 1992): 459-82 for a discussion of antebellum engineering education all over the country. For the variety of earlier experiments with a more flexible and responsive curriculum see R. Freeman Butts, *The College Charts Its Course* (New York: McGraw-Hill, 1939), 131-143.

elsewhere in the state. By 1854, this movement culminated in an endowment for the university to establish a professorship of agriculture. Inspired by the windfall, Mitchell drew on his experiences as an entrepreneur and engineer to envision a new kind of university that would train scientific leaders in a changing economy.³

The Southern press, particularly the agricultural press, often noted the rapid changes in science and technology and the importance of applying them to farming and industrial development. Mechanization, the sharing of experimental information, and adopting regular business-like practices were all topics frequently addressed in the press. Editors nearly as frequently pointed out the need for new kinds of higher education to bring science to bear on the region's economic issues. DeBow's *Commercial Review* is the best known antebellum newspaper or journal to advocate economic change, but there were others.⁴ An article on "Chemistry of Common Life" in the *Southern Quarterly Review* proclaimed the importance of science to agriculture and praised one particular set of published lectures on agricultural science.⁵ Another called for a polytechnic school so that farmers, lawyers, doctors, merchants, and engineers might have some training after

³ There are four published histories of the University of Georgia: Augustus L. Hull, *Historical Sketch of the University of Georgia* (Atlanta: Foote and Davies, 1894); E. Merton Coulter, *College Life in the Old South* (Athens: University of Georgia Press, 1951); Robert P. Brooks, *University of Georgia Under Sixteen Administrations, 1785-1955* (Athens: University of Georgia Press, 1956); Thomas G. Dyer, *University of Georgia: A Bicentennial History, 1785-1985* (Athens: University of Georgia Press, 1985). Thomas Walter Reed's unpublished manuscript history of the University, "*Uncle Tom*" Reed's *Memoir of the University of Georgia*, housed in the University's Hargrett Library provides a small amount of information not in these published sources. For a more detailed study of the reorganization plan and efforts to realize it through 1882 see J. Patrick McCarthy, Jr, "Commercial Development and University Reform in Antebellum Athens: William Mitchell as Entrepreneur, Engineer, and Educator," *Georgia Historical Quarterly* 83 (Spring 1999): 1-28 and McCarthy, "Realizing a University: The University of Georgia from 1854 to 1882," (Master's Thesis, University of Georgia, 1996).

⁴ Albert L. Demaree, *The American Agricultural Press, 1819-1860* (New York: Columbia University Press, 1941), 232, 356-258; "Agricultural Education," *Southern Planter* 13 (July 1853): 217-219; "Agricultural Schools," *Farmer's Register* 1 (January 1843): 16-17.

⁵ "Chemistry of Common Life," *Southern Quarterly Review*, 11 (January 1855): 207-234.

the necessary core of mathematics and classics.⁶ Still another praised the uses of science, explaining that “the domain of human knowledge has become extended...[as]...have the facilities for acquiring it multiplied.”⁷ *DeBow’s Review*, however, was the most widely circulated and well-known such magazine. Numerous articles appeared over the years about agricultural education, the importance of mathematics and science for practical life, industrial education, and the educational systems of England and Germany. They were often accompanied by various proposals and resolutions for education in the South. More specifically, DeBow called for professorships in agriculture and commerce in the colleges and universities of the South as instrumental factors in the diversification of the Southern economy.⁸

There were other outlets for expression about the need for practical education and the application of science to the region’s economic needs. In the 1830s, 1840s, and especially in the 1850s local agricultural fairs, societies, and other educational efforts coalesced into state societies that registered increased interest in agricultural education and scientific agriculture. The agricultural community eventually came together to pressure for the establishment of the United States Department of Agriculture and the passage of the Morrill Land Grant Act which were culminations of a decades-long effort

⁶ “Modern Education,” *Southern Quarterly Review*, 11 (April 1855): 451-476.

⁷ James Napier, “Applications of Chemistry,” *Southern Quarterly Review*, 11 (April 1855): 506-524.

⁸ The following citations refer to volume and page numbers. *DeBow’s Review* 7: 317-319; 16: 638-639; 17: 508-510; 18: 265-279, 287, and 430-432; 19: 15-16 and 21. “Commerce and Agriculture, Subjects of University Instruction,” *DeBow’s Review* III (June 1847): 502-516; “A Professorship of Commerce” *DeBow’s Review* VI (August 1848): 110-113; “Commerce, Statistics, etc.—Subjects of University Instruction,” *DeBow’s Review* XIX (October 1855): 431-437; “Polytechnic Education,” *DeBow’s Review* (new series II (October 1859): 486. In 1855 he even tried began a journal of education, but it failed. The interest in education on its own was not enough to attract readers of advertisers. James A. McMillan, *Bibliographic Analysis of J. D. B. DeBow* (Hattiesburg, Mississippi: The Book Farm, 1940), 29. For more on DeBow, see Ottis Clark Skipper, *J.D.B. De Bow, Magazinish of the Old South* (Athens: University of Georgia Press, 1958); Willis D. Weatherford, *James Dunwoody Brownson De Bow* (Charlottesville, Va., The Historical Publishing Co., Inc., 1935).

to get the federal government to adopt a clear agriculture policy.⁹ Numerous farmers and planters had realized that “the times have changed and we must change with them” and that organizations and institutions were needed to systematically collect and disseminate information about the application of science.¹⁰ Despite these frequent and sometimes emphatic calls for changes in agriculture, editors, fair organizers and other would-be reformers had to accept the fact that “agricultural revolutions proceeded with glacial dignity and the benefits, at first, are embraced by comparatively few people.”¹¹

In Georgia, there was a clear and direct relationship between these movements and sentiments and the reform efforts at the state university in Athens. In 1843, noted university trustee, banker, and railroad booster James Camak started the *Southern Cultivator*. In the pages of the new magazine he called for Georgia and the South to develop scientific agriculture and diversify their economies. The journal’s primary aim, however, was to help combat soil exhaustion by encouraging the creation of local and state agricultural societies and by acting as a means of information exchange about all things agricultural. “One of the most influential journals of the period,” the *Southern Cultivator* eventually reached a circulation of 5000 in 1848 and 10,000 in 1852.¹² Like most of the antebellum farm press around the nation, the *Southern Cultivator* also advocated formal agricultural education. Within a few years, Camak urged the Georgia

⁹ Albert L. Demaree, *The American Agricultural Press, 1819-1860* (New York: Columbia University Press, 1941), 197-198; Paul W. Gates, *The Farmer’s Age: Agriculture 1815-1860* (New York : Holt, Rinehart and Winston, 1960): 312, 315, 330-337; Alfred C. True, *A History of Agricultural Education, 1785-1925*, Unites States Department of Agriculture, Miscellaneous Publication No. 29, (Washington D.C.: US Government Publications Office, 1929): 7-17. See also Edward Eddy, *Colleges for Our Land: The Land Grant Idea in American Education* (New York: Harper Brothers, 1956) and Wayne C. Neely, *The Agricultural Fair* (New York: Columbia University Press, 1935).

¹⁰ Isaac Croom, Address Delivered Before the Greensboro Agricultural Society on the 2d of May, 1850 [Greensboro, Alabama: n.p., [1850?]] p7

¹¹ Demaree, *The American Agricultural Press, 1819-1860*, 233.

¹² Demaree, *The American Agricultural Press, 1819-1860*, 372-373.

legislature to fund the creation of an agriculture professorship at the state university. Interestingly, the legislature perceived the proposal not as an education measure but as a state-funded internal improvement, discussing it in tandem with the possible funding of agricultural surveys, experimental farms, and agricultural museums. The General Assembly failed to act on the proposal in 1847, and Camak died the same year.¹³

Daniel Lee continued the *Southern Cultivator* and its calls for agricultural education at the university. Lee spent most his adult life championing agriculture reform. Beginning as the editor of a New York farmer magazine, he became the agricultural editor of the *Augusta Chronicle and Sentinel* after moving to Georgia. While editing the *Southern Cultivator* he went to work in the agricultural section of the U.S. Patent Office where he no doubt encountered the technological and scientific advances that were altering America's transportation and commercial agriculture in the decades before the Civil War. Lee expressed interest in a number of ways Georgia and the South could enhance their agricultural and livestock output. He believed that scientific research might lead to improved fertilizers or cultivation methods and, like university professor Charles McCay, advocated sheep raising as an efficient use of land. Lee also advocated the establishment of a school of mines to improve the extraction and processing of raw materials.¹⁴

¹³ Camak had been a mathematics instructor at the university from 1817 to 1819. Clifford C. Norse, *The Southern Cultivator, 1843-1861* (Florida State University, Ph.D. diss., 1969), 110, 277; Coleman and Gurr, *Dictionary of Georgia Biography*, 154-155; Albert L. Demaree, *The American Agricultural Press, 1819-1860* (New York: Columbia University Press, 1941), 51; *Southern Cultivator* 1 (March 1843): 20; 2 (March 1844): 83; 3 (April 1845): 56; 4 (October 1846): 153, 6 (June 1848): 48.

¹⁴ Lee foreshadowed the federal commitment to agriculture in later decades by wanting to make the agricultural section of the U. S. Patent Office into its own Agricultural Bureau. Coleman and Gurr, *Dictionary of Georgia Biography*, 613-614; *Augusta Daily Constitutionalist* December 8, 1857; James C. Bonner, *A History of Georgia Agriculture, 1732-1860* (Athens: University of Georgia Press, 1964), 77; Norse, *The Southern Cultivator*, 114; *Southern Cultivator* 6 (June 1848): 48. *Southern Field and Fireside*,

In Lee's absence, editors and contributors to the *Southern Cultivator* still called for numerous state projects supporting agriculture, including an agricultural professorship and an experimental farm.¹⁵ Since the state legislature was reluctant to provide money to the university or any other school for these purposes, physician and planter William Terrell donated \$20,000 in bonds to the university in 1854. Interest from the bonds was to endow a professor who would do more than train planters' sons in the basics of farming and agricultural chemistry. The agricultural professor was to be a scientist and researcher who would lecture widely on agriculture as a scientific field and conduct useful experiments. Like the writers in the *Southern Cultivator*, Terrell feared that southern soil was deteriorating, and he hoped that science might provide ways constructively to "change the current system of agriculture and staple production."¹⁶ To this end, he made sure that the university trustees named Daniel Lee as their first agricultural professor. The university was still getting its reorganization plans underway in the late 1850s, so Lee was unable to accept the position until 1860. He, nevertheless, had very clear ideas about the new post. He would concentrate on agricultural research and leave instruction in chemistry and biology to the other professors. Lee believed that his outlook and experience could best serve the state and its farmers as they participated in an increasingly interconnected market economy by testing and reporting on fertilizers and cultivation techniques rather than by hearing recitations on basic science. He had

June 18, 1859. For a biography of Lee, see E. Merton Coulter, *Daniel Lee Agriculturalist* (Athens: University of Georgia Press, 1972).

¹⁵ *Southern Cultivator* 8 (March 1850): 40, 12 (September 1854): 281; 14 (March 1856): 98-99, 17 (August 1859): 226-230 and (September 1859): 258-261.

¹⁶ For a more detailed description of Terrell and his endowment see John Rozier, "William Terrell: Forgotten Benefactor," *Georgia Historical Quarterly* 65 (Summer 1981): 92-103 and William Terrell, *Endowment of the Terrell Professorship in Agriculture in the University of Georgia* (Athens: Sledge, 1854). UGA Trustee Minutes, August 1, 1854, July 28-30, 1855; UGA Catalogue, 1854-7; Brooks, *University of Georgia* 41; Dyer, *University of Georgia*, 85; Coulter, *College Life in the Old South*, 39.

little chance to bring these plans to fruition. The university trustees dismissed him during the Civil War because they did not want the university to suffer because it had a Northern-born professor.¹⁷

Lee's brief appointment was only one consequence of the Terrell endowment. The sudden availability of funds provided influential trustee William L. Mitchell incentive and encouragement to reshape the university. An 1825 graduate of the university and a prominent town lawyer starting in the 1830s, Mitchell was very active in the Athens and North Georgia business community. He was also the most influential trustee at the university from the 1840s to the 1880s as the head of the prudential committee that guided the trustees' deliberations, carried out their decisions, and acted on their behalf between infrequent full meetings.¹⁸

When devising a scheme for reforming the university in the 1850s, Mitchell drew on his extensive experience as a lawyer and entrepreneur and as chief engineer of the state-owned Western and Atlantic Railroad. Once he had opened his law practice, he had jumped immediately into politics and joined, as a sort of junior partner, a bipartisan Athenian elite composed of planters, professionals, and men who easily fit both categories.¹⁹ They hoped to build their town into an important city and commercial

¹⁷ After the war, Lee edited the Athens *Farmer and Artisan* and the Atlanta *Plantation* for a time in the 1870s then briefly returned to the *Southern Cultivator* in the late 1880s. Coleman and Gurr, *Dictionary of Georgia Biography*, 613-614; UGA, Trustee Minutes IV, 33-36, 41, 66; Augusta *Daily Constitutionalist* December 8, 1857.

¹⁸ E Merton Coulter, "A Famous University of Georgia Commencement, 1871" *Georgia Historical Quarterly* 57 (Fall 1973): 353. Hull, *Annals*, 485; Sylvannus Morris, "The Lumpkin Law School," *Georgia Law Review* 1 (1927), 5; Brooks, *University of Georgia*, 245.

¹⁹ The Whig party dominated Clarke County and Athens, but a Democratic minority met some success and always worked closely with their Whig counterparts, especially on the subject of internal improvements. Mitchell was a Democrat, but he was also a lifelong friend and associate of the head of the local Whig party, planter, lawyer, and university trustee Asbury Hull. Howell Cobb was another prominent Athens Democrat who became Georgia Governor in 1851 on the Constitutional Union ticket. Hull, *Annals*, 121-22, 142, and 149; *Athens Southern Banner*, January 4, 1834.

center through railroads, insurance, banking, and manufacturing.²⁰ Mitchell's affiliations with this group and his participation in these antebellum developments would shape his own ideas and ambitions in the years immediately before the Civil War.

A few years after opening his law practice, Mitchell bought a four-acre lot in town next to that of *Southern Cultivator* founder James Camak.²¹ The neighbors shared many views on the direction that the North Georgia and Southern economies should take. Mitchell assisted in the founding of the Clarke County Auxiliary of the State Agricultural Society, and Camak was its first president in 1845. The object of the society was to "collect and diffuse information concerning Agriculture and its kindred arts" and to encourage local experimentation to discover ways to improve planting and farming methods for increasingly commercial agriculture.²² This was not the only economic organization and experimentation going on in Athens in the 1830s and 1840s. The town experienced a minor boom in economic growth and diversification in these two decades, and Mitchell was a junior colleague and friend of many prominent citizens involved in

²⁰ For the antebellum growth of Athens see the first few chapters of Ernest C. Hynds, *Antebellum Athens and Clarke County* (Athens: University of Georgia Press, 1974); Augustus L. Hull *Annals of Athens, Georgia* (Athens: Banner Job Office, 1906). See especially Frances Taliaferro Thomas, *A Historic Portrait of Athens and Clarke County* (Athens: University of Georgia Press, 1992) and Michael Gagnon, "Transition to an Industrial South: Athens Georgia, 1830-1850," (Ph.D. Dissertation, Emory University, forthcoming) which portray nineteenth century Athens as a regional business and manufacturing center rather than a sleepy college town. For similar experiences elsewhere see Mary A. DeCredico, *Patriotism for Profit: Georgia's Urban Entrepreneurs and the Confederate War Effort* (Chapel Hill: UNC Press, 1990); David Goldfield, *Urban Growth in an Age of Sectionalism: Virginia, 1847-1861* (Baton Rouge: LSU Press, 1977); T. Mills Thornton, *Politics and Power in a Slave Society, Alabama, 1800-1860* (Baton Rouge: LSU Press, 1978); John R. deTreville, *The Little New South: Augusta, Macon, and Columbus, 1840-1865* (Ph.D. Dissertation, University of North Carolina, Chapel Hill, 1985); Christopher Morris, *Becoming Southern: The Evolution of a Way of Life, Warren County and Vicksburg, Mississippi, 1770-1860* (New York: Oxford Press, 1995); James Michael Russell, *Atlanta, 1847-1890: City Building in the Old South and the New* (Baton Rouge: LSU Press, 1988).

²¹ Land Deed, John Nisbit to William Mitchell, May 5, 1836; Land Deed, John Newton to William Mitchell, February 10, 1838 both in William Letcher Mitchell Papers, Southern Historical Collections, University of North Carolina Library, Chapel Hill, North Carolina (hereinafter cited as Mitchell Papers, UNC); Mary A. DeCredico, "Georgia's Entrepreneurs and Confederate Mobilization, 1847-1873" (pH Dissertation, Vanderbilt University, 1986), 6.

²² *Athens Southern Banner*, July 29, 1842, July 17, 1845.

even wider economic change. In the 1830s, another Mitchell mentor, William Dearing, opened some of the first textile factories in Athens; organized the first commercial conventions in the South to stimulate direct trade with Europe, internal improvements, and local manufacturing; and was instrumental in starting the Georgia Railroad and Banking Company. Mitchell often served as Dearing's lawyer, managed the first sale of stocks for the new railroad, and represented Athens and Clarke County at the third commercial convention. He remained active in the commercial convention movement into the 1860s.²³

Mitchell was also beginning to hold his own important positions in Athens society and soon became a leading player in the economic development of North Georgia. In the 1830s and 1840s, he served as postmaster, a member of the town council, and one of five directors of the local branch of the state bank. In the 1840s and 1850s he was one of the founding officers of the Southern Mutual Insurance Company, an officer in the Augusta, Atlanta, and Nashville Telegraph Company, president of the Athens Manufacturing Company, a founder of the Bank of Athens, and a fledgling land speculator.²⁴

Aside from these diverse business experiences, Mitchell served as the chief engineer of the Western and Atlantic Railroad from about 1848 to 1851. In 1847, the state-owned road, which had originally been chartered in 1836, was preparing to push construction from Atlanta to Chattanooga. On January 1, 1848 Governor George W. Towns appointed Mitchell chief engineer of the road and allowed him two assistant

²³ McCarthy, "Commercial Development and University Reform," 6-13.

²⁴ *Athens Southern Banner*, 17 August 1848, 25 January 1849, May 31, 1855; Population Schedules of the Eighth Census of the United States, Slave Schedule, 1860, Georgia, Clarke County, Athens, District 216 (Washington, D.C.: Census Office, 1860), Microcopy 653, Roll 144, Sheet 10; William Mitchell to Sarah Mitchell, Athens, December 29, 1847, Mitchell Papers, UNC; C.D. Mitchell to William Mitchell, May 1, 1864, Mitchell Papers, UNC; Land Deed from Mrs. Rosa E. Delaney to William L. Mitchell, 1864,

engineers to handle the complicated task of completing the newest section.²⁵ There is a wonderful story about how Mitchell acquired this post. When word got out that Governor Towns was looking for a chief engineer and would perhaps have to hire a Northerner, “Mitchell maintained that Georgia should not acknowledge to the world that she had no citizen capable of accomplishing any work that other men could perform.” He then offered to give up his law practice and purchased several textbooks to teach himself engineering. Before opening his law practice, Mitchell had been the university’s mathematics tutor and felt confident in his abilities. There were few places to learn engineering in Georgia at the time, and Towns may have had trouble finding a native Georgian who was technically (in both senses of the word) qualified. The University of Georgia only offered a few engineering classes to upperclassmen.²⁶

As chief engineer, Mitchell saw firsthand nearly every facet of economic growth in the state. Building a railroad was a major undertaking. At an office in Atlanta he received and approved bids from private contractors for iron rails, water stations, engine houses, depots, and various phases of the construction of trestles and the tunnel to go under the Little Blue Ridge. He handled advertising, the purchase of raw materials, and supervised the renting of slaves for construction and working in depots. He even met with the governor to discuss using prison inmates for construction. These diverse experiences as chief engineer and the lack of qualified engineers in Georgia to work on the road drove home an important lesson for Mitchell. While traveling on business for

Ibid; Unsigned letter to William Mitchell, March 16, 1868, *Ibid*; James Houston Johnston, *Western and Atlantic Railroad of the State of Georgia* (Atlanta: Georgia Public Service Commission, 1932), 203-5.

²⁵ Johnston, *Western and Atlantic*, 8, 25, 29-30; *Athens Southern Banner*, January 27, 1848, December 13, 1849.

²⁶ Mitchell obituary in the *Athens Banner-Watchman* December 5, 1882; Obituary by the Superior Court of Clarke County, November 1882, Mitchell Papers, UNC; Biographical Sketch in E. Merton Coulter Collection, Historical Manuscripts Part 1, University of Georgia Libraries, Athens.

the road in 1850, he wrote his wife, “the longer I live the more I see the importance of education.”²⁷ Shortly after stepping down from his position at the Western and Atlantic, Mitchell began the long task of making education more in tune with the changes he saw in late antebellum Georgia.

He had proposed curricular additions at the university in the 1840s and early 1850s as a trustee. In 1843, he suggested adding a law school to the university to provide formal training that would replace apprenticeships like the one he had had as a young man. In 1847 and again in 1853 he proposed adding Spanish, French, and German to the curriculum. He explained the “necessity of languages for study *and* law, commerce, and public life.” Graduates of the University of Georgia, Mitchell asserted, were governors of the state, federal officials, and influential lawyers and businessmen who would increasingly deal with foreign merchants and bankers as the region’s economy grew.²⁸ The school’s meager support from the state kept him and the trustees from realizing these early proposals.

In 1854, however, the Terrell endowment seemed to change everything, and Mitchell used it as a springboard to launch a radical restructuring of the university. He hoped to encourage the state legislature to provide either regular funding or a significant public endowment, and William Terrell’s generous gift could be valuable seed money to prompt more support from the tight fisted body. He first presented his plan in 1855, but its \$80,000 price tag was too steep for the state legislature that wanted to keep taxes

²⁷ William Mitchell to Sarah Mitchell, Athens, March 17, 1850, Mitchell Papers, UNC; *Athens Southern Banner*, January 27 1848; William Mitchell, Atlanta, to Sarah Mitchell, Athens, June 7, 1848, September 15, 1850, November 10, 1850, April 18, 1851, August 14 and 18, 1851, September 19, 1851, Mitchell Papers, UNC; Johnston, *Western and Atlantic*, 30, 36, 85; William Mitchell, “1850 annual report of the Chief Engineer of the Western and Atlantic Railroad,” quoted in Johnston, *Western and Atlantic*, 37.

²⁸ UGA Trustee Minutes, August 2, 1843, November 13, 1843, August 4, 1847, August 1, 1853; Hull, *Sketch*, 159; Reed, *UGA*, 587, 589, 639.

low.²⁹ Aside from continuing the state's fiscal conservatism toward education, the legislature was reluctant to invest in a school with declining enrollments. Several faculty members, most significantly John and Joseph LeConte, were locked in conflict with president Alonzo Church over the disciplinarian duties of faculty members. This widely publicized controversy drove enrollments down. Frustrated, the trustees could only resolve the problem by firing the entire faculty, including president Church, in 1856. The board soon hired a new slate of professors and rehired Church as president out of respect for his long affiliation with the university and his declining health. The university's prospects did not improve, however, as enrollments continued to decline. By 1858 the enrollment was just over half of what it had been in 1853. That November, Church announced he would retire as president at the close of the school year in August 1859.³⁰

Wasting little time, Mitchell began drafting a new version of his plans; when the Trustees selected a new president would provide the perfect time to present his new proposals. A well-publicized new direction might also boost the university's declining enrollment. He convened the Prudential Committee and had that body commission him to prepare a new report for the reorganization of the university and to print copies for all the members of the Board of Trustees before their meeting in August. This time he avoided opposition to his plan by not even requesting state funds. Unlike the 1855

²⁹ General Assembly of the State of Georgia, *Journal of the Senate* (Milledgeville: Boughton, Nisbett, Barnes, 1856), 494-5; UGA Trustee Minutes, November 6, 1855; Coulter, *College*, 183; Brooks, 41; Dyer, 83, 88. Dyer, *University of Georgia*, 83-88 focuses on this 1855 plan, but it was in some ways a rough draft for the more radical plans of 1859.

³⁰ The University's enrollment steadily declined from 1855 to 1859 (150, 112, 108, and 99 students). UGA Catalogue, 1855-59; William L. Mitchell, *Memoir of Alonzo Church, 1863* [photocopy], in Alonzo Church vertical file, Georgia Room, University of Georgia Library, Athens, Georgia, 24-5. UGA Trustee Minutes, August 4, 1846, August 4, 1852, July 28, 1855; UGA Prudential Committee, *Minutes*, September 7, December 6, and September 19, 1855, February 23, 1856; Athens *Southern Banner*, October 15, 1855, November 1, 1855, December 20, 1855; E. M. Coulter, "Why John and Joseph LeConte Left the University

version, the 1859 program was internal to the university, proposing a new organization to the trustees rather than the state legislature. It was also possible that once the plans were in place, their promise of success might generate state funding. When the trustees met August 1859, each had a slim fourteen-page pamphlet outlining “a scheme beyond anything yet attempted in the South.”³¹

Writing in the *Programme of Enlarged Organization of the University of Georgia*, Mitchell intended to separate institutionally mental discipline and general education from the increasingly important advanced scientific and practical education that had been creeping into the antebellum curriculum. To this end, he proposed altering the University of Georgia in two fundamental ways. The first was to remove the freshman and sophomore classes. The second was to create a series of professional schools around what remained of the liberal arts college. He based the first measure largely on the German (specifically Prussian) education system. A new type of university emerged in the German states in the early 1800s that allowed students freedom at an advanced academic level. The dominant secondary institution, the *Gymnasium*, subsequently retained the task of instilling mental discipline through an ordered classical curriculum, providing an enforced general education, composed largely of Latin, Greek, and mathematics. Like Francis Wayland, Henry Tappan, and others, Mitchell emulated the German model and realized that in order to elevate his institution toward becoming a university he needed to relegate education for mental discipline and the notion of students

of Georgia, 1855-6,” *Georgia Historical Quarterly* 53 (March 1969): 32-7; Lester D. Stephens, *Joseph LeConte: Gentle Prophet of Evolution* (Baton Rouge, 1982), 44, 46-51.

³¹ *Programme of Enlarged Organization of the University of Georgia* (Athens: Sledge and Chase, 1859), 7-13 (hereinafter cited as *Programme*). Dyer, *University of Georgia*, 96 glances over the 1859 program after focusing upon the 1855 plan; Coulter, *College*, 201-2 treats it cursorily; Hull, *Sketch*, 67 and Brooks, 41-2 also provide only the briefest outline of the plan. Mitchell was conscious of emulating some

as pupils to a lower tier of education. Today, the existence of upper and lower divisions in colleges demonstrates the general resistance of American colleges to make a clear choice between being universities and *Gymnasias*.³²

The University of Georgia in the 1840s and 1850s had young men ranging in age from a minimum of fourteen into the early twenties, and the average age was increasing over the period. Mitchell saw that the four-year college could not serve both boys, who required constant supervision and mental discipline, and young men, who could pursue more advanced and/or practical study with a faculty freed from disciplinary duties. Besides, many university matriculates entered as sophomores, indicating that some of the academies in the state were capable of offering ample mental discipline and general education.³³ Mitchell proposed that the trustees establish and govern a “Collegiate Institute” that combined “the instruction given in a well-regulated village academy and the Freshman and Sophomore classes of the college.” This new school, Mitchell claimed, “might be properly ranked as a *Gymnasium*.” He asserted that the discipline of the Institute would be parental (a clear statement of *in loco parentis*) and that the boys will be

Northern institutions, but no college in the North or South had developed a plan as comprehensive as his 1859 plan. *Programme*, 5, 7, 14.

³² Jurgen Herbst, *The German Historical School in American Scholarship* (Ithaca, NY: Cornell University Press, 1965), 21-22, 44, 49. Brubacher and Rudy have noted that “Americans easily accepted a graduate school of the German model atop their college, but they resisted partitioning their college to assimilate their high school to a German *Gymnasium*,” *Higher Education in Transition*, 255. Frederick Paulsen, *German Education* (New York: Schribner, 1912), 179-184, 196, 200-3, 205-6, 212-27; James C. Albesetti, *Secondary School Reform in Imperial Germany* (Princeton: Princeton University Press, 1983), 25, 29; Fritz K. Ringer, *The Decline of the German Mandarins: The German Academic Community, 1890-1933* (Cambridge: Harvard University Press, 1964), 26-34. The German education system was well known in the United States. Even the Georgia legislature commissioned a report on education in the 1830s that praised the Prussian system. One of Mitchell’s fellow committee members in the 1850s was the author of the report. Karl-Ernst Jeisman, “American Observations Concerning the Prussian Educational System in the Nineteenth Century,” in *German Influences on Education in the United States to 1917* (Washington, D.C: German Historical Institute, 1995), 21-42; *Milledgeville Southern Recorder* 27 February 1838; Dorothy Orr, *A History of Education in Georgia* (Chapel Hill: University of North Carolina Press, 1950), 88-93 and 411-12.

³³ UGA Catalogue, 1830-1859; Dyer, *University of Georgia*, 48.

“watched over night and day, till fully prepared for the Junior class.” Much like the *Abitur* that permitted *Gymnasium* students to enter German universities, a certificate from the Collegiate Institute would guarantee a student admission into the university proper in the junior year without an entrance examination.³⁴

Under Mitchell’s plans, Collegiate Institute students who went on the study at the university would enter a very different University of Georgia. The second component of his reform was to fashion a different kind of university that would train men in the new skills demanded by a diverse economy and socially elevate new professions for the elite to pursue in the changing world. He announced at the outset that the University of Georgia should be a place “where learning and knowledge which qualify men for all the varied avocations of useful human pursuits may be acquired.” Education, he proclaimed, “should respond to the wants of our age...[and] should sufficiently prepare the mind for the active duties of life.” Georgia’s university, he believed, should offer at least the same academic studies and professional skills young men could obtain in the northern states, if the state were to compete economically. And the future prosperity of the state, he argued,

³⁴ Trustees, *Programme*, 5, 6; Trustee, *Minutes*, 1 August 1859; UGA Catalogue, 1865/6; *Athens Southern Banner*, 16 April 1862; Thomas J. Deiner, “A Junior College Idea at the University of Georgia, 1859,” *Georgia Historical Quarterly* 56 (Spring 1973): 83-91. James Turner and Paul Bernard describe a similar set of ideas as those that inspired the establishment of the Collegiate Institute at the University of Michigan under Henry Tappan in James Turner and Paul Bernard, “The ‘German Model’ and the Graduate School: The University of Michigan and the Origin Myth of the American University,” *History of Higher Education Annual 1993—The Modern University: Studies in Adaptation* 13 (1993): 69-98. Frederick Barnard also had similar ideas at the University of Mississippi. John Fulton, *Memoirs of Frederick A. P. Barnard* (New York: McMillan, 1896), 179, 207, 211-13, 216 and Frederick A. P. Barnard, *Letter to the Honorable Board of Trustees of the University of Mississippi*, 1858; quoted in William Chute *Damn Yankee! The First Career of Frederick A. P. Barnard* (Port Washington, New York: National University Publications, 1978), 164. For similar instances where the lower two years were separated theoretically and in practice from their colleges and universities see Walter C. Eells, “Abolition of the Lower Division: Early History,” *Junior College Journal* 6 (January 1936): 194-5.

“depended upon education in practical knowledge and application” so that Georgia could further develop “Railroads, Manufactures, Mines, etc.”³⁵

Mitchell called for the creation of several “different schools” which would scientifically train professionals in law, medicine, agriculture, commerce, and the “applied sciences in the industrial arts.” He underlined “schools” because at this time educators used the terms “department” and “school” interchangeably. By emphasizing the word “schools,” he ensured that the trustees would be aware his plan called for autonomous schools within the university on par with the current notions of law and medical schools, rather than a subdivision of the courses among new departments. That the schools would be “added to and connected with” the university and that one of the schools had three departments of its own verify this distinction.³⁶

Adding a law and medical school was not exactly a radical reform. Many colleges across the country claimed to be universities by being affiliated, however loosely, with either of these types of professional schools. Mitchell had written the Medical College of Georgia in Augusta and secured an agreement from its officials to make it the medical school of the university, and he and any number of town lawyers could offer courses in a law school. Among the newer types of schools, the Terrell professor of agriculture would run the agricultural school along the lines indicated by William Terrell and Daniel Lee—as a nascent experiment station as well as a place for young men to study agricultural sciences. Aside from elevating agriculture to a scientific profession, Mitchell earnestly wanted the university to take part in the emergence of the engineering profession. The School of Civil Engineering and Applied Mathematics

³⁵ Trustee Minutes, III, 283, 291

³⁶ Trustee Minutes, III, 281, 283, 286, 289-9, 296-305.

would consist of three departments to train young men to construct railroads, buildings, bridges, and machinery; instruct them in commercial chemistry and “the manufacture of various articles of commercial value or common use;” and teach them how to extract Georgia’s geological wealth. Finally, the commerce school would instruct “young men in the great principles and history of trade, the channels of foreign commerce, and the duties of merchants.”³⁷

Despite the sweeping nature of his reforms, the degree system Mitchell proposed reveals his adherence to the mental discipline philosophy of education and his reluctance to turn the institution into a practical training school open to young men of all classes or levels of preparation. The professional schools and the Collegiate Institute left significantly fewer subjects for the juniors and seniors in Franklin College to master. Courses in practical subjects like constitutional law, civil engineering, and agricultural chemistry moved into the professional schools, and the introductory courses in languages, mathematics, and science moved to the Collegiate Institute with the freshman and sophomore classes. This freed the juniors and seniors to study Greek and Latin language and culture and advanced courses in pure mathematics and science. Under Mitchell’s “reform” the Bachelor of Arts would actually require greater attention to the classics and fundamental study.³⁸

Law and medical schools of the period frequently accepted students who had not graduated from a college or had insignificant formal preparation; they were not yet the graduate level schools we know them as today. Mitchell’s law school would follow the standard patterns of the day, and the medical school would continue its earlier policies.

³⁷ *Programme*, 11-14; Trustee Minutes, III, 291-4.

³⁸ *Programme*, 6, 11-12; Trustee Minutes, IV, 23.

Mitchell did, however, make all of his new schools decidedly graduate institutions. Only graduates of Franklin College or some other recognized college could earn a Master's degree by studying for a year in one or more of the schools. Non-regular students might pay to attend courses (as Mitchell no doubt expected some Collegiate Institute graduates to do), but there was no alternative degree system for students unwilling or unable to pass the requirements of the Bachelor of Arts degree. He reserved the Doctor of Philosophy for students who studied two years beyond the B.A., pursuing practical studies in three or more of the professional schools. Like his own experience, Mitchell envisioned University of Georgia graduates pursuing a number of careers over their lifetimes, and he wanted to give them suitable preparation. Clearly indicating that the new schools would train scientific professionals for a new kind of society, Mitchell considered the Ph.D. equal (if not greater) in prestige to the Bachelor of Law and the Doctor of Medicine.³⁹

According to Mitchell's proposal, a student wanting to enter the University of Georgia would first have to graduate either from the Collegiate Institute or an academy that taught courses through the sophomore year of college. He would then have four options before him. He could enter the college and earn the Bachelor of Arts, studying many of the same things he had mastered in the Collegiate Institute or Academy, only at greater levels. He could try to enter the law or medical schools, since neither required and B.A. for admission. He could enroll in the college to earn the Bachelor of Arts and begin taking courses in one of the scientific professional schools so that he could eventually earn an M.A. or Ph.D. Finally, he could simply enroll in several courses in

³⁹ *Programme*, 11-12. For the origins of the name Franklin College see E. Merton Coulter, "Franklin College as a Name for the University of Georgia," *Georgia Historical Quarterly* 34 (September 1950): 189-94. Funding for the schools would come from selling the university's \$30,000 in bonds, joining with the self-sustaining Medical College of Georgia, and selling tickets to lectures within the various schools.

one or more of the professional schools, aware that he would not receive a formal certificate or degree, but that the training would likely help him prepare for and find a job related to that profession.

The Board of Trustees adopted most of Mitchell's program when he presented it in August 1859. They postponed the decision to make the Medical College of Georgia the University's medical school, and the Civil War stretched that postponement over ten years. The rest of the plan's implementation would take time, and much of it would be put on hold when the nation erupted in civil war. In 1859 and 1860, the Georgia legislature incorporated the semi-autonomous law school and construction began on two new buildings—one on the main campus for the several schools and another a few miles away to house the Collegiate Institute. The trustees made Mitchell temporary president until they could find a replacement for Alonzo Church. After three board members—including Mitchell—rejected the offer to be the newly designed institution's head, Andrew Adgate Lipscomb from Alabama accepted the post in the summer of 1860. Mitchell stepped down upon Lipscomb's arrival, confident that Lipscomb would advance his university idea.⁴⁰

The Collegiate Institute finally opened in April 1862 with over forty students ages nine to seventeen paying tuition of either \$100 in specie or \$800 in Confederate currency.

⁴⁰ The specifics of the Lumpkin Law School were largely the work of Joseph Henry Lumpkin, William Hope Hull, and T.R.R. Cobb. Mitchell incorporated their ambitions into his overall plan. See the forthcoming history of the law school by Gwen Y. Wood and Timothy S. Huebner, "Joseph Henry Lumpkin and Evangelical Reformation in Georgia: Temperance, Education, and Industrialization 1830-1860," *Georgia Historical Quarterly* 75 (1991), 255-74. UGA Trustee Minutes, IV, 9-27, 34, 45, 79-81; General Assembly of the State of Georgia, *Journal of the Senate* (Milledgeville: Boughton, Nisbett, Barnes, 1860), 328. For a description of Lipscomb and his administration see Fielding Russell, "Andrew Adgate Lipscomb, Georgia's First Chancellor," *Georgia Review* (1951): 83-93; Joseph Jacobs, "Andrew Adgate Lipscomb, Chancellor of the University of Georgia, 1860-1874," *Bulletin of the University of Georgia* 29 (1929): 1-11. Lipscomb focused his earliest efforts on creating a school of engineering at the University.

A total of 103 students subsequently enrolled for the 1862-1863 school year. The school offered a five-year course, combining three years of secondary courses with the freshman and sophomore classes of the university. The war, however, forced Lipscomb to abandon the new administrative structure in an effort to keep the university afloat. When the impact of war and the draft lowered the enrollment of juniors and seniors, Lipscomb and Mitchell returned the freshman and sophomore classes to the university proper, leaving the Institute as little more than a town academy and undermining its role of elevating study within the university's walls.⁴¹ The war also prevented the law school from ever really getting off the ground and forced the university to close. Upon reopening in 1866, the University of Georgia's curriculum and structure appeared remarkably unchanged. Mitchell and Lipscomb were still at the helm in the late 1860s, however, and they dusted off the 1859 *Programme* when finally opening the School of Engineers, reopening the law school, and seeking funds under the Morrill Land-Grant Act.⁴²

UGA Trustee Minutes, IV, 60, 62, 70; Andrew A. Lipscomb, Montgomery, to William L. Mitchell, Athens, December 19, 1862 and December 13, 1865, Coulter Collection, UGA.

⁴¹ UGA Trustees, *Minutes*, IV, 22, 31-34, 45, 61, 71-75, 79-81; Kenneth Coleman, *Confederate Athens* (Athens, University of Georgia Press, 1968), 126; *Athens Southern Banner* 16, 23, 30 April 1862; *Athens Southern Watchman*, 23 April and 7 May 1862; UGA Catalogue, 1860-1870; William L. Mitchell, "Roll of the University High School," Coulter Collection; Kenneth Coleman, ed., *Athens, 1861-1865, as seen through letters in the University of Georgia Libraries* (Athens: University of Georgia Press, 1969), 43, 52.

⁴² UGA Trustee Minutes, IV, 107; UGA Catalogue, 1866-72; *Present Organization and Proposed Plan of Expansion of the University of Georgia* (Athens: Office of the Southern Banner, 1872).

CHAPTER TWO

THE SCHOOL FOR THE APPLICATION OF SCIENCE TO THE ARTS AT THE UNIVERSITY OF NORTH CAROLINA

The antebellum curriculum at the University of North Carolina was much like that at the University of Georgia. A student entering as a freshman had few or no choices about what courses he would take. Once enrolled, he would simply be in the same courses every day with his classmates until his junior and senior year when he could choose which science or modern foreign language he would like to take. The curriculum leaned heavily toward the classics and mathematics, but the expansion of the curriculum in the 1830s and 1840s similarly raised critical questions about the structure of the university. How could it best provide general, mental disciplining education and the scientific, practical education increasingly in demand as a result of economic change? The University of Georgia's reforms stemmed from the movement for agricultural education, William Mitchell's personal experiences as a businessman, and his time as the chief engineer of the state's Western and Atlantic railroad. The initial impetus for the University of North Carolina's antebellum reforms came from the creation of the North Carolina Railroad, the perceived new demand for trained engineers, and a trip Northward by several faculty members. Mitchell drew heavily from German education systems and his own ideas about professional education for the specific designs of his comparatively radical reforms. The faculty and trustees of the University of North Carolina, on the

other hand, ended up conducting a meticulous study of the major university's of the Northeast and selectively emulating them. The Sheffield Scientific School at Yale and the Lawrence Scientific School at Harvard served as their general models in that the North Carolina faculty and trustees created a scientific school and offered an alternative Bachelors degree as well as a science-based Masters degree, but they copied these prestigious institutions judiciously, carefully weighing the alternatives. Unlike at the University of Georgia, the more conservative reforms at the University of North Carolina survived the Civil War intact. Like the University of Georgia, the reforms at the University of North Carolina receive no mention in the general literature on the history of higher education for the period.

The faculty and trustees of the University of North Carolina created a scientific school in 1854. The School for the Application of Science to the Arts offered engineering and chemistry training for three kinds of students—Bachelor of Science students who pursued practical studies for two and a half years, traditional Bachelor of Arts students who took practical courses in the last half of their senior year, and Master of Arts students who remained an additional year after graduation to study engineering or agricultural chemistry at more advanced levels. The development of this new school grew out of two events. In the late 1840s and early 1850s, the university's president and its more prominent trustees were actively involved in the establishment of the North Carolina Railroad. The railroad, they believed, would bring economic growth and with it the need for a locally educated scientific and technological community to supervise (a) increasingly intensive and market-driven agriculture, (b) future internal improvements, and (c) potential industrial development. Also in the early 1850s, several university

professors and tutors traveled extensively in the Northeast. They examined the nation's latest educational offerings and industrial advances, returning to North Carolina with ideas that would shape the university's growth in the 1850s and beyond.

The state of North Carolina's first railroad proposals came from the university. President Joseph Caldwell wrote a series of articles in the *Raleigh Register* in the late 1820s after returning from a European trip to purchase books and scientific equipment. He advocated steam-driven railroads over canals and believed that the construction of these new roads throughout the state would facilitate internal and external commerce.¹ Prompted by representative John M. Morehead and heeding Caldwell's call, the state legislature was involved with two railroads in the 1830s and purchased a bankrupt one in 1845. An advocate of state-backed internal improvements, Morehead also proposed that the state should provide formal agricultural education either at the state university or in a separate school, "where agriculture may be taught as a science, and where a model farm may be attached, and the science be practically illustrated and applied to use." Morehead's ideas exemplify the platform of the Whig Party that dominated North Carolina politics for much of the antebellum period and its support of several types of internal improvements. Furthermore, the political rise of the western counties contributed to this interest, since western North Carolinians tended to favor the projects regardless of political party. The Panic of 1837, the economic slump that followed, and

¹ Caldwell wanted the university to be more scientific and launched plans that lead to the hiring of Denison Olmstead and Elisha Mitchell. William Snider, *Light on a Hill: A History of the University of North Carolina at Chapel Hill* (Chapel Hill: University of North Carolina Press, 1992), 49-53, 60. The articles were later collected printed and then reprinted in the 1850s when the railroad boom was underway as *The Numbers of Carlton*. Joseph Caldwell, *The Numbers of Carlton, addressed to the people of North Carolina, on central rail-road through the state* (New York: G. Long, 1928).

the reluctance to raise taxes—even among Whigs—prevented better coordination of the railroads already supervised by the state and further measures.²

Some of the more prominent Whig proponents of internal improvements at this time were not only university trustees but members of the trustees' executive committee. John Morehead, William Graham, and Charles Manly were Whig governors of the state, Whig Party leaders at the state and national levels, and unionists in the years before the Civil War. David Lowry Swain had risen to be the state's first Whig governor and university president as an advocate of democratic reform. He was also a great admirer of Joseph Caldwell's *Letter's of Carlton*—holding onto copies of them into the 1860s—that advocated extensive rail connections in the state. Romulus Saunders was a prominent Democrat who had earlier sponsored a state bill to make a \$3 million loan for internal improvements. Paul C. Cameron, perhaps the wealthiest man and largest slaveholder in North Carolina, was a lifelong advocate of the university, who helped the school rebuild after the Civil War.³ These men represented the North Carolina planter elite, an

² North Carolina House Journal, November 25, 1844; Thomas E. Jeffrey, "Internal Improvements and Political Parties in Antebellum North Carolina, 1836 to 1860," *North Carolina Historical Review* 55 (1978): 111-156.; Allen W. Trelease, *The North Carolina Railroad, 1849-1871, and the Modernization of North Carolina* (Chapel Hill: University of North Carolina Press, 1991), 12-14. For more on antebellum railroads, see George Rogers Taylor, *The Transportation Revolution, 1815-1860* (New York: Rinehart, 1951); Albert Fishlow, *American Railroads and the Transformation of the Antebellum Economy* (Cambridge: Harvard University Press, 1965); Forest G. Hill, *Roads, Rails, and Waterways: The Army Engineers and Early Transportation* (Norman: University of Oklahoma Press, 1957); James A. Ward, "A New Look at Antebellum Southern Railroad Development," *Journal of Southern History* 39 (1973): 409-420; R. S. Cotterill, "Southern Railroads, 1850-1860," *Mississippi Valley Historical Review* 10 (March 1924): 396-405). See Robert B. Starling, "The Plank Road Movement in North Carolina," *North Carolina Historical Review* 16 (1939): 1-22, 147-173 for a discussion of one of the lesser known internal improvements.

³ UNC Catalogue 1843; Manly was secretary of the trustees for many years. Samuel A Ashe, et al., *A Biographical History of North Carolina* (Greensboro: C. L. Van Noppen, 1905-1917 has excellent entries on these men as does William S. Powell, ed., *Dictionary of North Carolina Biography* (Chapel Hill: University of North Carolina Press, 1979-); R. D. W. Connor, *Antebellum Builders of North Carolina* (Greensboro: North Carolina College for Women, 1930); and Beth G. Crabtree, *North Carolina Governor's, 1585-1974* (Raleigh: Division of Archives and history, 1974). Cornelia Phillips Spencer, *Pen and Ink Sketches of the University of North Carolina as it has been Dedicated to the People of the State and the Alumni of the University* (typescript copy in the North Carolina Collection, UNC Libraries), 8;

economically diverse gentry that was very active in commerce and industry. Allied with an increasingly prominent commercial class of merchants and lawyers, this gentry worked to diversify and improve the state's economy.⁴

One of the projects that they collectively supported was a government-sponsored railroad to link the eastern and western portions of the state. In late 1848 Governor William Graham proposed the creation of the North Carolina Railroad. To get the measure passed, he and his allies agreed to support several other state-financed internal improvements—a turnpike, a plank road, aid to existing railroads, and river navigation improvement. Graham, Morehead, Saunders, and Swain became the road's chief promoters, urging citizens to buy shares of the new state venture. They wrote letters and gave speeches praising the new road, predicting that it would have a positive influence on the state's economy. University President Swain wrote the *Raleigh Register*, saying that the railroad would be faster and cheaper than the stagecoach and that it would increase land values along its route. Most importantly, the new railroad would benefit both

Burton A. Konkle, *John Motley Morehead and the Development of North Carolina, 1706-1866* (Spartanburg: Reprint Co., 1971, c. 1922); R. D. W. Connor, *John Motley Morehead: Architect and Builder of Public Works* (Raleigh: North Carolina Society, Daughters of the Revolution, 1913); Cordelia Camp, *David Lowry Swain, Governor and University President* (Asheville: Stephens Press, 1963); William S. Powell, *North Carolina Through Four Centuries* (Chapel Hill: University North Carolina Press, 1989), 122. Trelease, *NCRR*, 25, 96, 115; Paul D. Escott, *Many Excellent People: Power and Privilege in North Carolina, 1850-1890* (Chapel Hill: University of North Carolina Press, 1985), 5, 34-35. Paul D. Escott, "Yeoman Independence and the Market: Social Status and Economic Development in Antebellum North Carolina," *North Carolina Historical Review* 66 (1989): 276-279; Charles Richard Sanders, *The Cameron Plantation of North Carolina* (Durham, North Carolina: Seeman Publishing Company, 1974), 7. For a discussion of resistance to internal improvements see Harry L. Watson, "Squire Oldway and His Friends: Opposition to Internal Improvements in North Carolina," *North Carolina Historical Review* 54 (April 1977): 105-119.

⁴ Interested in more than just railroads, men like Cameron championed agricultural improvement, banking, railroads, insurance and textile mills—as well as education, as this essay in part shows. For the economically diverse enterprises of the North Carolina gentry before and after the Civil War see Dwight B. Billings, Jr., *Planters and the Making of the "New South": Class, Politics, and Development in North Carolina, 1865-1900* (Chapel Hill: University of North Carolina Press, 1979), 82ff and Escott, *Many Excellent People*. For an interesting community study that reveals the growth of a commercial-oriented middle class in North Carolina see Gail W. O'Brien, *The Legal Fraternity and the Making of a New South Community, 1848-1882* (Athens: University of Georgia Press, 1985), specifically 146-7.

agriculture and fledgling industry since goods could be taken to wider markets with less cost and at greater speeds. These appeals worked. Enough shares were sold to begin organizing the road, and John Morehead, the acknowledged head of the drive for railroads in North Carolina, was the first president from 1850 to 1855.⁵

The railroad officials hired West Point graduate Walter Gwynn as chief engineer to survey, design, and build the line, but the process was a long one. It took from 1849 to 1851 for Gwynn and several surveying crews to plan the route, and the first track was not laid until 1853. Service began on already completed parts in 1854, and the road's first stages were finally completed in 1856.⁶ That year, the state legislature voted to award \$50 to each county that organized an agricultural society for the promotion of "Agriculture, Domestic Manufactures, and the Mechanic Arts." As informal education agencies, agricultural societies distributed economically useful information, and the railroad's leaders and the state legislature realized that the new road would benefit commercial agriculture and stimulate the growth of industry. The state agricultural society had been founded in 1852 and under the leadership of the same men spearheading the new railroad, advocated agricultural fairs, a more orderly and business-like approach to agriculture, and the execution of small experiments by every farmer and planter for the benefit of himself and others. In the years before the Civil War, the railroad brought much of North Carolina into a more robust market economy. Yeoman farmers of North Carolina took advantage of this new connection to each other and the world by

⁵ Trelease, *NCRR* 15-19.

⁶ Trelease, *NCRR*, 26ff.

increasingly farming staple crops, while industry slowly became a more vital aspect of the state economy.⁷

At least one university student hoped to enter this changing economy. Kemp Battle, son of university law professor William Battle and a member of a leading gentry family, graduated from the university in 1849. Hoping to put his courses in surveying to practical use, he applied to work for the North Carolina Railroad as an assistant engineer on one of the surveying crews. He was only offered a job as chainman and opted to take the much higher paying position of mathematics tutor at the university.⁸ Within a year, however, Battle learned more about the economic changes sweeping the nation than he could possibly have learned hacking his way through North Carolina forests to survey the railroad route.

In the summer of 1851 university mathematics professor James Phillips was appointed a Visitor to West Point and university graduate Benjamin Hedrick was hired to work in the *Nautical Almanac* offices in Cambridge. The two traveled northward together, taking with them Kemp Battle and Phillips' son Charles who had graduated from the university in 1841 and was an instructor at the university. Making New York City their interim home, the group traveled extensively throughout New England and into Canada. Being men of science, they arranged to visit the extensive geological state collection in Albany and the factories for a wide variety of products, including stoves,

⁷ Transactions of the North Carolina Agricultural Society, 1857 (Raleigh: Holden and Wilson, "Standard" Office, 1858), 8, 109-110; Paul D. Escott, "Yeoman Independence and the Market: Social Status and Economic Development in Antebellum North Carolina," *North Carolina Historical Review* 66 (1989): 275-300. The last chapter of Trelease, *NCRR* is a thorough treatment of the impact of the North Carolina Railroad.

⁸ Kemp Battle, *Memories of an Old-time Tarheel* (Chapel Hill: University of North Carolina Press, 1945), 79, 84; Lucy Battle to William H. Battle, September 12, 1849, Battle Family Papers, Southern Historical Collection, University of North Carolina Libraries. The Battles were one of the families Dwight

steamboilers, weapons, bells, teapots, candlesticks, glass, engines, carpet, books, and clothing as well as engineering accomplishments like the bridge at Niagara Falls. Kemp Battle wrote his family members numerous letters during his trip, explaining to them the great speed of the trains on which he traveled, the construction methods of some of the bridges he saw, and the way canals and railroads brought timber from Michigan to the East Coast for various practical uses. As educators, Battle and the other men also visited Harvard, Union College, and West Point, seeing first-hand the latest practical and theoretical innovations in science and engineering education.⁹

By this time also—and throughout the early 1850s—speakers at the University of North Carolina, newspaper editors, and politicians were extolling the virtues of science. Swain, Morehead, Graham, and the other promoters chose the university's 1850 commencement to announce that all of the North Carolina Railroad stock had been sold. They likely made the same comments as the *Hillsboro Recorder* did three years later when the editor wrote that “the Science of Engineering has become of vast importance to the South within the last few years,” noting that the number of railroads then under construction had propelled the new field to prominence. W.W. Avery spoke to the university's literary societies just before the Phillips-Hedrick group left, saying that the South's love of orators and statesmen had slowed the commercial and industrial progress of the region. North Carolina, he believed, should catch up in science and learning since these ultimately led the way to greater comfort and wealth. Governor Aaron V. Brown

Billings used to demonstrate that a “small landed upper class laid the institutional framework of modern North Carolina.” Billings, *Planters and the Making of the “New South,”* 82ff.

⁹ Kemp Battle to Lucy Battle, June 13, 1851; Kemp Battle to Sister, June 14, 1851; Kemp Battle to Sister, June n.d., 1851; Kemp Battle to Sister, June 26, 1851; Kemp Battle to unknown, June n.d., 1851; Kemp Battle to Sister, July 9, 1851; Kemp Battle to Mother, June 30, 1851; Kemp Battle to Father, July 7, 1851 all in Battle Family Papers.

echoed these sentiments three years later, telling the university community that scientific training was increasingly important to society. Science had given the nation the railroad, the steamboat, and the telegraph, and these new technologies were essential to prosperity and growth. Similarly, James H. Dickson proclaimed that “the necessity of enlarging the basis of education in our country is beginning to force itself on public attention” and that the university will do good to “enlarge the sphere of its usefulness.”¹⁰

A few months after Kemp Battle and James and Charles Phillips returned from New York and shortly after construction began on the North Carolina Railroad, the trustees and president Swain proposed the creation of a professorship of civil engineering. The required curriculum at the University of North Carolina had grown to include scientific and practical courses over the years, and there had been several attempts to have formal engineering and agricultural training at the university. Despite these trends, president David Swain had held a fairly conservative notion about the function of the university.¹¹ After spearheading the effort to make North Carolina politics more democratic, Swain was made president of the university to increase the school’s popularity and enrollment. Tuition and private donations were the university’s primary sources of income, and private donations would more likely come when the university looked successful, that is, when enrollments were up.¹² Swain spent as little

¹⁰ Thomas K. B. Cherry, “Bringing Science to the South: The School for the Application of Science to the Arts of the University of North Carolina,” *History of Higher Education Annual* 14 (1994): 76; *Hillsboro Recorder*, February 16, 1853; W.W. Avery, *Address Delivered before the Two Literary Societies of the University North Carolina, June 4, 1851* (Raleigh: William Holden, 1851), 10-22; Aaron V. Brown, *Address Delivered before the Literary Societies of the University of North Carolina, May 31, 1854* (Nashville: J. F. Morgan, 1854), 7; James H. Dickson, *An Address Delivered to the Alumni Association of the University of North Carolina June 1853* (Raleigh: Office of the Southern Weekly Post, 1853), 40.

¹¹ Swain was an Elder in the Presbyterian Church and like most men of his society a slaveholder. One of his slaves was the unofficial janitor of the university. Kemp P. Battle, *History of the University of North Carolina*. (Raleigh: Edwards, Broughton, and Co., 1907-1912), I, 535.

¹² The state did not regularly fund the school until 1881.

money as he could on books and equipment, later praising himself for saving money, increasing enrollment, and constructing buildings.¹³ Aside from attracting students and bolstering state pride, Swain believed that the university should instill students with the ideal of public service and train them to be society's leaders.¹⁴

While training future politicians and "men of affairs" seemed to be the former governor's primary aim as an educator, his comments in favor of the North Carolina Railroad indicate, however, that he was well aware of the practical skill and scientific knowledge that these men of affairs would soon require. At one point he had convinced the faculty to award honorary M.A. degrees to graduates who had spent three years as successful merchants just as they did to those who had gone into education, law, medicine, or the clergy.¹⁵ Shortly before the beginning of the university's law school in the 1840s, he wrote trustee Charles Manly that "I am and always have been anxious to render our course of instruction practical to the greatest possible extent." In the 1830s and 1840s, Swain and others had made a partial concession to non-traditional studies by admitting irregular students to the university. These partial course students were essentially elective students who took whichever courses they were interested in, so long as the faculty believed they were qualified. They did not earn degrees, and they lived and

¹³ Swain had forged a university endowment of \$250,000 by the beginning of the Civil War. In 1858-1859 the University of North Carolina enrolled over 450 students, second only to Yale. Battle, *UNC*, I, 780; Trustee Minutes, December 3, 1860; Charles Phillips to Kemp Battle, June 23, 1866 and July 5, 1867 in Battle Family Papers, Southern Historical Collection, University of North Carolina Libraries.

¹⁴ This civic interest helps explain Swain's concern for the preservation of North Carolina history and the establishment of a history chair at the university in the 1850s. Aside from teaching a course in moral philosophy as most college presidents did, Swain also taught the university's offering in constitutional law. William E. Drake, *Education in North Carolina before 1860* (Bloomfield, NJ: Carleton Press, 1964), 117; George Beebe, "150 Years of History at the University of North Carolina, 1795-1945," (Master's Thesis, University of North Carolina, 1946), 25ff.

¹⁵ Battle, *UNC*, I, 781.

followed fairly strict rules alongside their Bachelor of Arts peers. Sometimes the university enrolled as many partial course students as the entire freshman class.¹⁶

In 1852 Swain and the trustees asked the faculty to assess the feasibility of a “department of civil engineering.”¹⁷ The faculty wrote their colleagues in universities around the country, inquiring about textbooks currently in use, the proper apparatus and amount of time needed for instruction, and the desirability of using lectures rather than traditional recitations.¹⁸ Professor Elisha Mitchell, Charles Phillips, and one other professor comprised the committee that reported the faculty’s findings. Writing for the committee, Mitchell claimed that agriculture was acquiring the “dignity of an art and a science,” intimating that farming would require a new professional status that science and the university could provide. Furthermore, he asserted that the rise of manufacturing and changes in technology—like the steam engine, railway, and telegraph—“require the services of educated men . . . and people look to the colleges of the country to furnish” them. The “present demand” may be low for professional civil engineers, but the faculty recognized that there were different kinds of demand and were clearly in favor of extending the scientific and practical offerings at the university.¹⁹

Swain and the trustees offered the job of civil engineering professor to Benjamin Hedrick who had since risen to the position of office manager at the *Nautical Almanac*. Hedrick had been studying chemistry at Harvard while in Cambridge and suggested that

¹⁶ David Swain, Chapel Hill, to Charles Manly, Raleigh, 1844, Swain Papers; UNC Catalogue 1845-46.

¹⁷ Thomas K. B. Cherry, “Bringing Science to the South: The School for the Application of Science to the Arts of the University of North Carolina,” *History of Higher Education Annual* 14 (1994): 73-100 provides a most detailed look at the planning processes for the new school that resulted from this request.

¹⁸ UNC Trustee Minutes, January 12, 1852; UNC Faculty Minutes, January 23, 1852; UNC Faculty Journal, 1849-1855, 137; D. Mahan, to “My Dear Sir,” February 5, 1851, University Papers. The faculty discussed the new department and subsequent school at great length in their meetings and were instrumental in shaping these curricular changes that the trustees first proposed. UNC Faculty Minutes, October 9, 192, November 25, 1853, January 13, 16, and 22, 1854, February 19, 1854.

he could teach chemistry and physics instead. At some point, the trustees offered the position of engineering professor to the one of the North Carolina Railroad assistant engineers, but he asked for more money than they were willing to pay. Ultimately, the trustees decided to hire Hedrick to teach agricultural chemistry and Charles Phillips to teach civil engineering under the auspices of a new School of the Application of Science to the Arts.²⁰

The trustees planned to open the new school in January 1854. In the meantime, they permitted Phillips to travel one year to prepare himself for his new post.²¹ He returned to the North to join Hedrick in study at Harvard's Lawrence Scientific School, the nation's pre-eminent scientific institution.²² The two planned visits to an agricultural fair in Saratoga to see the latest agricultural developments and Renselaer Polytechnic Institute, West Point, Yale, and Brown to study libraries and instructional methods. While at Brown, Francis Wayland encouraged Phillips in North Carolina's efforts to make its state university more scientific and useful.²³

When the trustees and faculty concluded to launch the new school, neither group had a clear idea what shape the school would take nor what its relationship to the college would be. Should students be allowed to take the scientific, professional courses in the school only after completing the traditional studies, or should the school offer practical training to students unwilling or unable to complete the classical, mental discipline curriculum? The faculty and trustees considered several specific ways the scientific

¹⁹ 1852 Faculty Report in University Papers.

²⁰ UNC Trustee Minutes, December 15, 1852; UNC Faculty Minutes, October 27, 1852; Benjamin Hedrick to David Swain, December 13, 1852, University Papers; Cherry, "Bringing Science to the South," 95 n. 18, especially 80ff for the intricate details of the offers to Hedrick and Phillips.

²¹ UNC Executive Committee Minutes, December 29, 1852.

²² Robert V. Bruce, *Launching of Modern American Science* (Ithaca: Cornell University Press, 1987), 179.

school could be associated with the university. The school could function autonomously from the regular curriculum and classes, or it could be more fully integrated into the core college. It and other professional schools like law and medicine might accept juniors who had completed two years of traditional studies, or the new school might be a graduate/professional institution, admitting graduates of the university or other colleges. It could offer purely practical training to students who never intended to earn a Bachelor of Arts degree or it could offer a traditional course of study modified to minimize ancient languages and maximize the sciences.²⁴

Based upon his observations in the North, Charles Phillips warned the trustees of the dangers of some of these choices, leading them to chose the more conservative options. Phillips had reported that campus frictions increased in those northern schools where students in scientific and classical programs had little interaction. Since discipline was a perennial problem on antebellum college campuses, the trustees decided that the new school would be closely affiliated with the regular courses and students. Phillips argued that since students in the scientific schools were preparing for many different professions, they should still pursue a classical curriculum to train their minds and expose them to the general education of the day. He reminded president Swain that the Prussian system of education received such high praise because it ensured that students had the fundamentals of knowledge and mental discipline before going on to advanced and professional studies. “What is the use,” he asked, “of laying information before those who are not qualified to retain and use it?” Consequently, the dominant feature of the

²³ Charles Phillips to David Swain, September 17, 1853, University Papers.

²⁴ UNC Faculty Minutes, November 18, 1853; The Report of Charles Phillips on the School of Sciences as Applied to the Arts, November 25, 1853, University Papers; Benjamin Hedrick draft letter, February 12,

new school would be graduate education, rather than dividing the four-year curriculum. This preserved the classical curriculum and ensured that the focus of the school would be to prepare traditionally educated leaders for the new economy. Like other schools around the nation, the University of North Carolina was helping make new economic endeavors like engineering and changing occupations like agriculture into scientific professions. For students who chose not to pursue a classical course of study, the trustees admitted partial course or scientific students. These students would study toward a modified degree, ensuring that the student had some general education from the university, rather than taking only a handful of practical courses.²⁵

The trustees authorized \$1,300 for the new school in December 1853. Charles Phillips remarked that “a new field of usefulness is to be opened by this institution wherein the education faculties and the disciplined energies of her sons may secure for North Carolina riches now not dreamed of.”²⁶ The university catalogue clearly stated the dual aim of the new school. “The general [partial course or scientific] student,” would receive, “instruction in the Mathematical, Chemical, and affiliated sciences, as used in supplying the various wants of society.” For the graduate students—“who seek for a professional education”—the school would offer “ample opportunities of preparation for the professional labor of Engineers, Artizans, Miners, Chemists and Farmers.”²⁷ The

1853 and to “My Dear Sir,” February 15, 1853, Hedrick Papers, Duke University; Charles Phillips to David Swain, January 1 and 15, September 3 and 17, 1853, University Papers.

²⁵ UNC Faculty Minutes, November 18, 1853; The Report of Charles Phillips on the School of Sciences as Applied to the Arts, November 25, 1853, University Papers; Charles Phillips to David Swain, January 1 and 15, September 3 and 17, 1853, University Papers; University of North Carolina Catalogue, 1854-1855.

²⁶ Charles Phillips to David Swain, December 30, 1853, University Papers; UNC Trustee Minutes, December 30, 1853.

²⁷ *Catalogue of the University of North Carolina, 1853-1854*; Drake, *Education in North Carolina*, 169, Battle, *UNC*, I, 642.

scientific offerings, particularly in chemistry, were also excellent preparations for students intending to become physicians.²⁸

The school was officially divided into two departments—the department of civil engineering and the department of the application of chemistry to agriculture and the arts. Engineering professor Charles Phillips planned to offer instruction in the surveying and construction of roads, railroads, and earthworks; mechanical, topographical and architectural drawing; and engineering instruments and their uses in the field. These topical courses followed basic courses in mathematics and calculus. Some of the textbooks included Smith's *Mechanics and Engineering*, Mahan's *Civil Engineering*, and Gillespie's *Roads and Railroads*. After lecturing and hearing recitations on engineering theory and equipment, Phillips hoped to cap his students engineering education with a field trip to concentrate on practical applications. In the chemistry department, professor Hedrick focused on the agricultural, medical, and mineralogical aspects of the science. Bowman's *Medical Chemistry* and Johnson's *Agricultural Chemistry* addressed both theory and practical applications, and the other textbooks included treatments of general and analytical chemistry. Hedrick lectured and heard recitations on the analysis and testing of soils, manures, mineral waters, ores, minerals, drugs, and medicines. Having worked in the chemistry lab at Harvard, Hedrick was convinced of the efficacy of independent work. He consequently established a laboratory in the basement of one of the buildings on campus that was open seven days per week. Despite the obviously practical bent of the two departments, both Phillips and Hedrick believed that it was more important for their students to acquire theoretical knowledge rather than be merely

²⁸ One of the textbooks used in the school was Bowman's *Medical Chemistry*. More focused professional training was not a new thing at the university. William Battle had run the university's law

acquainted with practical applications. They believed they were educating new kinds of scientific professionals. Swain received a supportive letter in 1857 that echoed this sentiment, drawing a clear connection between science and the professions and praising the new school for its service to them both. The correspondent asserted that university students prepare for “a profession the learning of which is almost entirely scientific” and that “professional men whose callings force them constantly to apply science, must make science a specialty.”²⁹ Phillips and Hedrick also saw a clear connection between the offerings of the university and the economic development of the state. In a letter to Swain, Phillips claimed that when manufacturing increases so does the need for the application of chemistry—a need the university can and should provide.³⁰ Swain, his correspondent, and the new science professors were no doubt pleased upon hearing students give Commencement Day addresses with titles like “The American Engineer” and “Farming Becoming One of the Learned Professions.”³¹

Students could enroll in the new school in one of two ways. They could enroll in both the college and the Science School by substituting civil engineering and agricultural chemistry for ancient and modern languages or international and constitutional law in the second term of their senior year. They would receive a B.A. alongside those who took the purely classical curriculum but then have the option of studying science for another (fifth) year, culminating in a Master of Arts. The other way for students to enroll in the

school since 1845.

²⁹ F. L. Hawks to David Swain, November 10, 1857, Swain Collection UNC.

³⁰ Charles Phillips to David Swain, October 8, 1853, Swain Collection UNC. William Woods Holden also made this connection when he wrote “we must learn to build our own roads with our own iron, and stock them from our own shops; to improve our rivers . . . to work our own mines, keeping all the profits from them that we can at home . . . to build our ships...to not depend on other states” in of all places the *North Carolina Journal of Education* I (February 1858): 53-55.

Scientific School was to take general courses (excluding ancient languages) and a heavy dose of the science courses for about two and a half years. They would leave the school with the new Bachelor of Science degree. Both types of science students were part of the regular university community, attending classes and mandatory chapel and following the typically rigid disciplinary rules together.³² One student, John K. Ruffin, wrote to his family describing the new system. He recounted how president Swain explained to the students that they must now choose between being classical, engineering, or agricultural chemistry students, and he told his parents that he chose agricultural chemistry because it had a wide range of applications; it is a “broad field.” It is intriguing that this student perceived agricultural chemistry as a general science education rather than simply training to be a better farmer.³³

Before the new school was created in 1854, students had two ways of attending the university—as regular students taking the prescribed courses toward a Bachelor of Arts degree or as irregular students taking whatever courses they could with no hope of a certificate or degree. Now, with the Science School, students had more choices. They could enroll as regular students and take an increased amount of classics and humanities courses since many of the sciences and all of the practical subjects had been relegated to the new school. They could take classes as irregular students without earning a degree. They could enroll in the Bachelor of Science program and take course for two and a half years. They could graduate with a B.A., substituting science courses for languages or law in their senior year. Finally, after earning this science-leaning B.A. or graduating with

³¹ Charles Phillips to David Swain, September 3 1853, University Papers; Charles Phillips on the School of Science as Applied to the Arts, November 25, 1853; University of North Carolina Catalogue, 1854-1855; Battle, *UNC*, I, 643, 670.

³² University of North Carolina Catalogue, 1854-1855, 1860-1861; Battle, *UNC*, I, 642.

enough science background from another college, they could take practical science courses for an additional year and earn the Master of Arts.

As Francis Wayland had predicted when talking with Charles Phillips, the new school was a “step in the right direction”—on paper. Students neither flocked to enroll in it as graduate/professional students, nor did many enroll as Bachelor of Science students. The university’s enrollment did increase by 70% in the 1850s to over 400, and the number of partial course students more than doubled to 39. The trend was already noticeable, however, before the Science School opened and was just as likely to be the result of the general improvement in the North Carolina economy. Most of the students who enrolled in the new school were seniors opting to take practical courses (or escape language classes) in their last term. In the five years before the Civil War, eighty-eight percent of the senior classes enrolled in the school. This merely continued the earlier curricular arrangement where practical fields and new sciences were placed in the senior year and traditional courses were either taken out or relegated to earlier years. The seniors would likely have taken similar courses if the new school had never been created. Ironically, the greatest change was for the twelve percent of the seniors who chose to study languages and law in the last half of their senior year. They no longer had to take the practical courses that had been increasingly dumped into the standard curriculum. Few, if any, of the Science School seniors received the Master of Arts degree for taking a fifth year of engineering or chemistry courses. That is not surprising since graduation rates for even the Bachelor of Arts tended to be quite low in antebellum colleges. It is likely that most of the partial course students pursued the Bachelor of Science curriculum, but here again very few graduated. James E. Lindsey received the first

³³ Quoted in Foerster, *State University in the Old South*, 282.

Bachelor of Science degree in 1857 and went on to be a physician and professor at the Baltimore Medical College. Only seven other students, however, completed the degree requirements before the Civil War. The partial course students did not seem to enter scientific professions any more than their peers at institutions without a Science School. The occupations of the third of the partial course students whose occupations are known were remarkably similar to those of non-graduates at the University of Alabama in the late 1850s.³⁴

In those years, however, President Swain, the trustees, and the science faculty did not know what occupations their students would or would not enter, nor did they know that a decade of Civil War and Reconstruction would tremendously delay their plans for both the North Carolina economy and the university's curriculum. They hoped to continue expanding the university's practical and scientific offerings, while preserving the liberal arts, traditional core of a college education. The university's primary function was still to provide mental discipline through the study of mathematics and ancient languages and to educate tomorrow's "men of affairs" through the study of history, political economy, and moral philosophy. The majority of the university's professors and resources were dedicated, after all, to providing a classical education.³⁵ The School for the Application of Science to the Arts was the beginning not of changing that traditional

³⁴ The war did not cause a rush to practical education, either. Thomas Waverly Palmer, *A Register of the Officers and Students of the University of Alabama, 1831-1901* (Tuscaloosa: University of Alabama Press, 1901); Cherry, "Bringing Science to the South," 92; Battle, *UNC*, I, 644, 676, 711; *UNC Catalogue*, 1861-1862.

³⁵ The 1855 faculty and salaries indicate where the university's educational emphasis still lay. President Swain earned \$2200 per year. Faculty and assistant salaries are below:

Mathematics	1650	Civil Engineering	1400	Latin and Greek Adjunct	1200
Latin	1650	Agricultural Chemistry	1400	Senior Tutor	800
Greek	1650	Rhetoric and Logic	1350	Tutor (3)	700
History	1550	Chemistry	1250		

Minutes of the Executive Committee of the University of North Carolina, 1835-1873, 70.

curriculum but augmenting it and diversifying the educational services provided by the university. The school was far from a success, but it was young, and enrollments would grow. The North Carolina Railroad took eight years to go from proposal to partial completion, why should the higher education habits of the state's elite change any faster? Swain and the trustees knew that there were efforts underway in the federal government to fund practical education. They knew many other colleges were debating and sometimes implementing curricular reform that would adapt higher education to the changing economy and society. Many of them had been instrumental in shaping those changes. Hoping to make the Science School more serviceable to a new kind of North Carolina and South, the trustees and president Swain instructed the faculty to explore ways to expand the school's offerings in 1859 so as to include "any new branch of practical science suitable to a University." Charles Manly recommended to Swain that the university "go in for Agriculture on the Largest scale." The trustees hoped to separate the school from the university more fully and add considerably more fields of scientific and practical study. Unfortunately, the Civil War made survival more important than expansion. The university had to wait until the late 1860s before the trustees and faculty resumed discussions of curricular change—in many ways where they had left off before the war.³⁶

³⁶ Greensboro, North Carolina, *Times*, April 17, 1858; Charles Manly to David Swain, February 12, 1859, Swain Collection UNC; UNC Trustee Minutes, January 26, 1859.

CHAPTER THREE

RETRENCHMENT AND REFORM AT THE UNIVERSITY OF GEORGIA IN WAR AND RECONSTRUCTION

The destruction of the Civil War and the tumult of Reconstruction was an understandably difficult setback for much of Southern higher education in the 1860s and 1870s. Experiences of Reconstruction differed, however, from state to state. Georgia felt comparatively light disruption and re-entered the Union rather quickly in 1871. Consequently, the University of Georgia did not undergo the politically motivated removal of the old boards of trustees as did the state universities in neighboring North and South Carolina. The war itself had caused the University of Georgia's Chancellor Andrew Lipscomb and head trustee William Mitchell to abandon reforms and close their school, but they quickly re-opened it in 1866. A student entering the University of Georgia this year would have seen little difference between the university and the one his older brother or father might have attended in the 1840s or 1850s. Because the war had forced the abandonment of antebellum reforms, the university returned to being a traditional college in which all students took the same prescribed courses as a class through the senior year, where they might have minimal choices among sciences or modern languages. Still reflecting the old mental discipline philosophy of education, this traditional structure foisted all of the new courses in sciences, advanced mathematics, and

their practical applications like agricultural chemistry and engineering upon all students in the increasingly diffuse lock-step curriculum.

Mitchell and Lipscomb soon made considerable changes. In the late 1860s and very early 1870s they reopened the law school, made a pre-existing medical school a part of the university, opened a new professional engineering school, created two business certification programs and two new bachelors degrees, and adopted a partial elective system. This rush of reforms led to some debate among the trustees over the wisdom of seemingly abandoning the mental discipline philosophy of education and its heretofore concomitant single prescribed curriculum, but this difference of opinion failed to diminish the consensus that the university should be a driving or at least assisting force in the economic improvement of the state.

Reconstruction for the University of Georgia was essentially a brief waiting game for the end of military occupation and a resumption of local control. When they finally happened, prominent university alumni and trustees concentrated their efforts on obtaining funds for the school from the 1862 Morrill Act, since the state was back in the Union and now eligible to receive them. Notably, when Mitchell and a committee of trustees crafted the university's application for the funds—complete with a university reform plan—in 1871, they did not have to study what was done in other parts of the country (where the war had not delayed the awarding of land and subsequent funds from the Morrill Act) nor did they have to scrutinize the 1862 law to fathom the direction its framer's intended higher education to take. They simply had to rework their own proposals from the 1850s and look to their own actions of the previous decade.

While Mitchell and Lipscomb drew from their early plans and their own ideas when conducting reforms in the late 1860s and very early 1870s, their actions reflected several national trends. The University of Georgia may have been one of the more ambitious Southern schools from an early date, but it fit well within nation-wide patterns of structural reform that had begun in the 1840s and 1850s and continued into the 1860s, 1870s and beyond when compared to other major universities.¹ What was coming under scrutiny and subject to reform at many universities was the mental discipline notion of the college curriculum in which all students took prescribed courses, focusing heavily on Latin, Greek, and mathematics. While additions of new sciences and disciplines to the prescribed curriculum had occurred since the founding of most colleges, it was not until the last decades before the war that structural changes to this monolithic educational idea became widespread. As they continued into the postbellum era, these reforms took several shapes. Under the elective principle students could take courses they wanted to varying degrees depending on the school. In the Northeast, Harvard had already instituted the elective system well before the arrival of Charles Eliot. Eliot, however, furthered student election beginning in 1871 and was the educational concept's most

¹ At first glance, it might seem unfair to compare the most advanced—in terms of reforms—schools in the South to demonstrate that the region's level of reforms was comparable to that of other regions. It was, however, only a few of the advanced universities in the Northeast and Midwest that were undertaking significant reform. As see W. Bruce Leslie has demonstrated in *Gentlemen and Scholars: College and Community in the "Age of the University," 1865-1917* (University Park, PA: Pennsylvania University Press, 1986), not all colleges in the Northeast, just because they were in the Northeast, adopted university reforms with the zeal of a Harvard or Cornell. Similarly, in the South numerous of the supposedly highly conservative denominational and military colleges had been undergoing reforms since the Civil War that reinforce one of the claims of "Commerce and College" that the South was not an intellectual, educational policy backwater. For denominational school reforms in Georgia and North Carolina that began around the same times as at the state universities, see Microfilm Role 113 of the Confederate Imprints Collection which contains 1860-1861 catalogues from many Southern colleges; Spright Dowell, *A History of Mercer University, 1833-1953* (Atlanta: Foote and Davies, 1958); Emory College Catalogue, 1846, 1848; Henry M. Bullock, *A History of Emory University* (Nashville: Parthenon Press, 1936), 105-108; Nora Campbell, Chaffin, *Trinity College, 1839-1892: The Beginning of Duke University* (Durham: Duke University Press,

vocal and recognized national champion. Another type of reform was the parallel or alternative Bachelors degrees that many schools began before the war. In this system, students chose among fairly prescribed courses of study that culminated in one of three degrees—Bachelor of Arts, Bachelor of Science, and Bachelor of Philosophy. Cornell University, another highly recognized and widely emulated model of educational innovation in the 1860s and 1870s, notably combined this method with the elective principle. Yet another innovation was the creation of new professional degrees in chemistry, engineering, and other new professional pursuits. Sometimes, with the help of Morrill Land Grant funds, these took the form of Bachelor's degrees like the Bachelors of Agriculture, Engineering, or Chemical Science. Other times they became graduate degrees like at the conservative Yale's Sheffield Scientific School which focused upon higher level graduate education—as had William Mitchell with the new professional programs in his 1850s reform plans. What is fascinating about the higher education reforms at the University of Georgia in the 1860s and early 1870s is not that they kept pace with those at these three Northeastern schools or Midwestern universities like the Universities of Wisconsin, Michigan, and Illinois. Rather, the University of Georgia matched and sometimes exceeded the reform zeal and results of schools in the Northeast and Midwest which drew students and support from a greater population, a more industrialized society, and/or a more educated populace.²

1950), 140ff; Normal College Catalogue, 1850-1851, 1860-1861 quoted in Chaffin, *Trinity College*, 140ff; William E. Drake, *Higher Education in North Carolina before 1860* (New York: Carlton Press, 1964), 169.

² Since it took until the 1870s for the reforms at the University of Georgia and North Carolina to take their final postbellum shape, a direct comparison between the offerings of these two schools and those of other universities will appear in chapter five. Morris Bishop, *A History of Cornell* (Ithaca, NY: Cornell University Press, 1962), 155-156; Brooks Mather Kelley, *Yale: A History* (New Haven: Yale University Press, 1974), 183-184, 186-187, 258; Samuel Eliot Morrison, *Three Centuries at Harvard, 1636-1936* (Cambridge: Belknap Press, 1936), 344-345; Howard H. Peckham, *The Making of the University of Michigan, 1817-1992*, edited and updated by Margaret L. and Nicholas H. Steneck (Ann Arbor: University

When Andrew Adgate Lipscomb arrived at the University of Georgia in the fall of 1860, William Mitchell, the faculty, and trustees were busily implementing the reorganization plans of the previous year. The Law School was already instructing its first class and construction was under way for new buildings to house the library, the geological museum, classrooms, and the Collegiate Institute a few miles from Athens.³ Unlike Mitchell, who forged the plans to reshape the university, Lipscomb was a minister and a professional educator. He grew up in Washington D.C., attending the Georgetown Military Academy and most likely Columbia Academy. After becoming a Methodist minister at age nineteen, he was a pastor in Virginia and Maryland for a number of years. He moved to Alabama in the 1840s and in 1849 opened the Metropolitan Institute for Young Ladies in Montgomery. Seven years later, Lipscomb became president of Tuskegee Female College where he remained until hired by the trustees of the University of Georgia to carry out Mitchell's reorganization scheme.⁴

At the beginning of the Civil War, Lipscomb was optimistic about the university's prospects. The war, he claimed, would take many of the older students away, but the university's halls would soon fill with young southerners forced to withdraw from northern schools. He reminded the trustees of their previous commitment to a school of

of Michigan Press, 1994), 43, 48, 87; Merle Curti and Vernon Carstensen, *The University of Wisconsin: A History* (Madison: University of Wisconsin Press, 1949), I, 439, 450, 462; Winston O. Solberg, *The University of Illinois, 1867-1894: An Intellectual and Cultural History* (Urbana: University of Illinois Press, 1968), 90, 164; Laurence R. Veysey, *The Emergence of the American University* (Chicago: University of Chicago Press, 1965), 60; John Brubacher and Willis Rudy, *Higher Education in Transition* (New York: Harper and Row, 1976), 111, 116, 204-6; Frederick Rudolph, *The American College and University: A History* (Athens: University of Georgia Press, 1990), 244, 293-4.

³Board of Trustees of the University of Georgia, *Minutes* (hereafter cited as Trustee Minutes), IV, 34, 45, 79-81.

⁴Joseph Jacobs, "Andrew Adgate Lipscomb, Chancellor of the University of Georgia, 1860-1874," *Bulletin of the University of Georgia* 29 (1929): 1-11; Fielding Russell, "Andrew Adgate Lipscomb: Georgia's First Chancellor," *Georgia Review* (1951): 83-93; E. Merton Coulter, *College Life in the Old South* (Athens: University of Georgia Press, 1951), 203, 238; Thomas G. Dyer, *The University of Georgia: A Bicentennial History, 1785-1985* (Athens: University of Georgia Press, 1985), 100.

engineering and prodded them by claiming that the Confederacy needed men to lead its industry. The trustees remained true to their plans despite financial difficulties created by the war. In 1862 they gave William Mitchell's Prudential Committee all of the university's excess funds to establish an engineering school.⁵ Lipscomb looked to Mitchell for guidance in running the university, and the two men shared the belief in an industrial future for the South. When Lipscomb visited friends and family in Montgomery, Alabama during Christmas of 1862, he wrote Mitchell predicting that a revolution would radically change the way people thought about work and the professions. He repeated these sentiments to the trustees the next summer. He told them that engineering would be the basis of Georgia's economy and—despite the uncertainties of war—now was the time to invest in an industrial future.⁶

Lipscomb was overly optimistic. The university's enrollment had dropped from 122 in 1861 to fewer than 40 in both 1862 and 1863. Many students and faculty members had enlisted in the Confederate army and navy, and the trustees were hesitant to authorize any non-essential funds. Lipscomb and Mitchell had too little cash on hand to purchase the equipment and hire another faculty member necessary, they believed, for the establishment of an engineering school. Even if they had the money, they probably could not have opened the school anyway. It is unlikely they would have been able to locate and purchase the necessary equipment, and able-bodied men with civil engineering knowledge and experience (the type of men they would have wanted to hire) were already most likely preparing fortifications, earthwork defenses, and railroads for the war

⁵Trustee Minutes, IV, 49, 61-2.

⁶Andrew Lipscomb, Montgomery, to William Mitchell, Athens, 19 DEC 1862, E. Merton Coulter Collection, Historical Manuscripts Part 1, University of Georgia Libraries, Athens; Trustee Minutes, IV, 70.

effort. By the end of the 1863-64 school year, Governor Joseph E. Brown called out the State Guard, and the Confederate Congress passed a law to enlist 17 and 18 year-olds. The low enrollments had forced the abandonment of the 1859 plan, and the university returned on paper and in reality to its pre-war structure. The proximity of General Sherman's armies to Atlanta finally forced the trustees to close the school in July 1864.⁷ Sherman's destructive march through Georgia in 1864 passed by Athens and the university, but for the next year and a half the university's doors remained closed. The Confederate government had briefly taken over most of the school's buildings and turned them into a hospital, and for a time the new library and classroom building doubled as a refugee center. Federal troops eventually occupied Athens and the university campus in late spring 1865. Throughout most of the period, Chancellor Lipscomb remained on campus and looked after the library, scientific equipment, and the University High School. Those professors who had not enlisted stayed in their university-owned homes rent free and privately tutored students too young to fight who remained in Athens.⁸

Unlike many southern colleges, the University of Georgia survived the war with its library, buildings, and scientific equipment intact. The worst physical damage was a few broken windows, some cracked facades, and an occasional damaged fence. The financial damage was far worse. Despite the good fortune of investing before the war in new buildings that survived, the trustees lost a great deal of capital. They had invested

⁷Board of Trustees of the University of Georgia, *General Catalogue of the University of Georgia* (hereafter cited as *University Catalogue*), 1860-1865; Trustee Minutes, IV, 61, 71-75, 84-5; Kenneth Coleman, ed., *Athens, 1861-1865: As Seen Through Letters in the University of Georgia Libraries* (Athens, University of Georgia Press, 1969), 2, 64; *Athens Southern Banner* 30 APR 1862; William L. Mitchell, "Roll of the University High School, 1862," in E. Merton Coulter Collection, Historical Manuscripts Part 1, University of Georgia Libraries, Athens; Coleman, ed. *Athens, 1806-5*, 43, 52; Thomas J. Diener, "A Junior College Idea at the University of Georgia, 1859," *Georgia Historical Quarterly* 56 (Spring 1973): 89-90; Dyer, *University of Georgia*, 105.

⁸Trustee Minutes, IV, 85, 97.

\$36,000 in now useless Confederate and Georgia State bonds and held an equally worthless 1,000 shares in the old state bank. The lack of income from tuition and the loss of \$8,000 interest from the state endowment worsened the university's financial situation. When the board's Secretary-Treasurer, Asbury Hull, secured some meager funds for repairs in 1865, Andrew Lipscomb proclaimed that the sight of money had never made him so happy. He immediately went to work fixing damaged plaster and putting up a new fence.⁹

Despite the dark outlook, the ever-confident Lipscomb immediately planned to reopen the university in January 1866 and continue the reorganization effort begun in the 1850s. William Mitchell became Secretary-Treasurer of the board of trustees the same year, further consolidating his control of the university. The two renewed efforts to transform the school into a university-proper by reopening the law school in 1867 with Mitchell and Benjamin Hill as professors. Since the trustees in the 1850s had postponed their decision to ally the university with the Georgia Medical College in Augusta, the war had increased the delay. It took another few years of cajoling and the courting of rival Atlanta Medical College, but the Augusta school finally became a branch of the university in 1872. The local board of trustees retained control over the Medical College's operations, including the awarding of degrees, while the university's board maintained general oversight of the school and reveled in the claim of presiding over a university complete with law *and* medical schools.¹⁰

⁹Andrew Lipscomb, Montgomery, to William Mitchell, Athens, 13 DEC 1865, E. Merton Coulter Collection, Historical Manuscripts Part 1, University of Georgia Libraries, Athens; Trustee Minutes, IV, 94-4, 100-1; Dyer, *University of Georgia*, 111-2.

¹⁰ For histories of Georgia Medical College see Phinizy Spalding, *The History of the Medical College of Georgia* (Athens: University of Georgia Press, 1987) and William H. Goodrich, *The History of the Medical Department of the University of Georgia* (Atlanta: Ridgely-Tilwell, 1928). Trustee Minutes, IV, 354, 381; William H. Hull, Augusta, to William L. Mitchell, Athens, 06 JUN 72, E. Merton Coulter Collection,

By 1872, the university would have even more professional schools under its aegis. Immediately after the war Lipscomb reminded the trustees at their annual meeting of their pre-war goals, and without hesitation the board resumed the other elements of its antebellum plans. Eleven years after Mitchell had first proposed the School of Applied Sciences, the School of Civil Engineers opened for the 1866-67 school year.¹¹ To enter the new school, students had to have already earned the Bachelor of Arts at the University of Georgia or elsewhere. Upon completion of a year of applied mathematics, applied chemistry, and a modern language—usually French—they earned a professional degree in Civil Engineering (C.E.). The next year the board added the degree of Civil and Mining Engineering (C.M.E.). The C.M.E. students took the same courses as for the C.E. for one additional year, making the C.M.E. a six-year degree. The trustees equated the C.E. and C.M.E. with the law degree (B.L.) and later in 1872 with the medical degree (M.D.). They designated all four “University Degrees” superior to the Bachelor of Arts—a college degree.¹²

Only five students graduated from the first class of the School of Engineers, and the university conferred few C.E. or C.M.E. degrees compared to law and medical degrees over the next twenty years. Nevertheless, Lipscomb and the board elevated

Historical Manuscripts Part 1, University of Georgia Libraries, Athens; Reed, unpublished history, 935; Dyer, *University of Georgia*, 121.

¹¹Confidence and funding for the new school came, in part, from the short-lived state legislation that paid for maimed veterans to attend the university and other schools around the state. Most all of the veterans enrolled in the much lower cost University High School, so the trustees were able to pocket the rest of the money. When the state’s financial boon ended in 1869 the school was underway and the High School’s enrollment dropped from 146 to 63 in 1870. General Assembly of the State of Georgia, *Acts* (Milledgeville: Boughton, Nisbett and Barnes, 1866), 143-4; Trustee Minutes, IV, 185, 97, 39-40, 149, 304; University Catalogue, 1866-71. For a discussion of the bill, see Derrell Roberts, “The University of Georgia and Georgia’s Civil War G.I. Bill,” *Georgia Historical Quarterly* 49 (December 1965): 418-23; Coulter, *College Life*, 255-6; Dyer, *University of Georgia*, 112-3.

¹²Trustee Minutes, IV, 107; University Catalogue, 1866-72; Augustus L. Hull, *A Historical Sketch of the University of Georgia* (Atlanta: Foote and Davies, 1894), 78; Robert Preston Brooks, *The University of Georgia Under Sixteen Administrations, 1785-1955* (Athens: University of Georgia Press, 1956), 56.

pursuits often identified with vocations or crafts to the level of professions. The University of Georgia would educate scientific professionals to lead the state and its industry, not train better workers. This was the goal of Mitchell's antebellum plans and the goal Lipscomb kept before the trustees every year at their summertime meetings. Lipscomb asserted that the university's aim was practical service to the state and that the university's degrees certified professionals. When William Mitchell and Benjamin H. Hill reopened the law school in 1867, a diploma automatically allowed graduates to practice law anywhere in Georgia. Engineering degrees would equally certify competent men for jobs leading the way in road, railroad, and mining construction and operation.¹³

Lipscomb championed all scientific and practical education, but emphasized educating professionals for commerce and industry—two areas which would bolster the postwar economy. For the next several years, he pressed the board to increase the university's emphasis upon professional education by providing better funding for the engineering school and creating new schools. Georgia was slow to recover economically, he claimed, because the state lacked the men trained in the industrial professions. Envisioning an industrial South led by men trained at the university, he cited examples of Harvard, Yale, Cornell, and the Universities of Virginia and Michigan, advising the board that Georgia should keep pace with the growing trend of professional schools throughout the country. He predicted that in twenty years manufacturing and industry would generate most of Georgia's wealth and claimed that the university had a crucial role to play in that transformation.¹⁴

¹³Trustee Minutes, IV, 222; University Catalogue, 1860-1, 1866-8.

¹⁴Trustee Minutes, IV, 187, 217-8, 257, 342-3; Thomas W. Reed, unpublished history of the University of Georgia, Miscellanea Publications, University of Georgia Libraries, Athens, 870-1.

Most members of the board clearly favored education for business and industry. They did little to bolster agricultural education at the university in the years immediately following the Civil War. During the war they had stopped using the interest from William Terrell's 1854 endowment for lectures in agriculture, diverting the funds to help create the engineering school. Earlier plans for an agricultural school seem to have been forgotten or left by the wayside in the heady rush to create a New South. By 1870 the board resolved to institute any scientific or professional programs that might continue their ongoing efforts to realize Mitchell's idea of a utilitarian university.¹⁵ To this end, Mitchell took a step in the direction of creating a commercial school by designing a two-year commerce program. Commerce students took introductory courses in English, history, arithmetic, algebra, and geometry. Mitchell himself taught courses in penmanship, bookkeeping, commercial law, and business forms. The university soon offered a similar program in building and architecture. Students in this three-year program took many of the same subjects as those in the commerce program, but also took courses in architectural drawing, building materials, and structures. Rather than receiving degrees, graduates of both programs received certificates of completion. Judging from the course content, these programs were more akin to the law and medical schools of the day, which had not yet developed into graduate-level institutions, than the School of Engineering with its more technical and post-baccalaureate emphasis. Mitchell, Lipscomb, and the board anticipated that these business certification programs would be the seed of a future professional school at the graduate level. They knew that while not all doctors, lawyers, or businessmen may have or need a classical or traditional college education, the leaders of those professions certainly had and did. They wanted their institution to train the

¹⁵Trustee Minutes, IV, 49, 61-2, 237.

leaders of professions as well as rank and file members. For now, commerce education required little specialized, scientific training like engineering and was desperately needed in the prostrate South.¹⁶

Creating professional schools and beginning certificate programs were only two ways that colleges and universities like the University of Georgia restructured their curricula to include the sciences and practical education in the middle and late decades of the nineteenth century. The University of Georgia was similarly in step with other nationwide reforms, creating alternative bachelor degrees and adopting the elective system. In 1866 and 1867, when the university opened the School of Civil Engineering and reopened the Law School, it began offering the Bachelor of Science degree (B.S.). The trustees borrowed the additional bachelor's degree idea from the curricular innovations begun at Yale, Harvard, North Carolina and other schools before the war. Students who earned a B.S. took most of the same courses as Bachelor of Arts students in their freshman and sophomore years. In their junior and senior years, the science students took mathematics, chemistry, biology, and geology, while their B.A. counterparts took history, political science, rhetoric, and metaphysics. The single greatest difference was the language requirement. B.A. students studied both Latin and Greek, but students in the B.S. program could substitute French and German for the ancient languages. By the 1868-69 school year, the trustees added another antebellum innovation—the Bachelor of Philosophy degree (B.Ph.). These students took the same courses as the Bachelor of Arts students, but had the option to substitute modern

¹⁶Fifty per cent of the University's students never received degrees, and the Board of Trustees never published the number of certificate recipients, so there is no way to know how many of them opted for certificates. Trustee Minutes, IV, 65-6; University Catalogue, 1869-82; Reed, unpublished history, 910.

languages for Greek and Latin.¹⁷ In the late 1860s Lipscomb and the trustees also created the elective department for students who preferred practical studies over ancient languages and pure mathematics. Students over sixteen years old could select their own courses without working toward a specific degree or professional certificate. According to the plan, however, the elective department was for those who had completed the first two years of regular study.¹⁸

With this last reform, considerable debate among the trustees ensued over the wisdom of abandoning the mental discipline philosophy of education by incorporating an, albeit partial, elective system. Some, like Mitchell, believed that the choice among bachelor degrees was election enough. This difference of opinion, however, did not undermine the friendship between Lipscomb and Mitchell. Whether their institute adopted a version of the elective system soon to be lionized by Harvard, multiple bachelors degrees, or some combination of both, the two men and the trustees were intent upon finding “the proper method of placing the Institution on a University footing” that would advance their overall agenda.¹⁹ This brief controversy failed to diminish the consensus among the trustees that the university should be a driving or at least assisting force in the economic improvement of the state. They consequently seemed to be incorporating every type of educational innovation. Undergraduates could specialize as

¹⁷Trustee Minutes, IV, 144; University Catalogue, 1866-72.

¹⁸University Catalogue, 1866-72; Trustee Minutes, August 1 and 3, 1867, November 13, 1867, July 30, 1869.

¹⁹ Trustee Minutes, III, 287-288, IV, 180, 186-92, 195-196; University Catalogue, 1866-72; Dyer, *University of Georgia*, 117; Hull, *Historical Sketch*, 159; Reed, unpublished history, 587, 589. This debate foreshadowed one that dominated higher education reform across the country over the next three decades. Proponents of the elective principle presented the new curricular system as an application of the American belief in individual freedom and new studies in psychology. Charles W. Eliot, the President of Harvard University, was the nation’s most outspoken champion of the elective principle. When he proposed bringing it to Harvard in 1869 he justified his position with the new psychology that asserted individuals

B.A., B.S., B.Ph. or elective students after their sophomore year, non-traditional students could take certification courses in commerce and architecture/building, and professional students could earn degrees in law, medicine, and two in engineering.

What is most interesting about these reforms is that they all took place without the benefit or direction of the 1862 Morrill Act and its funds. Georgia was still under Presidential and Congressional Reconstruction when Lipscomb and Mitchell undertook the reforms, so was still ineligible to receive the land and give the university any resulting money. By 1870, however, Reconstruction was coming to a close in Georgia and the native white elite prepared to take over the state government. Among those redemption era leaders were John B. Gordon, Alfred H. Colquitt, and Joseph E. Brown—the Bourbon Triumvirate—who would come to dominate Georgia’s government by the late 1870s. All three had enjoyed considerable economic and political prestige before and during the war; Gordon and Colquitt had become Confederate generals, and Brown had served as governor. They were not interested in the social reconstruction of Georgia that the Republicans had attempted. Rather, the primary goals of the Bourbon Democrats were a stable social order, white supremacy, one-party rule, “home rule” for the state and region, and the assurance of a subservient labor supply. Some of the activities by Brown, Gordon to lesser extent, and a number of their allies belied an interest in economically reconstructing the state through industry or at least enriching themselves through new kinds of economic endeavors. Joining those with this view were men like Benjamin H. Hill who had been a prominent pro-Union Whig in antebellum Georgia, but who had supported the Confederacy once Georgia seceded. Hill believed that the old Whigs and

have natural preferences and inborn aptitudes. Eliot argued that Harvard should allow students to choose which studies they wished to pursue. Rudolph, *American College*, 293-4.

union Democrats could have controlled the South after the war and would have brought “stability, economic progress, and prosperity,” but he blamed Congressional Reconstruction for failing to distinguish between men like himself and secessionists. Hill had ardently opposed Reconstruction, but by 1870 changed his recalcitrant stance, urging southerners to accept the fourteenth and fifteenth amendments demanded by Congress and to look to the future. He had recently become a partner in a company with Joseph Brown which leased the state-owned Western and Atlantic Railroad. They looked to the railroad to lay the groundwork for industrializing the state and to increase their own wealth. Brown, Hill, and some of their political allies also extended their interest to the university. They were not only in favor of the educational and economic changes discussed at the university but took an active part in them. Hill and Brown had been active trustees of the university before the war and early proponents of Mitchell’s reorganization plans.²⁰

In the summer of 1871—amidst the redemption of Georgia’s government—many of Georgia’s leaders gathered in Athens for the first meeting and banquet of the University Alumni Society. Every summer the University of Georgia campus filled with recent graduates, parents, and distinguished alumni for several days of socializing, a fair amount of political intriguing, speech-making by students and guests, and the awarding

²⁰For the divisions within southern Democratic parties see Woodward, *Origins*, 75-106; Numan V. Bartley, *The Creation of Modern Georgia* (Athens: University of Georgia Press, 1990), 75-7; and Kenneth Coleman, ed., *A History of Georgia* (Athens: University of Georgia Press, 1991), 214-5. Joseph E. Brown (1857-89), John B. Gordon (1873-1884), Alfred H. Colquitt (1878-82), and Benjamin Hill (1856-1881) were members of the Board of Trustees and supported practical education reforms. Among the four, Brown and Hill were the most active proponents. Gordon and Colquitt served on the Board for much shorter amounts of time and likely voted for reforms for reasons of politics as much as personal conviction. Hull, *Historical Sketch*, 155-6; Reed, unpublished history, 969-71. For their varied economic activities, see Woodward, *Origins*, 1-23; Bartley, *Creation of Modern Georgia*, 81ff; Coleman, ed., *History of Georgia*, 207-24, 296. Hill was one of the senators sent to Washington under Presidential Reconstruction but was

of prizes and diplomas. In an effort to attract attention to the reorganized university, the board of trustees designated one day of the four-day celebration Alumni Day.²¹

The first event of Alumni Day caused a sensation. Benjamin H. Hill, law professor, member of the board, and recent political ally and business partner of Joseph E. Brown, gave an impassioned speech about the condition of the South and its future direction. Hill told his listeners that slavery had kept the South from progressing economically and materially and proclaimed the South must create itself anew through business and industry. He told the large crowd that manufacturing and industry would constitute the core of Georgia's future economy and shape all future institutions. With added emphasis, he proclaimed that those who controlled these forces would govern in the state and the country.²²

The solution he presented was to multiply and socially elevate industrial pursuits. The South must learn, he said, to "honor labor, and make the callings of the miner, the manufacturer, the metallurgist, the machinist, the agriculturalist, and the mechanic as learned and as honorable as are the learned professions of law, medicine, and theology." Rather than opening higher education to all classes, his primary emphasis was to diversify the pursuits to which the middle classes and elite might aspire. New professional schools based on science should train the South's children to the new

forced to return home when the Republican Congress took over Reconstruction. House Report, 40th congress, 2nd session, no. 26, VII, 762.

²¹Coulter, "A Famous University of Georgia Commencement, 1871," *Georgia Historical Quarterly* 57 (Fall 1973): 347-60.

²² Hill never used the term the New South in his speech. For complete descriptions of Alumni Day see *Athens Southern Watchman* 09 AUG 1871, *Athens Southern Banner*, 11 AUG 1871, *Atlanta Constitution*, 03 AUG 1871; *Augusta Weekly Chronicle and Sentinel*, 09 AUG 1871, and *Augusta Weekly Constitutionalist*, 09 AUG 1871. E. Merton Coulter, "The New South: Benjamin H. Hill's Speech Before the Alumni of the University of Georgia, 1871," *Georgia Historical Quarterly* 57 (Summer 1973): 179-99; Coulter, "Famous Commencement," 347-60.

professions, and experts with diplomas from the new schools would then lead the New South.²³

Hill's sentiments reflected, in part, his own association with the university and his longtime relationship with William Mitchell. Hill had served on the university's board of trustees since 1856 and actively supported the reorganization scheme. Just hours before his speech, as chairman of the committee of laws and discipline, he had approved a new School of Applied Chemistry that would teach commercial sciences like dyeing, calico printing, and "the manufacturing of various articles of commercial use."²⁴ His actions and speech clearly indicate an intimate relationship between higher education and the his idea of the New South. He hoped that higher education would train a technological community that would create and run new industries and improve older, typically extractive, industries as well as agriculture. The South could then develop its own capital and industry, thus becoming economically independent of the North.

Hill's was not the only vision of economic boosterism in the 1870s and 1880s associated with Georgia and the University of Georgia. Another alumnus who heard Hill's speech that July day was Henry Woodfin Grady—the future first prophet of the New South. Grady had admired Hill's rabid opposition to Reconstruction and had known Hill's son while they were both students at the university. Grady earned a Bachelor of Arts at the university in 1868 and no doubt heard Andrew Lipscomb's view of the South's future in numerous lectures and sermons. Benjamin Hill, however, became Grady's mentor, and Grady forever acknowledged his intellectual indebtedness to him. A

²³ For a copy of Hill's speech see Benjamin H. Hill, Jr., *Senator Benjamin H. Hill of Georgia: His Life, Speeches, and Writings* (Atlanta, 1893), specifically 333 (quote), 337, and 343.

²⁴ Trustee Minutes, III, 291-4, and IV, 282ff; Hull, *Historical Sketch*, 155; Dyer, *University of Georgia*, 86.

number of Grady's future publications borrowed heavily from Hill's speeches and writings. The opening paragraph of Grady's famous speech given in New York in 1886, "The New South," credited Hill with originating the postwar New South idea. Grady's economic booster ideas for creating a New South were very different, however, from Benjamin Hill's. Hill hoped the South could develop its own capital and industry and train its own people to be the engineers and artisans who would create and run them. Henry Grady, on the other hand, advocated that the South should work to attract Northern investment and Northern immigrants who would become part of the region's skilled labor force.²⁵

These two means to economic development were not mutually exclusive, but the economic structure and the political milieu of the South in the 1870s and 1880s tended to favor Grady's New South approach that would deepen rather than remove the South's economic ties to the North. The South lacked a capital goods sector and relied on importing machinery and tools from Northern manufacturers. The imported technology made it easier to use unskilled labor in the labor surplus economy and decreased incentives to train Southern labor or to develop the technological community needed to support indigenous higher-wealth-producing industries or a southern capital goods sector. Contrary to Grady's vision, however, few Northern immigrants followed Northern investment capital and technology South the same way they did in the West. This lack of immigration only deepened the South's dependence on Northern technology and capital. Northern investment capital was essential for economic change, since the southern

²⁵ Numan V. Bartley, *The Creation of Modern Georgia* (Athens: University of Georgia Press, 1983), 84-85; Harold E. Davis, *Henry Grady's New South* (Tuscaloosa: University of Alabama Press, 1990); Benjamin H. Hill, Jr., *Senator Benjamin H. Hill of Georgia: His Life, Speeches and Writings* (Atlanta,

economy was intensely capital scarce and the prevailing credit system encouraged single crop agriculture and rarely backed manufacturing or industry beyond the most basic levels of agricultural processing. Southern capitalists and entrepreneurs, therefore, “were perfectly happy to become, in effect, franchisees of the already developed technological community of the manufacturing belt.” Similarly, Southern politicians were far more interested in keeping taxes low in their states than they were in funding education for a skilled workforce or the higher education that might be needed to develop an indigenous technological community.²⁶

Despite these realities of the South's postbellum political economy, university reformers like William Mitchell and Andrew Lipscomb tended to adopt Benjamin Hill's vision of Southern economic diversification and growth. They believed that an indigenous technological community could create a new, less dependent Southern economy, but such a strategy was simply not suited to the Southern economy in the 1870s and 1880s. Consequently, there was little real, present demand for the kinds of technologically skilled professionals they hoped to educate. They had devised their original plans in the 1850s when the South's economic structures were different from

1893); Raymond B. Nixon *Henry Grady: Spokesman of the New South* (New York: Knopf, 1943), 50-2, 244-5, 340.

²⁶ David L. Carlton and Peter A. Colclanis, "The Uninventive South? A Quantitative Look at Region and American Inventiveness" *Technology and Culture* 36 (1995): 303, 311-312, 322-325. Quote on page 325. Gavin Wright, *Old South, New South: Revolutions in the Southern Economy since the Civil War* (Baton Rouge: Louisiana State University Press, 1986), 37-38, 62-63, 78-80. Paul Gaston's *The New South Creed: A Study in Southern Mythmaking* (New York: Knopf, 1970) discusses the various forms of postbellum boosterism, coalescing them into one nebulous New South Creed. The economic boosterism of the 1870s and 1880s took many forms for many local or particular reasons. The structural reforms in higher education at the Universities of Georgia and North Carolina were one manifestation of that boosterism. See also Woodward, *Origins of the New South*, 145ff.

Despite the continued and new obstacles to industrialization and economic diversification after the Civil War in the South, the efforts by some boosters to create a "commercial revolution...fostering an industrial revolution" continued and strengthened, and was increasingly embraced by planters. *Thinking Back: The Perils of Writing History* (Baton Rouge: LSU Press, 1986), 74. See also James C. Cobb's "Beyond

what they would be in the 1870s and 1880s and could not have foreseen the shape of the economy that would emerge over the next few decades. In 1871, they were content to celebrate Democratic control of the state and to resume their antebellum reform plan as best they could.

A parade and banquet concluded the university's first Alumni Day. Led by a band, the alumni processed down Broad Street surrounded by a throng of spectators. The crowd had come to see more of Georgia's leading lights than gathered at election time or during the typical university commencement celebration. John Gordon, for example, was Georgia's preeminent war hero and commander in chief of the United Confederate Veterans. At seven o'clock in the evening the distinguished alumni sat down to a festive banquet. William Mitchell was master of ceremonies. He had served the university as mathematics tutor, trustee, chairman of the Prudential Committee, secretary-treasurer of the board, temporary Chancellor, professor and president of the law school, and now as president of the Alumni Society. For nearly three decades he had struggled to expand the university and lead the state toward industrialization. That goal and its connection to the New South was apparent when he read the banquet's formal toasts. Repeating sentiments expressed earlier in the day by Hill, Mitchell toasted the state's industrial future and the continued addition of professional schools to the university. When he toasted the older professions—medicine, the clergy, and the law—he included the engineering profession and the Engineering School. Answering the toast were two recent graduates from the Engineering School working for a new railroad—one as chief engineer.²⁷

Planters and Industrialists: A New Perspective of the New South" *Journal of Southern History* 54 (February 1988), 45-68.

²⁷Mitchell showed a little more caution than Hill had earlier in the day by also toasting the journalism profession. Coulter, "Famous Commencement," 352-60.

Mitchell, Lipscomb, and men like Benjamin Hill hoped to rebuild the state and create a New South through business and industry. Neither Mitchell nor any of the alumni who made numerous informal toasts mentioned agriculture or the fate of the agriculture school. No one recalled that William Terrell's \$20,000 agriculture education endowment had provided the funds and catalyst for the university's reorganization. The alumni and trustees did realize, however, that they would need to make concessions to agricultural education (which they did believe was beneficial, just not as vital as stimulating industry) if the university were to receive much needed funds. They recognized the university's dire financial need and acted to ensure that it would be the state's recipient of the Morrill Land Grant funds which were partially designated for agricultural education. Southern states like Georgia had not received money from the 1862 Morrill Act because they were in rebellion against the Union and the federal government. They were well aware, however, that one boon of readmission would be a chance to acquire the funds. Meeting during commencement week, the Alumni Society concluded that the university needed more professors, buildings, and scientific equipment for its proposed professional schools. Inspired by Hill's speech, they decided the school would need a \$500,000 endowment to become a modern university for the betterment and pride of the state.²⁸ The plan to request such an astronomical endowment from the state legislature was, however, a political ruse. The alumni knew that the deadline for awarding the funds provided by the Morrill Land-Grant Act of 1862 was nearing. By applying for an impossibly large endowment, they hoped to maneuver the legislature into giving them the Morrill funds instead. Besides, they knew that the state debt was \$10

²⁸At 8% interest—the rate still guaranteed by the state for the original \$100,000 endowment—the new endowment would considerably increase the university's annual income.

million at the end of Reconstruction with the lion's share of that having been generated in the six years between 1865 and 1871.²⁹

The uncertainties of Reconstruction and their reluctance to ask the Republican government for assistance kept the trustees from acting until 1872 when a Democratic legislature and governor resumed native white rule in Georgia. With the July 1872 deadline for use of the funds approaching, the last Republican Governor—Benjamin Conley—sold Georgia's Morrill Act land scrip in January of that year. It yielded \$243,000. There was no guarantee, however, that the money would go to the state university in Athens. Citizens of Dahlonega and Milledgeville applied for the funds to create separate agricultural and mechanical colleges in their towns and offered to provide buildings and land for the new institutions.³⁰

The university board of trustees commissioned William Mitchell and three other board members to write a memorial to the legislature explaining why the Morrill funds should go to the university. Mitchell and his ad hoc committee explained that the university had added a number of professional programs—law, engineering, and

²⁹Coulter, "Famous Commencement," 351-2; Coleman, ed., *History of Georgia*, 214-5; Dyer, *University of Georgia*, 119; Woodward, *Origins of the New South*, 15. As governor before the war, Brown had unsuccessfully proposed a \$500,000 endowment for the university, but the threat of war prevented the legislature from considering it. The political and economic climate in 1871 was little better, and the university did not receive any state funding. Republican Governor Bullock's administration had earned a reputation for corruption. The Democrats elected in December 1870 took office November 1871, but fiscal conservatism and reaction to Bullock's administration kept them from appropriating any funds for the university. Brown and Hill's own business activities may have cast a further shadow on efforts to obtain an endowment. Their company, though not directly involved in the scandals of the Republican government, was under some suspicion when it won the bid to rent the state-owned Western and Atlantic Railroad. Bartley, *Creation of Modern Georgia*, 71.

³⁰The Alumni Association had sent an unsuccessful delegation to the Republican legislature in 1871. Trustee Minutes, IV, 324; Dyer, *University of Georgia*, 120; Brooks, *University of Georgia*, 51; Reed, unpublished manuscript, 44, 930; Camillus Dismukes, "North Georgia College Under the Trustees," *Georgia Historical Quarterly* 56 (Spring 1972): 93; William I. Hair, *A History of Georgia College* (Milledgeville, GA: Georgia College, 1979), 4. As Daniel Boorstin has noted, having a college in one's town was a significant booster aim in the nineteenth century. Daniel J. Boorstin, *The Americans: The National Experience*. Chapter 20: Culture With Many Capitals: The Booster College, 152-61 (New York: Vintage Books, 1965).

agriculture—over the last decade and a half, suddenly remembering how important agricultural education was to their original plans.³¹ The Morrill funds would help the university continue that policy. They proposed a School of Science consisting of seven departments—agriculture, mechanical engineering, civil engineering, mining engineering, practical chemistry, building and architecture, and general science. The plan also included an experimental farm to serve as a laboratory for the agriculture students. With the exception of practical chemistry, the university nominally offered all of these programs of study already, and the board had recommended including it the previous summer. The department titles and the detailed course descriptions in the memorial revealed industry to be the board's primary concern.³²

Despite this focus upon engineering education, agricultural education still had its champions among the faculty, trustees, and literati of the state who tended to view the Morrill Act as being only about their particular brand of practical education. During the Civil War, the Terrell agriculture professorship was thoroughly appropriated into the general curriculum of the university, and agriculture became one subject among many taught by the professor of chemistry, geology, and agriculture. The trustees re-hired Louis Jones to fill this post after the war. He had left the university in the 1850s, and during the war he was a chemist at the Atlanta gunpowder works.³³

The original idea of the Terrell endowment, expressed in the plans Daniel Lee had for the position, was to provide research and outreach services to the state's farmers. Far from conducting extensive research, Jones was lecturing and hearing recitations on basic

³¹The official publication was titled *Present Organization and proposed plan for expansion of the University of Georgia* (Athens: Southern Banner, 1872) hereafter cited as *Present Organization*.

³²*Present Organization*, 4, 8-9; Trustee Minutes, IV, 282, 308-10; Reed, unpublished history, 293.

science. Local farmers did, however, attend lectures he gave on fertilizers and crop rotation.³⁴ Just as before the war, those who advocated agricultural education were split over whether it should be offered at the university or in a separate institution. Agricultural editors, university professors, the state agricultural society, and Chancellor Lipscomb wrote articles in several journals and other venues in the late 1860s and early 1870s arguing both sides of the issue, and Jones purchased the *Southern Cultivator* to have control over at least some educational outlet for his beliefs and ideas. Those in favor of having agriculture education at the university generally argued in favor of a polytechnic school for all practical sciences, while those wanting a separate agricultural school understandably feared that agriculture would be overshadowed by engineering and other professional education in such an arrangement. The trustees had, after all, started an engineering school immediately after the war while diminishing the agricultural role of the Terrell professorship.³⁵ Both sides could only agree that agricultural education was needed and that the state should have an experimental farm to conduct useful research.

Mitchell and the committee charged with acquiring the Morrill funds compared their proposed plan for agriculture education within a polytechnic school to agricultural schools in other states and in Europe. Citing the agricultural colleges in Massachusetts and Michigan, they asserted that the University of Georgia already taught many of the same courses as the leading independent agricultural colleges in the country. Aside from apprenticeship work that students could do at home anyway, the most useful things

³³University of Georgia, Trustee Minutes IV, 110, 114; Coleman and Gurr, *Dictionary of Georgia Biography*, 259-260.

³⁴*Southern Cultivator* 25 (June 1867): 186 and (August 1867): 266.

³⁵Trustee Minutes IV, 127-138; *Plantation* 2 (June 10, 1871): 313-314; *Southern Farm and Home* 2 (June 1871): 296; *Southern Cultivator* 29 (December 1871): 460-461; *Plantation* (May 27, 1871): 273-275; *Macon Southern Farm and Home*, 1871, 331-336, 404-410.

agricultural colleges could impart were a knowledge of the basic sciences underlying agriculture and their application on a farm that the university could easily add. The committee presented several other reasons why the legislature should give the money to an established institution rather than create an independent one. The cost of maintaining independent agricultural schools in a number of states had forced some state legislatures to provide additional funding, something they knew the Georgia legislature wanted to avoid. The university already possessed the needed buildings and would give up the University High School to establish an experimental farm. Additionally, the “great Universities of Germany and elsewhere” had agricultural schools attached to them. If the university—the state’s university—were to be properly prestigious, it needed an agricultural college within its proverbial walls. The committee further explained that a polytechnic school at a university where agriculture was one of its components would enjoy high enrollments, while a stand alone agriculture or polytechnic school would suffer from smaller enrollments, sacrificing economies of scope and scale.³⁶ The proposal concluded with the reminder that the Morrill Act intended the funds for different types of education and that the university and the state must make provisions for “all the varied branches of industrial education” and not consider agricultural education in a vacuum.³⁷

The trustees held a special meeting in Atlanta in March 1872 to finalize efforts to win the funds. A few of the board’s most prominent members—including Joseph E. Brown and Robert Toombs—personally appealed to Democratic governor James M.

³⁶ They noted that 54 out of 200 students took agricultural courses at the Illinois Industrial University and at Cornell the ratio was 25 to 600. If the agricultural students from these school were at their own, independent school it would be a very small one and a considerable misuse of resources.

³⁷ *Present Organization*, 8, 11-4, 16.

Smith who issued an executive order officially transferring the funds to the University of Georgia in May 1872. Once invested in state bonds, these funds increased the university's income by \$16,000 per year.³⁸ The university finally had the ability to properly finance the resumption of Mitchell's antebellum plans. The next two decades, however, would prove just as difficult as the previous one. Agricultural forces and some New South boosters challenged the university's hold over the funds, sadly and ironically accusing the university of not being educationally innovative enough.

While most of the university's growth and problems in the 1870s and 1880s would stem from the use of the Morrill funds, from 1866 to 1872 the University of Georgia had swiftly transformed from a single liberal arts college into a new kind of institution without the funds. By 1870, the trustees and prominent university alumni understandably focused their efforts on acquiring them. They wanted the money not to start a new direction in state higher education but to fund and expand the changes that had already begun. Far from new ideas, nearly all of the changes had their origins in the university's plans of the 1850s. Because of the interruption of the Civil War, the 1866 freshman at the University of Georgia could look forward to four years of required courses with little or no choice. By the time he graduated, he could only look enviably at the numerous choices that lay before an incoming freshman. The new freshman could enroll as a partial course or non-traditional student and take certification courses in commerce or architecture. If he had attended a good academy and had already taken numerous freshman level courses, he could enter as a sophomore like a large percentage his peers or he might try to enter directly into the law or medical schools since they had

³⁸Trustee Minutes, IV, 315-21; University catalogue, 1895-6; Hull, *Historical Sketch of the University*, 83-4; Reed, unpublished history, 931; Brooks, *University of Georgia*, 52-3; Dyer, *University of Georgia*,

no college requirements. If he enrolled in the regular course of studies as a freshman, he would only take the general courses in languages, mathematics and science for two years. As a junior, he could then choose among four tracks. He could become an elective student and take whatever courses he wanted. If he wanted to earn a degree, he could enroll in one of the degree programs and work toward a Bachelor of Arts, Bachelor of Science, or Bachelor of Philosophy, depending upon whether he wanted to pursue a more traditional course of studies or drop some of his ancient languages courses in exchange for a focus on the sciences or the humanities. Upon graduation and even while he was a senior, he could chose to take classes that would earn him a new professional degree in civil engineering or in both civil and mining engineering. Similarly, he could enroll upon graduation or as a senior in either the law or medical school and earn one of these traditional professional degrees as a second degree. Not many students took advantages of all or even some of the choices. Most of those who graduated from the University of Georgia in the 1860s and 1870s did so with the traditional Bachelor of Arts degrees or the old professional degrees in Law or Medicine. There was simply too little present demand for the new degrees and their social and economic value were by and large untested. The number of students who earned certificates is untraceable for lack of records. Regardless of how many students chose to enter which programs and earn which degree, the choices were a regular part of the curriculum. Andrew Lipscomb, William Mitchell, and their allies on the board of trustees had created a new university in Georgia to meet a number of present and future educational demands. They designed an institution that would potentially foster economic development by offering numerous levels and types of

training needed by a hopefully expanding and diversifying economy, and in 1872 they acquired the Morrill funds to help them.

CHAPTER FOUR

SETBACKS AT THE UNIVERSITY OF NORTH CAROLINA IN WAR AND RECONSTRUCTION

Unlike at the University of Georgia, the faculty and trustees of the University of North Carolina were able to keep their school open during the Civil War. They, too, resumed reform efforts once the war ended. Led by professor Charles Phillips who had been involved in the opening of the science school in the 1850s and trustee Kemp Battle who was becoming active in state business and politics, the faculty and trustees applied for the state's share of the Morrill Land Grant funds in 1866 and planned widespread structural changes in 1867. The advent of Congressional Reconstruction in 1868 cut their plans short. While the University of Georgia experienced Reconstruction lightly and developed and executed a substantial reform agenda, the University of North Carolina's Reconstruction travails kept not one but several reform plans from ever leaving the drawing board. A Republican appointed president and board of trustees took over the university with their own ideas. They proposed several curricular and structural changes that were quite radical compared to those by Battle and company, but the fundamental goal of expanding the educational offerings of the school in light of economic necessity remained the same. Facing a hostile local and state elite, an uncooperative state legislature, and dwindling enrollments, the Reconstruction trustees failed to implement any of their plans and closed the university in 1871. By 1875, a new slate of trustees

(often being trustees from before Reconstruction) took over the university, ensured their receipt of the Morrill Land Grant funds, and began rebuilding the university along the lines set forth over the previous two decades.¹

From the middle 1860s to 1875, there were relatively few students at the University of North Carolina. The several curricular changes proposed never affected the actual curriculum or the educational choices students could make at the university. The reform proposals do indicate, however, that educators at the University of North Carolina continued to wrestle with the issues confronting higher education across the nation with considerable sophistication and developed several schemes to restructure the university as a collection of schools that would offer different kinds of education for different constituents, both responding to and theoretically stimulating changes in the economy.²

¹ The best source for the history of the University of North Carolina in this period is still Kemp Battle's two volume work. He lived through and played a central part in the university's development as trustee and president and relied heavily on university documents (sometimes verbatim) when writing the books. Kemp P. Battle, *History of the University of North Carolina*, 2 vols. (Raleigh: Edwards, Broughton, and Co., 1907-1912). William Snider, *Light on a Hill: A History of the University of North Carolina at Chapel Hill* (Chapel Hill: University of North Carolina Press, 1992) draws almost exclusively from Battle and a few older works, including Hope Sumerall Chamberlain, *Old Days at Chapel Hill, Being the Life and Letters of Cornelia Phillips Spencer* (Chapel Hill, University of North Carolina Press, 1926); Henry McGilbert Wagstaff, *Impressions of Men and Movements and the University of North Carolina* (Chapel Hill: University of North Carolina Press, 1950). Robin Brabham, "Defining the American University: The University of North Carolina, 1865-1875," *North Carolina Historical Review* 57 (October 1980): 428-50 is a close look at several of the curricular designs of the period under study in this chapter and was an invaluable guide in beginning research for the period.

² A more detailed comparison between the offerings at the Universities of Georgia and North Carolina and other university's will appear in chapter five. For how universities in other regions dealt with university reform in this time period, see Morris Bishop, *A History of Cornell* (Ithaca, NY: Cornell University Press, 1962), 155-156; Brooks Mather Kelley, *Yale: A History* (New Haven: Yale University Press, 1974), 183-184, 186-187, 258; Samuel Eliot Morrison, *Three Centuries at Harvard, 1636-1936* (Cambridge: Belknap Press, 1936), 344-345; Howard H. Peckham, *The Making of the University of Michigan, 1817-1992*, edited and updated by Margaret L. and Nicholas H. Steneck (Ann Arbor: University of Michigan Press, 1994), 43, 48, 87; Merle Curti and Vernon Carstensen, *The University of Wisconsin: A History* (Madison: University of Wisconsin Press, 1949), I, 439, 450, 462; Winston O. Solberg, *The University of Illinois, 1867-1894: An Intellectual and Cultural History* (Urbana: University of Illinois Press, 1968), 90, 164; Laurence R. Veysey, *The Emergence of the American University* (Chicago: University of Chicago Press, 1965), 60; John Brubacher and Willis Rudy, *Higher Education in Transition*

The circumstances of war took many things away from the University of North Carolina—students and faculty who went off to fight and sometimes die for the Confederacy, significant capital, and President Swain’s reputation that had done so much to build it up in the 1840s and 1850s. Despite such losses, the University of North Carolina was lucky. It remained open when so many other schools were forced to close, and its buildings and grounds remained largely intact. Swain was unable to secure exemption from the draft for students over 18 years old, and war’s eternal appeal to youth took many of the other younger students away as well. Three of the faculty were wounded, killed, or returned from prison in Ohio with a “ruined constitution.” The other nine were exempt from military service because they were either clergymen or too old to fight. Those faculty who remained received a \$500 bonus in 1863 to combat massive inflation. Tuition increased from \$60 to \$100, and the worsening economy made maintenance difficult as material costs and rental fees for slaves to do the work increased. Inflation was far from the worst economic consequence of the war for the school. By 1860, president Swain had amassed an impressive endowment of \$250,000, largely from greatly increased enrollments and by ignoring the pleas of the faculty for more books and equipment. Despite his support of the new science school in the 1850s, Swain measured success not so much by educational quality and diversity as by the size of the school’s endowment and enrollment. By these standards and despite not having the books and supplies the faculty wanted, Swain and the university were very successful in 1860. At the war’s close, however, the school was \$103,000 in debt, owed the faculty \$7,000 in

(New York: Harper and Row, 1976), 111, 116, 204-6; Frederick Rudolph *The American College and University: A History* (Athens: University of Georgia Press, 1990), 244, 293-4.

unpaid salaries, and held 2,000 shares of now worthless bank stock and \$25,000 in equally useless Confederate securities.³

Perhaps the university's greatest asset that fell victim to the Civil War was the reputation of David Swain. Many credited his status as a former governor with elevating the university to its high enrollments and prestige in the years before the war. Having a popular political, literary, or military figure as president was often a way college and university trustees tried to bolster confidence in their schools. The thinking was that these men would attract large numbers of students hoping to learn and make connections under the guidance of a "great man." This is one reason why so many confederate generals were asked to be college presidents in the 1860s, 1870s, and 1880s. Swain, like the other prominent leaders at the university and many other North Carolinians, was a Unionist who joined the secession movement only after Abraham Lincoln authorized the use of force against the nascent Confederacy. During and after the war, however, he did not endear himself to North Carolinians who had more eagerly seceded, who seemed less cooperative with the occupying Northern forces and who were more reluctant to be reconstructed. His efforts to exempt students over 18 from the draft, his political maneuverings to keep the university open, and his role as one of three representatives who officially surrendered the city of Raleigh to advancing Northern armies likely reduced his standing. While the local and state elite who concerned themselves with the affairs of the university did not harbor the belief that Swain was a Union sympathizer or "scalawag," the president's social and political acumen were left to serious doubt by these and two other incidents. In 1867 his daughter, Eleanor, married Smith Atkins, the

³ Battle, *University of North Carolina*, I, 729-734, 754, 811-818; Chamberlain, *Old Days*, 88; Phillips J. *The Woman Who Rang the Bell: The Story of Cornelia Phillips Spencer* (Chapel Hill: University of North

commanding general of the Union troops in Chapel Hill, and during the occupation general William T. Sherman gave the university president a gift—a horse most likely confiscated from a southerner. There were other, less political, reasons for the faculty and trustees' waning faith in Swain by the end of the war. They believed that the sixty-five year old president's abilities to run the university effectively and to continue the antebellum reforms were "considerably impaired," at least partially due to his diminished hearing. The old politician was competent enough, however, to wrench a \$7,000 appropriation from the state to pay the faculty back wages.⁴

By this time, the dynamic Kemp Battle had become a trustee and emerged as the driving force for change at the university. Like William Mitchell at the University of Georgia, Battle's experiences informed his desires to make the University of North Carolina more utilitarian both to attract more students and to foster economic revitalization and diversification in the state by training a technological community. Unlike Mitchell, however, Battle made the transition from being an instrumental trustee to university president in 1876, a position he executed until 1891 when he became professor of history and wrote his memoirs and the university history until his death 1919. Because he was the guiding force behind the university for most of the late nineteenth century, his background and experiences are important to understanding how he conceived of North Carolina society and the university's place in it.⁵

Carolina Press, 1949), 95; UNC Trustee Minutes, December 3, 1860.

⁴ Charles Phillips to Kemp Battle, June 23, 1866 and William Horn Battle to Kemp Battle, July 15, 1867, both in Battle Family Papers, Southern Historical Collection, University of North Carolina Libraries; Cornelia Spencer, "Old Time in Chapel Hill," *University Magazine* May 1884, 217-218; Wagstaff, *Impression*, 13.

⁵ There is no recent article or booklength biography of Kemp Battle. A generation older than Mitchell, his story covers much of late antebellum North Carolina history as well as the tumultuous and fascinating decades after the Civil War.

Kemp Plummer Battle was a member of North Carolina's elite. His father was William H. Battle, the university's law professor and one of the leading jurists and legal minds in the state. William Battle served the state in numerous capacities over the years as a legislator, university trustee, delegate to the national Whig convention in 1839, and superior court judge. In the 1830s he was on a commission that revised the state statutes, and in the early 1870s he was the sole commissioner to revise them again for the Redemption government. He moved his family to Chapel Hill in 1845 so that his son Kemp could more easily attend the state university. Kemp graduated from the University of North Carolina in 1849 at age 18, hoping to work on the new North Carolina Railroad that was just being surveyed. Not offered the engineering position he sought, he chose instead to be a mathematics and Latin tutor at the university. In 1851, he traveled with his father, fellow tutor Charles Phillips, and others to New York and New England where they surveyed the economic and educational advances of the day. It was this trip, combined with the new railroad, that influenced the trustees of the university to create the science school with its new B.S. and M.A. degrees in the early 1850s. Battle remained at the university as a tutor, studying law under his father, until 1854 when he moved to Raleigh to open a law practice.⁶

While in Raleigh, the young Battle made a name for himself as a lawyer, businessman, planter, and politician. He focused on corporate law and made numerous connections in the state capital, at least partially due to his father's enormous shadow. In 1855 he married the daughter of a large planter and cotton manufacturer and became responsible for a number of slaves and two plantations in Edgecombe county. Never

⁶ Kemp Battle, *Memories of an Old-time Tarheel* (Chapel Hill: University of North Carolina Press, 1945), vii-viii, 109, 286, 289, 290.

taking a direct interest in the running of his properties, he employed a white overseer on one plantation and a slave overseer on the other.⁷ In 1857 he became a director of the Bank of North Carolina and was elected by the General Assembly to be a director of the State Insane Asylum. As a director of the Mutual Fire Insurance Company, he helped rejuvenate the ailing enterprise. Battle was a staunch Whig and Unionist, actively involved in the Constitutional Union campaign in 1859 and 1860, but like David Swain, when the federal government employed force, he advocated secession at the 1861 convention.⁸

After trying unsuccessfully to be elected lieutenant of a regiment, Battle opted for other, albeit less glorious, ways to serve the Confederacy that were more suited to his talents. In 1861, he launched a campaign to fund and build a railroad from Raleigh to Deep River that would connect the city to sources of coal in Chatham and Moore counties. Upon securing state support for the enterprise, he was named president of the Chatham Railroad Company. As such, he hired superintendents, chief engineers, and survey and construction teams, working also to connect the road with another one coming northward out of South Carolina. The war eventually took away the mules, material, and men that Battle was using, and he never completed the line. After the war, he became state Treasurer from 1866 to the beginning of Congressional Reconstruction in 1868 and gave up his position as president of the road. It never did reach Deep River, but it became one part of the through line of the Raleigh, Columbia, and Augusta Airline Railroad Company. Because of his experiences as state treasurer and as a railroad

⁷ Over half of Battle's slaves remained with him after the war as freely hired hands or as tenants.

⁸ Battle advocated increased taxation on slavery and slaveholders for state expenditures by repealing a law that exempted taxation on slaves under twelve and over fifty. Battle, *Memories*, vii-viii, 25-30, 157, 158, 160, 286, 289, 290.

executive, numerous railroad companies retained Battle as their attorney in the subsequent years, giving him first-hand, intimate knowledge of the economic conditions and prospects of the state.⁹

Battle was also involved in a fascinating business endeavor after the war. He collaborated with Colonel Jonathan Heck who had been in the Confederate Quartermaster's Department and Dr. William J. Hawkins who was president of the Raleigh and Gaston Railroad Company to form Battle, Heck, and Company. The new enterprise aimed to "induce Northern people to buy and settle among us" by amassing and distributing data on available land and opportunities in North Carolina. After securing pardons from President Andrew Johnson, they opened an office in Raleigh and published a weekly paper to advertise land for sale and provide enticing investment information. They hoped to attract prosperous or at least lower middle class immigrants as well as wealthy capitalists who might invest in the newly impoverished region. Battle, Heck, and Company handled advertising and sales for nearly 150,000 acres, seven manufactories, eight homes, and 138 building lots. Heck and Battle even opened an office in New York at 62 Broadway where they received many written inquiries and visitors. Drawing upon their collective experience and connections, the three men were in serious negotiations with several railroad companies when the Republicans in Congress inaugurated Congressional Reconstruction. The uncertainty of the future in North Carolina forced them to dissolve the company.¹⁰

⁹ Like many of the antebellum Unionists in North Carolina and the South, Battle and his father were eager to effect reunion with the North on many fronts. The two traveled to Philadelphia in 1865 to participate in a General Convention that assured the reunification of the Protestant Episcopal Church. Battle, *Memories*, 173, 175-8, 192, 220, 286.

¹⁰ Battle, *Memories*, 202-203; *North Carolina Advertiser* (Raleigh, North Carolina: North Carolina Land Agency, 1865); Kemp Battle to Zeb Vance, September 19, 1865, Vance Papers, North Carolina Division of Archives and History, Raleigh, North Carolina.

Battle did not let the “capture” of the state government by Republicans backed by Northern arms halt his law practice or his political and economic activities. Directing his energies elsewhere, he spearheaded the effort to revive the State Agricultural Fair. Like the agricultural journals and associations before the war, postbellum agricultural reformers used the press and fairs as ways to educate farmers and planters about the potential benefits of crop diversification and scientific advances in land use, fertilizers, and planting methods. Battle was an advocate of all of these changes and was president of the Fair Association in Raleigh from 1869 to 1871. From 1871 to 1873 he drew on his experience as state treasurer and railroad president to rectify city finances and organize the construction of new roads as a city commissioner in Raleigh, and from 1870 to 1876 he was president of the North Carolina State Life Insurance Company.¹¹

Battle had become a trustee of the university in 1862, and was the board’s most active and influential member until 1868 when the Republican government completely replaced it with more “loyal” men. In the middle to late 1860s, Battle advocated reforms that would bring the university in line with progressive institutions nationwide, continue the changes begun in the 1850s, respond to the popular demand for more practical education, and maintain (or even increase) the level of education received by graduates of the university. He received direct and indirect support in these endeavors from several trustees, including his father and William A. Graham. Like Benjamin Hill at the University of Georgia, Graham was a Presidential Reconstruction Senator turned away by a Congress intent on remaking the South. Battle also had allies among the faculty, including his one-time traveling companion to the North—first engineering professor of the new science school—Charles Phillips. It was not that president Swain or any of the

¹¹ Battle, *Memories*, vii-viii, 25-30, 157, 158, 160, 173, 175-8, 192, 220, 286, 289, 290.

other faculty and trustees actively opposed change, it simply took time before Swain decided to retire on his own and the university could be made to resume its dynamism amid the inertia and ennui left over from the war. Even many of the older board members backed reform. The board of trustees was still composed of men like secretary-treasurer Charles Manly, Bartholomew F. Moore, and the aging Romulus Saunders who had been advocates of economic and internal improvements before the war and had consequently suggested the science school in the early 1850s. On the faculty, mathematics and engineering professor Charles Phillips concurred with Battle and chemistry Professor William Martin that the standards of the university should increase, while Professor of Logic and Rhetoric Andrew Hepburn wanted to completely remake the university on a more utilitarian model to combat dwindling enrollments.¹² All of these men were likely aware of noted New South advocate Daniel Harvey Hill's recent call for "a total radical change in our system of education" in which he asserted that North Carolina and the South needed "a comprehensive plan of instruction, which will embrace the useful rather than the profound, the practical rather than the theoretical." Such a change would lift the region out of its economic malaise by encouraging the diversification of industry and agriculture. Rather than bestow a patina of aristocratic erudition that may have been an asset for the antebellum politician, Hill believed education should be useful and practical in the new social and economic environment that had been wrought by war and the changes of the previous decades.¹³

¹² UNC Catalogue, 1865-1868; Charles Phillips to Kemp Battle, June 23 and July 5, 1866, Kemp Battle to Charles Phillips, August 7, 1867, and William Horn Battle to Kemp Battle, July 15, 1867, Battle Family Papers; Andrew H. Hepburn to David Swain, June 23, 1866, Swain Papers; Hepburn to Swain (undated) University Papers; William Martin to Honorable William A. Graham and the Committee of the Board of Trustees, October 3, 1866.

¹³ There were other journals and editors calling for practical education, such as the revived *DeBow's Review* and agricultural journals, who were continuing their antebellum positions. Besides, it would be

There were two conflicting notions of reform at work here. Both were grounded in the basic assumption that the university should offer more practical education in response to a perceived popular demand. While such reforms would increase enrollments, there was another important factor to consider. Those advocating reform implicitly acknowledged that education provides economically useful skills and knowledge and that the skill and knowledge sets necessary for prestige and success in their society were changing or should change. The educators at the University of North Carolina tended to present their ideas in terms of educational theory and policy.¹⁴ Most, however, had to have been acutely aware of the economic underpinnings of the theories they espoused and, like Battle, likely applied their own knowledge and experience—as well as hopes for a revitalized South—to plans or calls for change. Both reform visions shared the belief that the university should alter its curriculum for the economic betterment of the state—more precisely for the individuals who comprise it.

The reform agendas differ, however, when considering the expected rigor or level of education at the university. On the one hand was the notion of making the university an entirely practical institution. To Battle, Phillips, and a number of trustees, this was a dangerous idea if carried to its logical extreme. Since, there were few secondary schools of high quality in North Carolina at this time, too radical and popular a shift toward utilitarianism threatened to make the university little more than a technical institute or

most odd if politicians, editors, and educators who had called for reform in the late 1850s, who were used to pleas of empty coffers as well as active resistance, simply stopped with the war. Hill was writing in North Carolina at the same time as heightened reform discussions at the University of North Carolina and likely influenced the spread of this utilitarian point of view. Daniel Harvey Hill, "Education," *The Land We Love*, I (May 1866), 3, 11.

¹⁴ Buttressing this conception was the slowly more popular notion of the psychology of individual differences which asserted that individuals have different innate interests and temperaments and that by studying what they were interested in students could still develop their minds as they had before taking

practical high school. They wanted, rather, to maintain and raise the standards of the university, offering high level scientific and professional education, while still providing the building blocks of a traditional mental discipline curriculum. The only way the faculty and trustees could have it both ways—appease popular demand and maintain high academic levels—was to offer dual education within the school's wall. This was a violation of the old tradition of mental discipline—that one prescribed curriculum was necessary for all educated men to refine them into gentlemen and to train their minds for any possible future profession. The trustees had already made that crucial step in the 1850s, however, by offering Bachelors of Science degrees alongside professional Master of Arts degrees—training practical and the professional men together in the science school. In practice these men were likely peers in their various professions, but the leaders of professions tended in the later nineteenth century to be the ones with the added classical or more formal education. The new policies that the trustees ultimately developed in the late 1860s continued the educational trend of embracing these two discrete reforms in one institution. When looking at the entire white male population of the state, the University of North Carolina still remained the preserve of the elite, but there would at least be greater educational options for those in the upper middle classes only able to afford or only interested in a few years of school with little or no Latin or Greek.

The issue of which socio-economic classes the university served took on added emphasis with the 1862 Morrill Land Grant Act. In 1866 and 1867 the University of North Carolina trustees applied for the funds. In a memorial to the state legislature

prescribed Latin and Greek. This, however, was an educational and psychological ideology to the material reality of a need for greater educational diversity to serve a changed economy and restless middle class.

requesting the money, they tried to argue that the university was not only an institution for the elite. They mentioned that some of North Carolina's poorer citizens had attended the university in the past by virtue of the frequent excusing of fees and occasional private donations and had risen to positions of prominence. Despite this meager anecdotal evidence, they were confident that the university could continue nurturing "humble talent and merit," serving all classes of the state. They also echoed the earlier design of educating B.S. and M.A. students together in the science school. They claimed that putting those studying for "the practical life" and those "destined for professional and literary pursuits" under the same educational roof would be "a wholesome influence on both classes."¹⁵ It is easy to read a highly democratic, anachronistically egalitarian, emphasis into the intent of the faculty and trustees. Both classes in their minds, however, were parts of the upper echelons of society, with a sprinkling of lower class men who might rise based on their own merits and the financial beneficence of political patrons and family friends.

The state legislature did give the proceeds from the land scrip to the university, but attached provisions that hobbled the university's financial prospects for many years and threatened the trustees' elitist and meritocratic position. The 270,000 acres that the federal government gave the state of North Carolina based upon its representation in Congress brought 50 cents per acre, or \$135,000. The state invested this money and guaranteed the university \$7,500 per year. Confident that Battle, Phillips, and the trustees would continue the university in a direction that served the upper classes and professionals of society who could afford quality secondary education, the legislators

¹⁵ Memorial of the Board of Trustees of the University of North Carolina to the General Assembly (Raleigh: William E. Pell, 1867), 5-6.

attached riders to the law to ensure that even lower class and less prepared students than the faculty and trustees had envisioned could attend. The law required the university to waive the tuition of one student from each county and to maintain lower admission standards for agricultural and mechanical students than those pursuing regular studies. To Battle and the trustees, these provisions courted disaster because funds were hard enough to secure without having to teach many students for free.¹⁶ The legislators further required that two professorships be devoted to agricultural and mechanical studies.¹⁷ That the faculty and trustees accepted these stipulations to acquire the funds in no way indicated, however, that they were going to change their educational ideas. Their actions over the next several years indicated that they continued in the idea of training the upper and middle classes in both old and new professions.

The Morrill funds did not become available until well into the 1867 school year. That summer, however, two of the faculty members Andrew Hepburn and William Martin who had been proposing rapid, sometimes radical, change impatiently resigned. They feared that the university would not be able to modernize in the direction they hoped for two reasons. The legislators had ample opportunity to help fund the university from the state's, albeit meager, coffers when addressing the awarding of the Morrill funds, but they did not. These faculty members knew that money was a crucial ingredient to educational change, especially if the university were going to offer a wider variety of courses that required a greater array of professors, books, classroom space, demonstration equipment, and perhaps even tools for experimental farms and workshops. The two were unconvinced that Battle, the other trustees, and particularly president

¹⁶ Since the percentage of college and university attendees who graduated in the nineteenth century was always rather low, having simply attended college for some time was enough to distinguish the local elite.

Swain could or would take the necessary steps to alter the university's structure to meet the educational and economic demands of the college-going populace. They hoped to offer more practical and professional programs as well as give the university's students much greater choice than they currently enjoyed.¹⁸ Registering the faculty resignations and declining enrollments as lack of faith in the university as it was currently constructed, David Swain soon resigned as president.¹⁹

Within a month, Battle and the other trustees created a five-man committee to study ways to accelerate reform at the university and bolster public confidence with a new "scheme of instruction and government." They were motivated in part by the requirements of the Morrill Land Grant but had been pursuing reforms since the 1850s and had begun resuming that course at the close of the war—not as a result of the federal government's largesse. Battle led the committee and was helped considerably by fellow members William A. Graham and Samuel F. Phillips, the brother of professor and Battle collaborator Charles Phillips. To help the committee formulate plans, Battle corresponded widely and studied course catalogues from colleges and universities around the country. The catalogues he studied would have shown him a variety of organizational schemes. Since no consensus had emerged over the form curricular change should take in higher education, the possibilities confronting him were limitless. Nearly all the

¹⁷ *Public Laws of North Carolina, 1866-1867*, c. 2; Wagstaff, *Impressions*, 13-14.

¹⁸ At the time, degree-seeking students could either study for the B.S. for two to two and a half years, the B.A. for four years, or the M.A. with an additional year of polytechnic studies. Hepburn to Battle, June 25, 1867; Martin to Battle, July 15, 1867; Hepburn to Board of Trustees, August 17, 1867; Hepburn to Swain, n.d., University Papers; Hepburn to UNC Trustees August 17, 1867, University Papers.

¹⁹ It is not entirely clear if Swain intended to remain retired from the university. Many college presidents resigned in turbulent times only to be kept on or immediately rehired when either their own goals had been met or various controversies blew over. As was typical, Swain's resignation would only go into effect when a replacement was found. The same can be said for Martin and Hepburn. Freshman enrollments from 1866 to 1867 dropped from 34 to 13. UNC Catalogue 1865-1868; Swain to Governor

schools recognized, however, that students should have greater choice among subjects more directly practical than Latin and Greek.²⁰ The letters Battle received from presidents, trustees, and even former faculty members Martin and Hepburn did not help narrow his choices.²¹

Closely following the suggestions of Andrew Hepburn whose ideas borrowed from the organizational structure of the widely imitated University of Virginia, Battle finally settled upon a reorganization plan. With the committees' help, he wrote an extensive report for the trustees proposing changes to the university's curriculum that were in some ways very new but in other ways natural continuations of the 1850s science school. He divided the university into four departments (schools in today's parlance)—academic, agricultural and mechanical, law, and medical. The law and medical schools would be the standard professional schools that periodically attached themselves to a college, making it a “university.” The university essentially already had a law school run by William H. Battle since 1845. Medicine was one of the three traditional professions and classical appendages of a “university,” so it was a natural decision for Battle to make. There seems to have been no demand or desire to create a theological seminary or school at this state university. The academic school contained the courses students already took, now divided into ten schools (departments in today's parlance)—Latin, Greek, modern languages, mathematics and mechanics, physics and astronomy, chemistry and mineralogy, geography and geology, political science and history, rhetoric and English,

Jonathan Worth, July 23, 1867, University Papers. See Brabham, *Defining the American University*, 440-445 for a similar treatment of these events.

²⁰ Even the more conservative schools had begun to make changes, offering different prescribed curricula culminating in different degrees—B.A., B.S., B.Ph. and others.

²¹ UNC Trustee Minutes, August 22, 1867; Battle, *University of North Carolina*, I, 764-5. Asa Smith to Battle, January 6, 1868; Theodore Woolsey to Battle, October 15, 1867; Thomas Hill to Charles Phillips,

and metaphysics and ethics. While students no longer progressed as a class, to earn a Bachelor of Arts, they still had to master the subjects taught in each department of the academic school. They could take courses in any combination and whenever they chose, but to get the degree they needed to obtain certificates of proficiency (essentially little diplomas) from the professors heading each department. The certificate of proficiency was the building block of educational certification under Battle's 1867 plan. Irregular, or partial course, students—long a feature at the school—could now leave after a few years with a handful of these little diplomas in fields they believed were most directly relevant to their future careers. Bachelor of Arts graduates had to earn all ten, but for students with a scientific or humanities and social science inclination, combinations of certain certificates comprised alternative bachelor's degrees. These students may not have had to earn certificates from all of the departments, but they did need to take courses in basic subjects like English and mathematics for at least two years whether earning a certificate from the department or not. Many schools throughout the country awarded the Bachelor of Philosophy degree, but the requirements for this degree varied widely. Battle only required B.Ph. students to earn certificates of proficiency in the humanities and social science departments—rhetoric and English, metaphysics and ethics, and political science and history (which included political economy). He continued the Bachelor of Science degree, first added in the 1850s. B.S. students graduated from the mathematics, chemistry, physics, and geology departments, and took practical courses in the agricultural and mechanical school. Battle failed to provide precise information about the relationship of this school to the academic school, but intended to flesh out the details

November 11, 1867 William McGuffey to Battle, October 30, 1867; Hepburn to Battle, November 28, 1867; Martin to Battle, November 1867; Charles Phillips to Battle, January 17, 1868, University Papers.

later. The M.A., also first added in the 1850s, remained in the curriculum as well. Master's students still took an additional year of prescribed polytechnic studies, and it was here that the university would produce new professional leaders in engineering and agricultural chemistry.²²

Battle hoped that the new “scheme of instruction and government” would do several things. Since every student, except the overtaxed B.A. student, no longer needed to take every course and each could advance at his own pace, Battle believed that the new elective system would allow for higher quality work. Rather than cramming every field into a crowded, and consequently superficial, fixed curriculum, the new structure would allow professors to work at a higher level with their students, giving lectures rather than hearing time-consuming recitations on the basics. This belief, however, was a great leap of faith—faith in the secondary education of the state. If the university were to offer truly higher education, the preparatory schools would have to provide the fundamental background in the basic disciplines as well as a certain amount of mental discipline. Battle was not afraid that the abandonment of the more rigid and fixed mental discipline curriculum was to the detriment of the students. While Latin and Greek were fine instruments to sharpen the mind, other disciplines could be as well. The changes might give students more control over their time and study, but Battle believed that the “careless and indolent” would be no worse off than before and those wanting to make the most of their time would greatly benefit from the new organization.²³ The awarding of

²² UNC Catalogue, 1867-1868; “Report of the Special Committee on Matters Connected with the University,” December 17, 1867 in University Papers; UNC Trustee Minutes, December 17, 1867.

²³ Battle had not been too impressed by the levels of learning by some students and the ease with which they still obtained their degrees in the years before the war, and he knew that the problem would continue. The multiple certificates and diplomas, however, would clearly stratify the educational attainments of their recipients.

certificates of proficiency, the creation of the agricultural and mechanical school (although only on paper for now), and the new B.Ph. degree would all bolster the confidence of parents and students in the university and widen its popularity. Battle was also intent on giving the university “a large infusion of scientific teaching” and developing “those branches of knowledge which show the application of science to the arts.” While he did not expressly say it, Battle must have reflected on his experiences over the previous years—his thwarted attempt to work for the North Carolina Railroad because he was less qualified than a Northerner and those he hired, his journey to New York and New England with his father and Charles Phillips in 1851, his presence at the university when the science school began, his brief stint as a railroad executive and subsequent legal work for other roads. Judging from his pronouncements later as president of the university, these experiences convinced him of the need for more scientifically trained and qualified professionals to build North Carolina’s railroads, improve the productivity of the land, and accelerate the spread of manufactories across the state.²⁴

Within a few short months, however, the trustees had to put aside Battle’s plans and would be unable to pick them up again for several years. During the summer of 1868 the board did not know how Congressional Reconstruction would affect the university. Uncertain of the future, they voided the faculty and presidential resignations of the previous summer and suspended all reorganization plans.²⁵ Within a few weeks, a new

²⁴ Battle, *University of North Carolina*, I, 764-766, 781-782; UNC Catalogue, 1867-1868; “Report of the Special Committee,” UNC Trustee Minutes, December 17, 1867.

²⁵ UNC Trustee Minutes, June 4, 1868; “Pen and Ink Sketches,” *The Sentinel*, July 7, 1869.

board of trustees assumed control of the university.²⁶ Three men whose previous experiences indicate the board's composition guided the new board's deliberations—Governor William Woods Holden, State Superintendent of Public Instruction Samuel S. Ashley, and University President Solomon Pool. Holden had become a lawyer in 1841 and bought the *North Carolina Standard* in 1842. He used the paper to advocate numerous reforms, including equal suffrage, internal improvements, and universal education. Serving at times in the state legislature, his politics shifted over time from being an advocate of state's rights in the 1840s and 1850s to being a unionist in 1860 and a leader of the peace movement in 1864. He was provisional governor of North Carolina in 1865; he helped to organize the state's Republican Party; and won election as Republican governor in 1868 with the onset of Congressional Reconstruction. Ashley was a Massachusetts Congregationalist minister who had come to North Carolina in 1865 as a missionary to the freedmen. He also helped organize the North Carolina Republican Party, chaired the education committee for the Republican-dominated constitutional convention, and served as Superintendent of Public Instruction from 1868 to 1871. Solomon Pool was an 1853 graduate of the university, becoming mathematics tutor in 1856 and adjunct mathematics professor in 1861. He resigned in 1866 to be United States deputy appraiser of North Carolina until 1869 when he became president of the university. The three men had goals for the university that were very similar to those of Battle and the original trustees in some respects, but very different in other ways. Over

²⁶ Interestingly, the new board was appointed by the State Board of Education, rather than the state legislature. This notion of state education—higher, secondary, and primary—under one administrative entity unfortunately did not survive Reconstruction or the nineteenth century. See J. Patrick McCarthy “The Articulation of Secondary and Higher Education: Four Historical Models and the University of Georgia,” *History of Higher Education Annual* 19 (1999): (25-26) for a discussion of the nineteenth century relationships between the levels of formal education in a southern state.

the next few years, they tried with varying degrees of success to “loyalize” the university, make it a people’s college, bring co-education to North Carolina public higher education, provide state-supported higher education for blacks, and give university students a wide array of educational choices. They had difficulty, however, obtaining cooperation from a majority of their own Republican board, a majority of the state legislature, and the significant percentage of the state’s elite who deeply resented Reconstruction and Republican rule in the statehouse as well as the state’s university.²⁷

Under Holden, Ashley, and Pool’s guidance, the new board of trustees devised a number of comprehensive and individual schemes to alter the University of North Carolina. Some of their most far-reaching aims were to bring co-education to the university, induce the state to provide higher education for blacks, coordinate the university with all levels of education as it provided normal (teacher) training, and use the university for political capital. Holden and Ashley were both ex-officio members of the board of trustees’ executive committee, and, like the committee members before them, they steered the trustees’ deliberations and set the board’s agendas. In the fall of 1868, however, the full board did not follow their lead and rejected an executive

²⁷ UNC Trustee Minutes, November 17, 1869. For treatments of William Holden, see William K. Boyd, *William H. Holden* (Durham: Seeman, 1899); William C. Harris, “William Woods Holden: In Search of Vindication” *North Carolina Historical Review* 59 (Autumn 1982): 354-372; Horace W. Raper, “W. W. Holden and the Peace Movement in North Carolina” *North Carolina Historical Review* 31 (October 1954): 493-516; Horace W. Raper, “William Woods Holden: A Political Biography” (Ph.D. diss., University of North Carolina, 1951). *Cyclopedia of Eminent and Representative Men of the Carolinas of the Nineteenth Century* (Madison, Wisconsin: Brant and Fuller, 2 vols., 1892; Spartanburg, South Carolina: Reprint Company, 1973), II, 401-402. See entries in Samuel A. Ashe, et al., *A Biographical History of North Carolina* (Greensboro: C. L. Van Noppen, 1905-1917; William S. Powell, ed., *Dictionary of North Carolina Biography* (Chapel Hill: University of North Carolina Press, 1979-); R. D. W. Connor, *Antebellum Builders of North Carolina* (Greensboro: North Carolina College for Women, 1930); and Beth G. Crabtree, *North Carolina Governor’s, 1585-1974* (Raleigh: Division of Archives and history, 1974). For Ashley, see Marion Nolan O’Quinn, “Carpenter Samuel S. Ashley and His Role in North Carolina Education, 1865-1871” (M.A. thesis, North Carolina State University, 1975).

committee proposal for co-education at the university.²⁸ The board was slightly more sympathetic to their plans for black education, but the state legislature was less compliant. Ashley, Holden, and the executive committee hoped to create a “colored department” at the university. The UNC trustees, however, were a little more cautious and in tune with their socio-political surroundings than their colleagues at the University of South Carolina who attempted to racially integrate their school. The UNC trustees rejected integration. The obvious compromise position was for blacks to be educated under the auspices of the university, but at another location. Here again, the executive committee’s intentions went from grand ambitions to compromise to nonexistence. At first they wanted to create a university equal to the one in Chapel Hill for blacks located in some other part of the state. Aware of the financial hurdles this presented, they later proposed a simple “school of agriculture and technology” near Raleigh. Ultimately, the state legislature refused to support these intentions, believing that the trustees did not have the power to found branch colleges.²⁹ Solomon Pool was most interested in the establishment of a Normal School at the university that would train teachers to work in preparatory and elementary schools. He admirably planned a convention and set up a committee of correspondence to coordinate the establishment of the school with the needs and desires of the State Board of Education and representatives of the state’s all-too-few teachers and schools. The convention never met, and the committee never began operation.³⁰ Holden and Pool also wanted to make the university a Republican

²⁸ UNC Trustee Minutes, November 19, 1868.

²⁹ Holden is cited in Battle, *University of North Carolina*, II, 35; UNC Trustee Minutes, November 19 and 20, 1868, January 7 and 8 1869, November 12 and 17, 1869.

³⁰ Battle, *University of North Carolina*, II, 23; UNC Trustee Minutes, November 17, 1869. Universal education was not a new goal or a unique goal to the Reconstruction board of trustees or legislature. William Holden had advocated publicly-funded education for all well before the Civil War, and Cornelia Phillips Spencer—sister of former professor Charles Phillips and former trustee Samuel Phillips—who

stronghold for the state and gain political capital by opening its doors much wider. The Republican trustees, of course, hoped that the university could be “thoroughly loyalized.” David Swain had even believed for a time that he might be kept on as president for the same reasons that had discredited him with North Carolina conservative elite. As governor, William Holden hoped to increase the university’s enrollment and receive political credit as a champion of the common man. At the first commencement under the new administration, he proclaimed that the University of North Carolina would serve the state well even if prejudice and resentment kept the wealthy from sending their sons. As a “people’s college,” he continued, the university would serve “the meritorious poor young men and will maintain and educate them at public charge.” Holden subsequently tried to get the state legislature to provide enough funds for the school to accept 170 tuition-free students. This was many more students and a much greater financial burden than the previous legislature had required when initially awarding the Morrill Land Grant funds to the university. Even the new state lawmakers balked, and Holden failed to keep his promise.³¹

These were all secondary elements of the two reorganization plans proposed, and only partially executed, by Holden, Ashley, Pool, and the Reconstruction trustees. The primary thrust of the plans were to reconstitute the university as a collection of several colleges that offered a multitude of educational options. As William Mitchell’s proposals at the University of Georgia and Battle’s for North Carolina indicate, educators at this time were consumed with the notion that in order to make their school a “university” it had to be a collection of colleges or schools. This came from observing the older

rabidly opposed the Reconstruction trustees from her home in Chapel Hill similarly advocated free public education. Russell, *Woman Who Rang the Bell*, 132.

European universities with their schools of medicine, law, and theology and the universities of England with their numerous colleges. Furthermore, Holden had long been an advocate of altering the Southern economy through industry, and the Reconstruction trustees were likely just as eager to view education as one way to do it. Samuel Ashley headed a committee to propose a new organization of the University of North Carolina that would embrace these requirements. He proposed and the trustees initially accepted creating eight distinct colleges and a “colored department” within the university. While the colored department never materialized, the eight colleges were approved by the board and made it into the 1869-1870 University Catalogue. Like the 1867 Battle plan, the Reconstruction plan allowed students to take whichever courses they chose and to earn certificates of proficiency for completion of undergraduate studies in each department or discipline. Also, just as in the Battle plan, several certificates of proficiency combined to constitute full diplomas or degrees from the university. The Reconstruction plan created the fiction of a college around these degrees. The College of Literature and Arts awarded the B.A. and the M.A. under the same requirements as before. The College of Philosophy awarded the B.Ph. and Ph.D. The College of Science and the Arts would assumedly award the B.S. Here again, it becomes clear that educational innovation was a process of trial and error and that the college, department, and degree systems that emerged in the twentieth century did so after considerable debate and experimentation in these decades. For practical and professional education Ashley and the trustees created colleges of Agriculture and Mechanical Arts, Business and Commerce, Teaching, Law, and Medicine. Like Battle and the original trustees, Ashley and his fellow committee members did not even consider adding a theological school.

³¹ Raper, *Holden*, xv, 124, 125; UNC Trustee Minutes, November 17, 1869.

While most aspects of the Reconstruction plan did little to change the courses or degrees at the university, adding a Ph.D. and colleges of business and teaching were interesting, new elements that were logical extensions of the changes already begun. The trustees admitted that they did not have every aspect of the new plan figured out. The opposition from North Carolina's conservative elite and the end of Congressional Reconstruction in North Carolina assured that they never would.³²

The Reconstruction university faced opposition on several fronts. Few of North Carolina's elite sent their sons to the university, effectively boycotting the school. Only ten students arrived in the first year of the Pool administration and only thirty-six enrolled in 1870. Much of the state press condemned the school's current situation, encouraging parents to send their sons elsewhere.³³ The Reconstruction university's greatest antagonist was Cornelia Phillips Spencer. Her story is one of those unfortunately rare, but refreshing moments, when women become the central figures of nineteenth century higher education and political history. She was the daughter of antebellum faculty member James Phillips and the sister of former faculty member Charles Phillips and former trustee Samuel Phillips. The occupation of Chapel Hill was not only the occupation of the university but of her home. She wrote a series of articles in the Raleigh *Daily Sentinel* and other papers chronicling events at the university and condemning its

³² UNC Catalogue, 1869-1870; UNC Trustee Minutes, November 17 and 19, 1869; Battle, *University of North Carolina*, II, 19; article by Solomon Pool, "The University and Public School, No. 4" in Kemp Battle Scrap Book; *North Carolina Journal of Education* I (February 1858): 53-55. Brabham, *Defining the American University*, 448, n.56 intentionally only mentions this reorganization plan in passing because it is primarily the work of Ashley, a northerner. This insistence merely perpetuates the false dichotomy between northern and southern educators. Educators in the entire United States drew from each other's examples and studied educational structures and policies in Europe. It is particularly instructive to note the immense similarities between the 1867 Battle and the 1869 Ashley plans. While different in a few glaring cases, the overall goals and means were the same.

³³ UNC Trustee Minutes, June 10 and November 17, 1869; *Wilmington Daily Journal*, June 6, 1869; Raleigh, *Sentinel*, April 6, 1869; Raper, *Holden*, xv, 124, 125.

administration to a wide audience.³⁴ Far from alone, Spencer received encouragement and funds from North Carolinians, including former governor Zeb Vance, intent upon purging the state and its university of northern and Republican influence. Solomon Pool rightly took Spencer's attacks as the chief voice of the opposition and countered in the *North Carolina Standard*.³⁵ Pool was also alarmed by Ku Klux Klan activity near Chapel Hill and feared that it might be, in part, directed at him and the current administration of the university. While the North Carolina Klan must have had several agendas in its activity, at least one of its leaders—William L. Saunders—became a very active trustee in the 1870s and 1880s. These and other Klan actions led Governor Holden to raise a militia, carrying on his own little war. When the Democrats returned to power, they used these actions to justify his speedy impeachment.³⁶

With such opposition among the conservative elite who, despite Holden's "people's college" claims, would have to constitute the largest part of the school's enrollment, the reconstruction university had little hope of success. Even the still-Republican legislature hesitated to fund the eight-college plan for a school with few students and a serious debt. Desperate to keep the school open in the face of overt opposition, low enrollments, and legislative frugality, Solomon Pool proposed an unusual but fascinating plan in late 1870. Intent upon construing the university as a collection of colleges, he proposed that all of the denominational colleges in the state join together as

³⁴ Raleigh *Weekly Era*, July 31, 1873; Raleigh *Daily Sentinel* December 1, 1868, April 6, 1869, August, 1-2, 1873. Several of Spencer's articles are reproduced in Louis R. Wilson, ed., *Selected Papers of Cornelia Phillips Spencer* (Chapel Hill: University of North Carolina Press, 1953).

³⁵ Raleigh *North Carolina Standard*, June 10, 1869; Chamberlain, *Old Days*, 156-158; Russell, *Woman who Rang the Bell*, 105-147. For a fuller treatment of Cornelia Spencer and her efforts to redeem the University of North Carolina, see Pamela Blair Gwin, "Poisoned Arrows" from a Tar Heel Journalist: The Public Career of Cornelia Phillips Spencer, 1865-1890," (Ph.D. diss., Duke University, 1983), 75-148.

³⁶ Cornelia Spencer to Charles Phillips, September 2, 1869, reprinted in Wilson, *Selected Papers*, 630-631. Russell, *Woman Who Rang the Bell*, 129, 135-6, 144.

independent colleges within the state university. The university property in Chapel Hill could be leased out to form another one of these colleges. This intriguing mixture of higher education system thinking and the overt melding of state and private education was, of course, doomed to failure. The trustees knew it was beyond their power to enact such a scheme and decided instead simply to close the university.³⁷

It took several years before the state legislature, with the end of Reconstruction, installed a new board of trustees. While many of the old board members had died in the intervening years, the same class and character of men who had run the school before Reconstruction worked to reopen it in the middle 1870s. By 1875 the trustees petitioned the state legislature to honor the awarding of the Morrill Land Grant funds in 1866, despite the fact that the Reconstruction trustees and state government had essentially lost it. Amidst some opposition, the legislature complied, awarding the university \$7,500 per year based on the now phantom principal. With the effects of Reconstruction receding from the campus and school, the trustees and the university had weathered a second political and economic upheaval, and they now had dependable funds that might allow them to undertake meaningful reform.³⁸

Over the next decade they did just that. By 1876, they named Kemp Battle president and resumed where they had left off, diversifying the school's educational offerings while meeting the demands of the Morrill funds. Continuing the reforms begun in 1850, the school reached a new height of educational comprehensiveness in the 1880s and was planning considerable expansion after receiving a regular appropriation from the

³⁷ UNC Trustee Minutes, November 19, 1868, November 15, December 1, 1870 and February 1, 1871; Battle, *University of North Carolina*, II, 26.

state. Again on the edge of lasting transformation, however, Battle and the trustees' reform ambitions would be challenged. This time the threat was from the early stages of the populist movement in North Carolina and a younger generation of professionals intent upon transforming the South who allied to take the Morrill funds away from the university.

³⁸ UNC Trustee Minutes, February 18 and April 9, 1875, February 10 and 11, 1875; "Memorial of the Board of Trustees of the University of North Carolina," Document No. 24, North Carolina General Assembly, 1874-1875; Battle, *University of North Carolina*, II, 64ff.

CHAPTER FIVE
DEFENDING AND KEEPING THE MORRILL FUNDS AT THE UNIVERSITY OF
GEORGIA, 1872-1890

War and Reconstruction kept the University of Georgia from receiving the 1862 Morrill Land Grant Act funds until early 1872. The trustees (still under William Mitchell's guidance) and the university (still directed by Andrew Lipscomb) immediately created a State College of Agriculture to house the practical elements of the expanding curriculum and comply with the Act. The university's educational diversity reached a height by the middle-to-late 1870s when the political turmoil of Reconstruction in the state had subsided and the Morrill funds had energized earlier reform efforts, keeping the university solvent amidst economic depression. Throughout the period and in the years that followed, however, the university suffered from an acute lack of funding and well-prepared students. There was little motivation for politicians to fund the university and its new directions when they were more interested in maintaining a low-tax environment than they were in developing scientific professionals. Few students saw the economic worth of the new degrees and courses of study, if they could socially and economically advance without them, and even if they wanted to study for the new degrees offered at the university few had the sufficient educational background to do so. Aside from these general challenges to university reform, several specific difficulties confronted the university, its organization, and its use of the Morrill funds in the 1870s and 1880s. A

new Chancellor, Henry Tucker, tried to reverse the reforms of the previous decades and reshape the university into a multipurpose college with three Bachelors degrees. This forced the trustees to fire him in 1878. His successor—Patrick Mell—soon had to defend the State College against efforts within the State Agricultural Society to take away the Morrill funds and create a separate agricultural college. The university had become a battlefield in the conflict between Bourbons and the nascent Farmer's Alliance and Populist movement. Some members of the society and the political advocates of farmers were concerned that the university was not training farmer's sons through practical methods to be better farmers but was using the Morrill Funds instead to teach the pure sciences, classics, and non-agricultural practical fields. Mell and the trustees created a series of agricultural branch colleges to deflect this criticism, while simultaneously defending the use of the Morrill Funds for scientific agriculture and non-agricultural studies. The movement for and creation of the Georgia Institute of Technology also threatened the university and, Mell believed, its control of the Morrill Funds. Despite the fact that the university had long been an advocate of education for a new economy and that Mell was requesting funds to create a technological department in the State college, the university's critics accused it of being out of touch with the needs of the New South. The University of Georgia's reform and expansion policies survived the first two challenges. The opening of the new Institute in Atlanta along with several other educational developments in the state, however, signified the diffusion of state funds and support for higher education and was a major setback for the nineteenth century expansion of the university.

After finally receiving the Land Grant funds in the summer of 1872, the University of Georgia trustees organized the State College of Agriculture. While a separate college within the university, the State College—as it came to be called—occupied the same buildings as Franklin College. Professors taught courses in and received salaries from both schools. Admission to the State College was less stringent than to Franklin College which required knowledge of Greek, Latin, advanced arithmetic, and geometry. The State College admission exam only required students to have a “fair knowledge of arithmetic, geography, and English,” and if the prospective student failed the exam, he could still enroll in classes and retake the test three months later.¹

The trustees, Lipscomb, and Mitchell designed the State College to include all the university’s specifically practical courses and programs, except medicine and law. Students pursuing the Bachelors of Arts, Sciences, and Philosophy degrees still enrolled in Franklin College. As in Franklin College, students in the State College took prescribed courses for two years and chose a degree program or took electives their third year. A student entering the State College took English, mathematics, history, chemistry, and basic agriculture in his first two years. If he stayed another year (and many did not make it past the first year or two) he could take practical agriculture courses and earn the Bachelor of Agriculture (B.Ag.) or basic engineering and modern language courses and

¹ Giving the Morrill funds to the University of Georgia was not the only option available to the state legislature in the 1870s. Across the nation, state legislatures distributed the funds in different ways, giving them to established institutions, issuing them to a number of schools, or creating new schools altogether. Colin B. Burke, *American Collegiate Populations: A Test of the Traditional View* (New York: New York University Press, 1984); 214; Earle D. Ross, *Democracy's College: The Land-Grant Movement in the Formative Stage* (Ames, IA: Iowa State University, 1942), 95-6, 155; Rudolph, *American College*, 257-8. In the South, the Universities of Georgia, North Carolina, and South Carolina all received the land grant funds, but only the University of Georgia was able to hold onto them. The state legislature in Alabama avoided the future higher education turmoil experienced in these states by awarding the funds to an entirely new school—what eventually became Auburn University. University Catalogue 1873; Dyer, *University of Georgia*, 120.

earn the Mechanical Engineer (M.E.). If he hoped to be one the new “chemists of manufactories” that Mitchell and Lipscomb believed the New South needed or if he wanted to prepare for medical school, the State College student could take courses in theoretical and practical chemistry and earn the new Bachelor of Chemical Science. The really ambitious State College student also had two other choices. He could take a fourth year of coursework in chemistry, mathematics, and agriculture to earn the Master of Agriculture (M.Ag.) or a fourth year of pure and applied mathematics to earn the Bachelor of Engineering (B.E.).²

Despite having all State College students take agriculture in their first two years and creating two agriculture degrees, the trustees used the Morrill Act funds and the State College to continue their focus upon the fundamental sciences and industry-oriented education. Over the years the board spent only fifteen per cent of the federal money for agricultural training. When they hired Henry C. White in 1872 as professor of chemistry, they added the Terrell lectures in agriculture to his duties as an afterthought. E. M. Pendleton, who also began teaching at the university in 1872 with the opening of the new State College, wrote a textbook by 1875 that captured the outlook on science and education at the university. His work, “Textbook of Scientific Agriculture with Practical Applications,” was by no means a farmers’ manual. Pendleton confidently asserted that science would save agriculture in the South and consequently provided an introduction to a staggering array of sciences against a farming and agricultural backdrop. He was also

² Mitchell had first proposed the chemical science degree and conjectured about its uses in the 1850s and was only now able to see it realized. The other elements of the State College also clearly reflect the antebellum plans. Despite his advanced age, William Mitchell was keeping a watchful, guiding eye on the university. 1879 Board of Visitors Report to the Governor of Georgia (Broadside, Hargrett Rare Book and Manuscript Library, University of Georgia Libraries, Athens, Georgia); Trustee Minutes, IV, 500; University Catalogue 1873-8; Reed, unpublished history, 1005.

sure to point out the Latin origins and meanings of words and concepts. “Prepared especially for southern students,” the book was a general introduction to biology and chemistry and included sections on botany, mineralogy, chemistry of soils and plants, fertilizer and manure, and animal nutrition.³ These professors would educate agricultural scientists not train farmers. Pendleton, himself, did fertilizer experiments while at the state college. He had manufactured commercial fertilizers in Sparta before moving to Athens and continued the business while a professor. He left in 1877 for Atlanta and took his business to the state’s emerging economic center.⁴

The various degrees and programs in the State College also revealed the trustees’ educational emphasis. Compared to the numerous degrees and programs for business and industry, they offered only the two agricultural degrees. They used the Morrill funds for the pre-existing two-year program in commerce and three-year program in building and architecture by putting them in the State College. The Board also continued offering two graduate engineering degrees in addition to the B.E. and M.E. They had developed the Civil Engineer (C.E.) and Civil and Mining Engineer (C.M.E.) as five- and six-year degrees in the late 1860s, designating them University degrees. This placed them alongside the Bachelor of Law and Doctor of Medicine, elevating engineering to a profession. The highest agriculture degree—the M.Ag.—remained a college degree equal to the nonagricultural bachelor degrees.⁵

³ E. M. Pendleton, *Textbook of Scientific Agriculture with Practical Applications*, (New York: Barnes and Company, 1875), i-ii, 13.

⁴ Agricultural College History, 14-15.

⁵ University Catalogue, 1872-8; Agricultural Alumni Association of the University of Georgia, *History of the College of Agriculture of the University of Georgia* (Athens: The College of Agriculture, 1975), 10-19. University of Georgia Trustees, *Proposed Plan for Expansion*, 8-9

The number of students who enrolled in the agriculture programs and earned agriculture degrees supported the Board's emphasis upon industrial education. The State College attracted over one hundred students each of its first three years and over 40 students each year for the next decade. Throughout the entire 1870s only thirty of these students studied agriculture beyond the two years required for all State College students. Three and half times as many students voluntarily enrolled in engineering courses. A much larger percentage of the State College students than those in Franklin College never received degrees. Some of these left when they received certificates of completion for the commerce and architecture courses. Of those who earned State College degrees in its first ten years of operation, forty-two students studied engineering and twelve studied chemical science. Only four students completed the degree requirements for the Bachelor of Agriculture, and the university awarded one honorary Master of Agriculture degree.⁶

The opening of the new State College was one of several dynamic changes at the University of Georgia in 1872. The Board of Trustees acquired a medical department for the university, closed the University High School, and opened the school's first branch college. The Civil War had interrupted William Mitchell's efforts to acquire the Georgia Medical College in Augusta, and after the war he began courting the Atlanta Medical College. The school in Augusta finally made an official union proposal in July 1872. It soon became a school within the university. The local Board of Trustees retained control over the Medical College's operations, including the awarding of degrees, while the

⁶ The overwhelming majority of awarded degrees remained for the traditional professions--law (84) and medicine (214)--and the Bachelor of Arts (161). Seventeen students earned the Franklin College Bachelor of Science and twenty earned the Bachelor of Philosophy from 1872-1882. University Catalogue, 1872-82; Hull, *Historical Sketch*, 188-200; Agricultural Alumni, *College of Agriculture*, 18.

university board maintained general oversight. With this merger, William Mitchell guided the realization of another aspect of his antebellum university plan to include a broad range of professional training.⁷

As part of the package to earn the Morrill Act funding, the Board of Trustees closed the University High School in August 1872. The school was all that remained of the Collegiate Institute that briefly flourished in the early years of the Civil War, teaching students through the sophomore year. The war had reduced it to a village academy or high school, and its enrollment had dropped the previous two years since the legislature discontinued funding education for Georgia's maimed veterans. The trustees had originally intended to establish the State College at the University High School but realized such a physical separation would be unwieldy. Instead, the land and buildings became an experimental and model farm. There had been calls for practical, yet scientific agriculture experiments at the university for many years, and with the reallocated land and new scientifically-inclined faculty the visions began to take shape. The faculty and trustees did recognize that to be useful to the whole state they needed an agricultural experimental station other areas, but until one could be acquired they used the new farm for as wide a range of experiments as possible.⁸ It took several years to complete the needed construction and renovations for the State College and farm, but by 1879 the trustees heard a report that praised the number of experiments taking place at the farm and exhorted the importance of training men who go on to "scientific

⁷For histories of Georgia Medical College see Phinazy Spalding, *The History of the Medical College of Georgia* (Athens: University of Georgia Press, 1987) and William H. Goodrich, *The History of the Medical Department of the University of Georgia* (Atlanta: Ridgely-Tilwell, 1928). Trustee Minutes, IV, 354, 381; William H. Hull, Augusta, to William L. Mitchell, Athens, 06 JUN 72, E. Merton Coulter Collection, Historical Manuscripts Part 1, University of Georgia Libraries, Athens; Reed, unpublished history, 935; Dyer, *University of Georgia*, 121.

enterprises.” That year, the farm had nine acres of corn, ten acres of cotton, and eleven acres of vegetables and flowers, testing fertilizers and planting variations. Within another half dozen years Henry White, university professor and state chemist, presented results to the State Agricultural Society of twenty experiments he was conducting at the university on various fertilizers and tillage techniques for both corn and cotton.⁹ The State College farm marked the infusion of a research ethos into the university and exemplified the service idea most often associated with the University of Wisconsin and Progressivism in which the state university would create and distribute knowledge of social and economic use to the leaders, businessmen, and citizens of the state.¹⁰

Despite this modernizing development, the demise of the University High School and the university’s lack of a preparatory department left the faculty and trustees with a dilemma. William Mitchell had created the High School in 1859 to prepare students for study at the university. By the early 1870s, Georgia’s public school movement was still just getting underway, and private academies which provided preparatory education for a small percentage of the population were slowly disappearing. The desire to attract more students to the university prompted a number of Board members to consider alternative ways to prepare students for university study in Athens.¹¹

⁸University of Georgia Trustees, *Present Organization and proposed plan for expansion of the University of Georgia* (Athens: Southern Banner Job Office, 1872), 8.

⁹1879 University of Georgia Chancellor’s Report (Patrick Hues Mell Collection, Hargrett Rare Book and Manuscript Library, University of Georgia Libraries, Athens, Georgia); 1879 Board of Visitors Report to the Governor of Georgia (Broadside, Hargrett Rare Book and Manuscript Library, University of Georgia Libraries, Athens, Georgia); *Transactions of the Georgia State Agricultural Society*, 1885, 249-260.

¹⁰ This is particularly true since the farm seemed to be used more as an experiment station than as a teaching/apprenticeship facility. White and the trustees championed the research components of this Service Idea above other notions of service like outreach, since a primary original function of the Terrell lectures was to be an open forum for the public to learn more about agriculture. Outreach in the form of farmer’s institutes did eventually come to the university, but at this time the emphasis lay with the creation of knowledge useful to modifying the economy and solving the contemporary “farm problem.”

¹¹ In the early 1870s the public school movement created few new schools, but provided state funding for pre-existing county schools. For the public school system see Dorothy Orr, *A History of Education in*

One of the university's former competitors for land-grant funds provided a solution. After the university received the funds, U.S. Congressman William P. Price and the trustees of a new college in Dahlonega applied to the university for a portion of the land-grant money. In April 1871, the Lumpkin County Superior Court had incorporated an agricultural college with a board of trustees comprised of Dahlonega businessmen and town leaders. Price—with the help of Justin Morrill, architect of the Morrill Act—had convinced the United States Congress to give the buildings and lands connected with the U.S. mint in Dahlonega to the new school. When the town's application to the state for the Morrill funds failed in early 1872, the North Georgia trustees redirected their efforts to the University of Georgia. Accepting the application, the university's trustees awarded the North Georgia College trustees \$2,000 per year in return for the new school becoming a branch of the University of Georgia. The North Georgia trustees surrendered title to all the school's buildings and real estate and acknowledged that the University of Georgia Board held the right to appoint the president of the college. A principal aim of the new branch, the university trustees decided, would be to prepare students for "the higher classes in the University of Georgia." The Board planned for most university-bound North Georgia College students to study the prescribed courses through the sophomore year and then transfer to the university to enter degree programs.¹²

Georgia (Chapel Hill: University of North Carolina Press, 1950), 156-247; and Charles Edgeworth Jones, *Education in Georgia* (Washington, D.C.: Government Printing Office, 1889), 34-6. Trustee Minutes, IV, 88, 358, 366; Reed, unpublished history, 935; Agricultural Alumni, *College of Agriculture*, 8.

¹² The Georgia state legislature took a great deal of financial responsibility for the school in 1878 when it awarded North Georgia over \$20,000 to make repairs after a devastating fire. This fact demonstrates that the state was contributing at least partially to the development of all levels of education in the state. Morrill co-sponsored the bill in the Senate to give the mint buildings to Dahlonega. William Pittman Roberts, *Georgia's Best Kept Secret: A History of North Georgia College* (Dahlonega: Alumni Association, 1998), 10; Trustees, *Minutes*, IV, 372; Dismukes, *North Georgia College*, 92, 93, 95. For more on Justin Morrill's life, see William B. Parker, *The Life and Public Service of Justin Smith Morrill* (New York: Houghton Mifflin, 1924) and Coy F. Cross, *Justin Smith Morrill: Father of the Land Grant Colleges* (East Lansing:

The trustees of North Georgia College had their own ideas. They accepted students with little or no formal education and sent few to the “higher classes” in Athens. The new school was compensating for the general lack of educational institutions in northern Georgia. Students of all backgrounds flocked to Dahlonega, and by 1876 its attendance outstripped the university’s enrollment in Athens 245 to 203. Encouraged by the large enrollment, the local board of trustees developed North Georgia College far beyond its preparatory role. This was likely their and Price’s intent when they applied for the Morrill funds in 1872. Price was interested in creating a college for his district, and regardless of educational value, the presence of a college associated with the university would increase Dahlonega’s prestige and boost its economy.¹³ North Georgia’s original charter allowed it to confer college degrees, and the school soon began exercising its power by granting Bachelor of Arts degrees. Technically, the college and university were not competitors since the diplomas of North Georgia College identified their recipients as graduates of the University of Georgia. Because North Georgia College granted these degrees, few students traveled from Dahlonega to Athens.¹⁴ Nevertheless, North Georgia College had joined Franklin College and the State College as a degree-granting college within the university.¹⁵

Michigan State University Press, 1999). See also William Pittman Roberts, *Georgia’s Best Kept Secret: A History of North Georgia College* (Dahlonega: Alumni Association, 1998) for a brief treatment of this period.

¹³ Price contributed \$4,000 and several lots of land to the school. University Catalogue, 1872-76; Trustee Minutes, IV, 308; Dismukes, *North Georgia College*, 92, 97; Daniel Boorstin, “Culture With Many Capitals: The Booster College” in Boorstin, *The Americans, The National Experience* (New York: Vintage Books, 1965), 152-61.

¹⁴ This competing B.A. source was compounded by the fact that attending “college” in Dahlonega met the demand for formal education beyond the common schools and only slightly (if at all) beyond the academies. It was enough to distinguish the local elites and enough for them to develop the social skills and contacts that would serve them in later life. University Catalogue, 1866-1882; Trustees, *Minutes*, IV, 308; Dismukes, *North Georgia College*, 92, 97; Jones, *Education in Georgia*, 52.

¹⁵ The scarcity of transfer students from Dahlonega should not have surprised the Trustees. Less than 30% of the early University High School classes went to University. “Roll of the University High School”

In some ways North Georgia College fulfilled the Morrill Act's purported intent to open education for a variety of skills to all classes. The school enrolled students from a wide range of economic and social classes and even admitted women in 1873.¹⁶ Students of lesser ability and preparation or those unwilling to study for the more stringent degrees at the State College could study several practical non-degree courses at North Georgia.¹⁷ Most of the students in Dahlonega were in the preparatory and primary grades, and few earned Bachelors degrees, but some took college-level practical courses in agriculture and engineering. In fact, a larger percentage of college-level students voluntarily studied agriculture at Dahlonega than in the State College. Initially it seemed like the school's practical offerings might be exclusively in agriculture, but the educational policies set at the university to expand practical education whenever possible existed here as well. The college was first chartered as an agricultural college, and its first president was D. W. Lewis who would for a time serve as president of the State Agricultural Society. The professor of biology and his assistant even maintained a small farm, but the agricultural courses were shorter and fewer than the other courses, and the trustees did not even establish an agricultural chair until 1902. Many students studied industrial pursuits, mining engineering in particular, and a large portion came from towns rather than county farms. North Georgia College's greatest practical education contribution to the state was teacher training. Following Governor James Smith's 1875 appeal for Normal Schools in the state, North Georgia established a Normal department

in E. Merton Coulter Collection, Historical Manuscripts Part I, University of Georgia Libraries, Athens; University Catalogue, 1866-1882; Trustee Minutes, IV, 308; Dismukes, *North Georgia College*, 92, 97; Jones, *Education in Georgia*, 52.

¹⁶ Consequently, by 1880, some women were receiving University of Georgia Bachelor of Arts degrees.

¹⁷ A side benefit of this development was that having this more open school as a Morrill fund recipient within the university allowed the State College to pursue its more science and professional orientation. This arrangement would become a model for new initiatives in the 1870s and 1880s.

that awarded certificates authorizing graduates to teach in public primary schools. This program provided many teachers for Georgia's burgeoning elementary public school system that was taking shape outside university influence under the new State Board of Education.¹⁸ By 1884 the College was teaching over seventy teachers in four-month terms between common school sessions, and by 1894 the school had awarded over 11,000 teaching certificates.¹⁹

By the middle 1870s, William Mitchell, the trustees, and faculty had come a long way in realizing their educational goals for the state's university and public higher education. The ideas drafted in the 1850s had survived the Civil War and Reconstruction, slowly becoming a reality. Students now enjoyed a considerable array of educational choices. In several schools and colleges located in Athens, Augusta, and Dahlonega, University of Georgia students could earn professional degrees in law, medicine, and engineering; Bachelors and Masters degrees in agriculture, engineering, and chemical science; certificates in business, architecture, and teaching—not to mention the Bachelors of Arts, Science, and Philosophy. Mitchell and Lipscomb hoped this new structure would help to stimulate and provide educated leaders for a new economy in Georgia.²⁰

¹⁸ Trustees, *Minutes*, IV, 421; Dismukes, *North Georgia College*, 85, 97, 98; University Catalogue, 1873, 1882. For discussions of the egalitarian, elitist, and meritocratic issues surrounding the Land Grant colleges see Frederick Rudolph, *The American College and University* (Athens: University of Georgia Press, 1990, 248-253; Laurence Veysey, *The Emergence of the American University* (Chicago: University of Chicago Press, 1965), 15, 70-71; Brubacher and Rudy, *Higher Education in Transition*, 62-4, 389-393; Oscar and Mary Handlin, *The American College and America Culture*, 53; Ross, *Democracy's College*, 46ff, 86, 113-4; and Edmond, *Magnificent Charter*, 29, 33-5. A number of educators led by Gustavus Orr had created a State Board of Education which was laying the foundations of a permanent public school system in 1870 and within a few years launched a moderately successful campaign. Orr, *Education in Georgia*, 221-223.

¹⁹ Roberts, *North Georgia College*, 3-8.

²⁰ Even though a small number of students took then new courses, they still had an impact. At the school's leaders knew, universities at this time educated a very small percentage of the population, and a handful of professionals in the new fields could effect significant change in such an aristocratic world.

Over the next decade and a half, however, this diverse structure and its growth did not go unchallenged. The first challenge was from within. New chancellor Henry Tucker tried to abandon the State College and return to the classic liberal arts college model, until Mitchell and the trustees dismissed him. Simultaneously, some members of the State Agricultural Society and farmer advocates challenged the State College and the university's use of the Morrill funds. The university's leaders ably defended their interpretation of the Morrill Act and their use of the funds, while diverting criticism by establishing branch agricultural colleges. Finally, the movement for mechanical engineering education that culminated in the establishment of the Georgia Institute of Technology in Atlanta undermined the State College's place as the pre-eminent practical education institution in the state. Try as they might to build their own idea of a university, the UGA faculty and trustees were unable to bring all state higher education under their direct control.²¹

After thirteen years as Chancellor and one year of administering the newly expanded university, Andrew Lipscomb resigned in 1873. He had seen the university through war and reconstruction, and remained true to William Mitchell's vision of a university which he was hired to realize in 1860. Lipscomb claimed his poor health could not withstand the increased duties and responsibilities connected with the recent changes. The Board had hired him a private secretary and contemplated hiring a business manager but could not prevail upon the Chancellor to remain past the 1873-74 school year. They hired Henry Holcombe Tucker to replace him in 1874. Tucker was a native Georgian who went to school at Columbian College in Washington, D.C. and the

²¹ Because of the way the University of Georgia was chartered, the Georgia Institute of Technology was technically a branch of the university, but it ultimately operated like a separate institution. Regardless, it

University of Pennsylvania. He had a diverse career before coming to the university. Before the Civil War he practiced law, was a full-time Baptist minister, and taught at a Georgia female college. During the war he entered the salt manufacturing business and afterward edited the *Christian Index* for a short time. It was Tucker's experience as president of Mercer University from 1866 to 1871 that no doubt convinced the Board to hire him as the university's second Chancellor.²²

The Board designated William Mitchell to act as Tucker's "constitutional advisor," but the two men differed widely over the university's purpose. Shortly after he took office Tucker addressed the state legislature, complaining that students could receive any kind of education they chose at the university. The elective system allowed students the freedom to choose individual courses after their sophomore year, and an array of degrees and programs allowed them to choose among practical, scientific, liberal, and professional education. Tucker vigorously opposed this arrangement. He told Georgia's legislators that young men should study ancient languages and classical culture. Mental and moral discipline—not the student freedom and utility that had heretofore guided the university's growth—informed Tucker's view of college education. He also seemed more interested in the extent of his authority as chancellor over students and faculty than the intricacies of overseeing the proliferating colleges and professional schools.²³

Tucker especially criticized agricultural and other practical education in the State College. He claimed the practical bachelor's degrees and certificates undermined the

expanded the state-funded educational opportunities available in the state.

²² Susan B. Tate, "Henry Holcombe Tucker," in Coleman and Gurr, eds., *Dictionary of Georgia Biography*, (Athens: University of Georgia Press, 1983), 1006-8; Dyer, *University of Georgia*, 121, 124.

²³ Tucker was an extremely serious man and Mitchell and Tucker never developed the same rapport as had Mitchell and Lipscomb. Henry H. Tucker, Atlanta, to William L. Mitchell, Athens, 21 JAN 75 and 08 APR 75, E. Merton Coulter Collection, Historical Manuscripts Part 1, University of Georgia Libraries,

university's purpose of mentally training well-prepared students in the liberal arts and sciences. In 1876 and 1877 he told the Board of Trustees that teaching practical agriculture was a hopeless endeavor. He declared that students best learned practical agriculture on the farm and that the university should focus upon educating agriculture students in the liberal arts and sciences. Tucker also complained about the unrealistic expectations of parents and students and the loose admission policy of the State College. Many students who entered the State College expected to earn agricultural degrees in a short time, and low admission standards admitted those unprepared to study even the fundamental sciences of the freshmen and sophomore years. There was an acute lack of public schooling in Georgia, especially at the secondary level, and the State College charged no tuition. These two factors led many parents to send their sons to Athens simply for public education beyond the primary grades of the common schools. Forced to teach the basics, the State College sent students home with the same education they could receive in academies.²⁴

Many of Tucker's criticisms were very accurate. It was true that the State College created false hopes for the farmers and their advocates in the state who had unrealistic expectations of how an agricultural college might help lift them out of the morass of the 1870s depression. The farmers wanted the university to provide quick answers to their economic woes, whereas the university was trying to educate their sons to be professionals. Unfortunately for Tucker, the Board of Trustees held him—as Chancellor—accountable for the university's declining enrollment. Despite their desire

Athens; Hull, *Historical Sketch*, 88, 91-2; Henry Holcombe Tucker, *Address [on the] Condition, Interests, and Wants of the University of Georgia* (Atlanta: Harrison, 1875), 33-5.

²⁴ Trustee Minutes, IV, 574, 580-8; Reed, unpublished history, 1004-11; Hull, *Historical Sketch*, 89; Brooks, *University of Georgia*, 57; Dyer, *University of Georgia*, 125, 128.

to expand the university's educational offerings, they still needed to attract enough students to keep it open and growing. After a high of 151 when it first opened in 1873, the State College's enrollment swiftly dropped to 40 by 1877.²⁵ The Panic of 1873 had set off a six-year economic depression, and across the nation students left colleges and universities to augment their families' incomes. Southern farmers particularly suffered, and their sons left universities throughout the South. Tucker blamed the university's decreasing enrollment on the depression and the disappointment parents felt when their sons returned home from the State College having learned little more than English grammar, arithmetic, and fundamental chemistry. Hoping to secure his position, Tucker pointed out that the University of Georgia still educated a higher percentage of the state's population than many other state universities. Most schools calculated their total enrollments by adding the number of students in college-level courses, preparatory departments, and professional schools. Tucker explained that using this method of counting, the university with its far-flung structure had a total enrollment in 1876 of 312 students.²⁶

By 1877 Tucker also blamed declining enrollments on the university's increasingly complex organization, the bewildering number of degrees and programs, and the confusion caused by the elective principle. He proposed a plan to reshape the university that would reverse the Board's policy of increasing the university's utility through practical, professional, and industrial programs. He proposed returning to the "Old American College System," eliminating all degrees and programs except the

²⁵ Attendance at Franklin college fell from 119 to 89 over the same period, but the greatest losses and the most alarming to the Board were in the State College. University Catalogue, 1872-82.

²⁶ Trustee Minutes, IV, 574; Reed, unpublished history, 945, 959, 1004, 1010, 1036; Brooks, *University of Georgia*, 57, 61; Dyer, *University of Georgia*, 127; Dabney, *Mr. Jefferson's University*, 28.

Bachelors of Arts, Science, and Agriculture. This eliminated all sorts of degrees and programs, particularly those in engineering and chemical science—additions to the curriculum for industrial education long sought by the Board of Trustees. Tucker also proposed ending election at the university. Tucker called for all students to begin one of the three Bachelor programs their freshman year and have no choice over individual courses. Professional engineering degrees and the elective department for students without degree objectives or pursuing professional certificates—commerce and architecture—also had no place in Chancellor Tucker’s plans for the university in Athens. The only professional programs that would remain were those in the traditional professions of law and medicine.²⁷

The Board of Trustees created a special committee headed by Alexander Stephens to address Tucker’s proposal. The committee deferred the issue to the university’s faculty. Led by Patrick Hues Mell, the faculty submitted a counter-proposal to the committee in the summer of 1878. Mell had been at the University since 1856 and had served as Andrew Lipscomb’s vice-Chancellor. He was an important Baptist minister in Georgia and an esteemed parliamentarian. Mell and his fellow professors proposed retaining the six Bachelor programs—B.A., B.S., and B.Ph. in Franklin College and the Bachelors of Agriculture, Chemical Science, and Engineering in the State College.²⁸ The faculty plan also retained the professional engineering degrees, the elective department, and the certificate programs. They made only one significant break with the university’s development over the past twenty-three years—abandoning the elective principle for those pursuing degrees. Rather than choosing their individual courses in their junior and

²⁷ Trustee Minutes, IV, 591ff; Brooks, *University of Georgia*, 67; Dyer, *University of Georgia*, 128.

senior years, students would take prescribed courses as a class according to their degree program. The faculty plan preserved the Board of Trustees' guiding principle of offering many types of liberal and practical education but abandoned the elective principle for degree-seeking students. This rejection of extreme student individualism foreshadowed the return of many colleges and universities to the liberal arts in the 1890s.²⁹

When the special committee presented the faculty plan to the full Board, Chancellor Tucker made a final appeal for reorganizing the University into a liberal arts college. He was aware that few members of the Board shared his opinion and finally agreed to work under the faculty plan. The Board of Trustees immediately adopted all of the faculty's proposals and fired Chancellor Tucker. Within minutes, they chose Patrick Mell to replace him. Tucker's proposals had convinced the Board that he neither agreed with their commitment to professional, practical, and industrial education nor appreciated the political subtleties involved in retaining the State College and the funding from the Morrill Land-Grant.³⁰

Tucker's proposals demonstrated a remarkable political ineptness. The university was under considerable attack concerning its use of the Morrill funds in the late 1870s, and the threat of removing the funds from the school was in the air. Many land-grant colleges were drawing fire nationwide from state agricultural societies and the Grange

²⁸ The M.E. program had never really gotten off the ground, so it would be absorbed into the B.E. program.

²⁹ Thomas G. Dyer claimed the faculty report returned the University of Georgia to the classical liberal arts mold; but, historian Charles Edgeworth Jones noted in 1893 that the system designed by the faculty was indeed an elective system. Jones had become good friends with William Mitchell and was intimately familiar with the university and its trials. Students enjoyed considerably more options than under the expanded prescribed curriculum of the antebellum liberal arts college. Dyer, *University of Georgia*, 131-3; Jones, *Education in Georgia*, 51; Faculty of the University of Georgia, *Minutes*, 96-105; For the most recent work on Patrick Mell see B. Lewis Noles, "Patrick Hues Mell: The Southerner as an Educator, 1814-1888," Master's Thesis, University of Georgia, 1996. See chapter four in Veysey, *Emergence*, for a discussion of liberal education in the 1890s.

when they planned to train farmers as scientist-professionals rather than businessmen and spent more of the Morrill money for engineering and industrial education than for agricultural training. The states that gave these funds to established universities, like Georgia, received the most criticism. Advocating the creation of new, separate institutions to receive the land-grant funding, several of these state organizations succeeded in taking the money away from the original recipients. This debate was particularly fierce in the South where agriculture dominated the economy longer and agrarian groups enjoyed considerable strength. The University of Georgia remained the state's land-grant institution, but the political climate of the late 1870s and early 1880s forced the trustees to fight a delaying action in order to maintain authority over the Morrill income.³¹

The Democratic Party that took control of the state government in 1871—ending Congressional Reconstruction—was a coalition of former Whigs and Democrats. By continuing old Whig policies of stimulating economic growth, the dominant faction of the Party desired to create a New South based upon industry and diversified agriculture with the help of Northern investment and technological abilities. This faction was led by the Bourbon Triumvirate—Joseph E. Brown, Alfred H. Colquitt, and John B. Gordon—who constituted the Atlanta Ring with Henry W. Grady and other pro-business and industry leaders. They dominated the Democratic Party and state politics, but before 1882 they confronted opposition. In 1877 a new state constitution threatened their vision

³⁰ Trustee Minutes, V, 66; Reed, unpublished history, 1045.

³¹ For discussions of the controversies over the educational content in the Land-Grant colleges, see Rudolph, *American College and University*, 250-1; Veysey, *Emergence of the American University*, 15; Brubacher and Rudy, *Higher Education in Transition*, 62-4; Ross, *Democracy's College*, 86, 113-4; Edmond, *Magnificent Charter*, 33-5. James B. Sellers, *History of the University of Alabama*, I (University, AL: University of Alabama Press, 1953), 382, 400, 553; James A. Cabaniss, *A History of the University of Mississippi* (University, MS: University of Miss. Press, 1949), 87; William Snider, *Light on a Hill: A History of the University of North Carolina at Chapel Hill* (Chapel Hill: University of North Carolina

by undermining government efforts to attract and develop new industries. Robert Toombs and Charles Jenkins guided the constitutional convention which discouraged industrial development by providing railroad regulation and halting the ten-year remission of taxes for new factories. This new constitution championed traditional and agrarian interests and, in its attempts to limit the expenditure and scope of the state government, also had a far-reaching effect on education in Georgia. It precluded the use of state funds for secondary schools and limited the curriculum in the common schools to basic English education. Only incorporated towns could raise local taxes for secondary schools, seriously curtailing the efforts of counties to fund academies which all but disappeared by the 1890s.³²

Education was one arena in the ensuing conflict between nascent Populism and the Bourbon leadership. Also in the 1870s a number of Georgia Democrats had broken from the Party and run as Independent Democrats. To have run as Republicans would have virtually guaranteed defeat in Redemption Georgia. Opposing the machine politics of the Atlanta Ring, Independent Democrats typically supporting agricultural over industrial interests, and riding a wave of discontent spurred by the long economic Depression of the 1870s. Several won elections. The nominal head of the Independent movement was William H. Felton who first won election in 1874. The movement reached its height from 1877, with the new Constitution, to 1882 when Alexander

Press, 1992), 71, 90; D. W. Hollis, *University of South Carolina*, II (Columbia: University of South Carolina Press, 1951-6), 89-90, 107-8.

³² For the coalition nature of southern Democratic party after the Civil War and the Redemption-era legislation see C. Vann Woodward, *Origins of the New South* (Baton Rouge: Louisiana State University Press, 1951), 75-106; Numan V. Bartley, *The Creation of Modern Georgia* (Athens: University of Georgia Press, 1990), 78ff; Dabney, *Universal Education in the South*, I, 252; and Orr, *Education in Georgia*, 250. The new Constitution also limited state-funded higher and practical education (essentially anything above the common or elementary schools) to the university. Any new schools—such as the Georgia Institute of

Stephens failed to run as an Independent candidate for governor and it quickly collapsed.³³

The short-lived strength of the Independent movement in the late 1870s instilled confidence in many members of the Georgia State Agricultural Society to challenge the allocation of the Morrill Land-Grant funds to the University of Georgia. Most members of the State Agricultural Society were politicians and upper and middle class planters who guided the Society to serve their interests. Their ranks included members of the Bourbon Triumvirate as well as the Independent Democrats. Share-croppers and small farmers, when cognizant of the Society's policies and actions, often opposed them. Some of the Society's Independent-leaning members were dissatisfied with the university's inclusion of liberal and engineering education in the State College of Agriculture. They felt the federal funds should be used only for practical agricultural education and believed the state's agricultural college should be more of a business or trade school than a modified liberal arts college. Their general sentiment was that "Farming is just as much a business as banking or merchandise . . . it must be managed on the same strict business principles."³⁴ The State College, then, should offer agricultural education that taught students the fundamentals of farm operation and bookkeeping. The agricultural press was just as critical. The editor of the widely read *Southern Cultivator* was William Louis Jones. He had resigned as a professor in the State College in protest over the way funds and resources he believed were earmarked for agricultural education were allocated to

Technology and the state Normal School in the next two decades—would technically have to be branches of the university.

³³ For more on the Independent Movement see George C. Jones, "William H. Felton and the Independent Democratic Movement in Georgia, 1870-1890," (Ph.D. Dissertation, University of Georgia, 1971); and Kenneth Coleman, ed., *A History of Georgia* (Athens: University of Georgia Press, 1991), 217-9.

non-agricultural programs and buildings.³⁵ The university, these men believed, would need to change the way it taught agriculture and allocated the Morrill Act funds or perhaps it should not have them.

When Henry Tucker became Chancellor and began speaking against agricultural and other practical education, he exacerbated this critique. The Agricultural Society soon debated establishing a five-person committee to determine if the university was properly using the federal funds. Joseph Brown—society member, university trustee, and a leader of the Atlanta Ring—led successful opposition among the membership to kill the committee idea. Then, in 1877, Chancellor Tucker proposed his reorganization that would make the university a multipurpose college. Despite his inclusion of the Bachelor of Agriculture in the plan, the Agricultural Society responded with a special committee to study the feasibility of establishing its own agricultural college. This was not so unusual an idea. In many ways the State Agricultural Society was already an alternative agricultural education institution. It sponsored a state fair, semi-annual meetings, and a publication that educated farmers and planters about the practical aspects of running and modernizing their land use.³⁶ Further angering Society members, Tucker even claimed that farmers should enjoy no special privileges in education. Most university trustees of course agreed. They believed the university must make provisions for “all the varied branches of industrial education.”³⁷ Unlike Tucker, however, they saw the need to appease agrarian interests in order to retain the land-grant funding that allowed them to

³⁴*Transactions of the Georgia State Agricultural Society*, 1889, 685. Despite the later date of this particular cite, it capture the sentiments of the 1870s quite well.

³⁵*Southern Cultivator* 32 (November 1874): 428-430; Hull, *Historical Sketch*, 96; Brooks, *University of Georgia*, 58; Coleman and Gurr, *Dictionary of Georgia Biography*, 559-561.

³⁶Agricultural College History, 16-19.

³⁷Board of Trustees of the University of Georgia, *Present Organization and proposed plan for expansion of the University of Georgia* (Athens: Southern Banner Job Office, 1872), 8, 11-4, 16.

continue their own policies, especially in the midst of a depression. In 1878 the Society requested the right to appoint four trustees of the university. The Board refused but fired Chancellor Tucker instead.³⁸

In 1878, new Chancellor Patrick Mell joined William Mitchell in a new policy initiative that would divert attention and criticism from the State College and permit Mell to defend the structure and resource allocation within the College itself.³⁹ The “success” of the branch in Dahlonega and the rumblings within the State Agricultural Society had encouraged other hopeful towns to apply to the university for shares of the Morrill monies. Despite the failure of North Georgia College to act as a feeder school, the university trustees approved a limited number of these appeals in the late 1870s and early 1880s. They chose this unusual course of action for two reasons. Establishing branch colleges was a defensive measure to prevent traditional and agrarian interests from taking all of the funds away from the university. Second, the educational provisions of the 1877 Constitution severely limited public funding for secondary education. Mitchell and Mell hoped to ensure a supply of students by funding a series of preparatory schools more closely directed by the university and its officials than the “failed” branch at Dahlonega.⁴⁰

³⁸In 1880, when the Independent movement was thriving, the state legislature finally forced the Board of Trustees to accept four members chosen by the State Agricultural Society. Among the four was William H. Felton, the first elected Independent Democrat. Transactions of the State Agricultural Society, 1876, 58, 62 and 1877, 201; Reed, unpublished history, 1113; Agricultural Alumni, *History of the College*, 17; Brooks, *University of Georgia*, 58; Hull, *Historical Sketch*, 96.

³⁹The aging Mitchell was still head of the Prudential Committee and Secretary-Treasurer of the Trustees. An accomplished parliamentarian, Patrick Mell understood the necessity of preserving the Board of Trustees’ subterfuge. For the most recent treatment of Mell, see Lewis B. Noles “Patrick Hues Mell: The Southerner as an Educator, 1814-1888” (Master’s Thesis, University of Georgia, 1996.)

⁴⁰ Reports in the *Atlanta Constitution*, cited in the *Thomasville Times*, 26 December 1874, 3 July 1875, 24 June 1876, 7 July 1877, and 9 February, 1878; Trustees, *Minutes*, VI, 68-80; William W. Rogers, *Thomas County, 1865-1900* (Tallahassee: Florida State University Press, 1973), 212; Reed, unpublished history, 1183, 1293; Hull, *Historical Sketch*, 96. One of the few works to treat Georgia’s agricultural and mechanical colleges is Irvine S. Ingram, “The History and Significance of the A. and M. Schools in Georgia,” (Master’s Thesis, Emory University, 1933). Ingram gives only the briefest mention (pp. 42-3) to the agricultural branches of the University of Georgia that were the first such colleges in the state until the

Delegates from Milledgeville, Thomasville, and Cuthbert presented formal proposals, asking the trustees to establish branch colleges in their towns. With the state government now situated in Atlanta, Milledgeville still had the old state capitol buildings and hoped to use them for a new school. The Cuthbert and Thomasville delegations proposed using the funds to turn pre-existing private academies into branch colleges. In Cuthbert, the Randolph Male Institute and the Bethel Female Institute had joined to make the bid for Morrill Act funding. Thomasville's Fletcher Institute had operated in rural south Georgia since 1854 and drew a number of students from surrounding counties in south Georgia and north Florida. The Board of Trustees awarded each of these towns \$2,000 of the Morrill Act funds in return for the right to select the presidents of the schools and oversee their curricula. In September 1879, the South Georgia Agricultural College in Thomasville and the Southwest Georgia Agricultural College in Cuthbert opened, followed by the Middle Georgia Military and Agricultural College in Milledgeville the next January. Several towns beside these three submitted applications for the Morrill funds. Town boosters in Cedartown wanted to establish the Northwest Georgia Agricultural and Mechanical College. The West Georgia A. and M. College in Hamilton and the Middle Georgia College in Jonesborough also hoped for branch college status but were never affiliated with the university as recipients of the Morrill funds. Griffin, Rome, Waycross, and Bowden also applied in vain to have branch colleges in the

state legislature took up the practice in 1906. A. McIntyre, Thomasville, to William Mitchell, Athens, 20 January 1880, Coulter Collection; Trustees, *Minutes*, VI, 178-9, 308, 330; University Catalogue, 1900, 111; Rogers, *Thomas County*, 214, 216, 218; Reed, unpublished history, 1135; Hull, *Historical Sketch*, 99; Brooks, *University of Georgia*, 76; Dyer, *University of Georgia*, 135. See Peter Wallenstein, *From Slave South the New South: Public Policy in Nineteenth Century Georgia* (University of North Carolina Press, 1987), 165-169 for a brief discussion of the branch colleges in the larger context of public policy and the growth of the state and its activism in the 1870s and 1880s relative to earlier periods.

1880s.⁴¹ The university's trustees were disseminating only some of the Morrill funds so that they could keep what was left for themselves and track students from several regions of the state to their doors.

They gave away \$8,000 per year to the four branch colleges, but half of the Morrill funding was better than none, and the Board had its own plans for the schools. The trustees never intended the branch colleges to teach practical agriculture, and neither did those who lobbied for their towns and ran the schools. In Cuthbert and Thomasville, the depression of the 1870s and the lack of a public high school system had sent the towns looking for funding to help the private schools educate their children beyond the primary grades. As branch colleges, the old schools taught secondary and college-level courses in the liberal arts and the sciences, paying little attention to agriculture. When the branch college in Milledgeville lost the Morrill funds after a few years, it stopped offering agricultural education altogether.⁴²

Unfortunately for the trustees of the University of Georgia, the agricultural branch colleges did not send many students to the university either. When the local boards first operated their schools as branch colleges, they created numerous preparatory grades along with freshmen, sophomore, junior, and senior classes. Mell forced the schools to change their structure in 1880 and agree to teach courses only through the sophomore level, but this solution failed to change the situation. The university trustees established a standing committee to oversee the branch colleges, and by the early 1880s the committee

⁴¹ There were other "agricultural colleges" in the state but only these few were branches of the university by virtue of receipt of a share of the Morrill Funds. General Assembly, *Acts*, 1878-1879, 91, 92, 97-98; S. Byrd to William Mitchell, Athens, 30 July 1880 and Benjamin C. Hunter to William Mitchell, Athens, 6 October 1879, Coulter Collection; Trustees, *Minutes*, V, 68-80, 178, 592-6; University Catalogue, 1882; Jones, *Education in Georgia*, 116; Reed, unpublished history, 1045; Agricultural Alumni, *History of the College*, 11; Rogers, *Thomas County*, 213.

reported that the schools were acting as competitors rather than feeder schools. Few students transferred to the university in Athens from the agricultural branch colleges. With the end of the 1870s depression, enrollment in all the university's colleges and professional schools steadily climbed over several years. Yet, only five students out of a potential twenty-five entered the higher grades at the university from the three newly established branch colleges in 1882, and not a single student transferred to Athens in the 1886-1887 academic year. Despite not being able to grant University of Georgia degrees—like North Georgia College—and despite the wishes of the Board, the branches were operating as quasi-independent colleges, sufficiently meeting local demand for higher education.⁴³

Consequently, the trustees reduced funding for the schools to \$1,000 per year in 1883 and by 1890 abandoned funding and directing the branch colleges altogether. With so few students coming to the university in Athens and the receding of serious threats from the State Agricultural Society, there was little need to send money to the branch colleges. The university catalogue even disavowed a direct relationship with the wayward schools once the umbilical cord of the Morrill funds was cut.⁴⁴

The short-lived experiment with branch colleges diminished the threat to the Morrill Funds and the State College, freeing Mell to defend more openly the allocation of

⁴² University Catalogue, 1882; Trustee Minutes, V, 268, 592-6; Reed, unpublished history, 1040; Hair, *Georgia College*, 5; Brooks, *University of Georgia*, 75, 78; Rogers, *Thomas County*, 207-13.

⁴³ Trustees, *Minutes*, 1 August 1879; 16 July 1880, 14 July 1882; 16 July 1886; 19 July 1887.

⁴⁴ There were efforts to establish other branch colleges and make the division of Morrill Funding permanent, but they failed. By 1889 several agricultural colleges received direct support from the state legislature and none except Dahlonega received Morrill funds. This indicated, however, increasing state expenditure. For more on the demise of this transformation of the branch colleges see "The Articulation of Secondary and Higher Education: Four Historical Models at the University of Georgia," *History of Higher Education Annual* 19 (1999): (30ff). *Acts of the General Assembly*, 1882-3, 16; 1886-7, 10; 1888, 11; House Journal, 1883, 1327; Senate Journal 1883, 484; University of Georgia, Trustee Minutes V, 638, 701; University Catalogue, 1900-1901.

resources within the College. He was by then, however, without a key ally. William Mitchell's guiding hand left the university in 1882 when he died after decades of service to the school. After the fiasco with Henry Tucker, Mitchell must have exercised some influence over the selection of Patrick Mell and must have been confident that Mell would continue to pursue his vision of university education. Mitchell still received most correspondence relating to the school—since he was the most highly placed, longest serving official ever since the Civil War—state officials called on Mitchell when visiting the university as much as on the chancellors, and Henry Tucker had sarcastically referred to Mitchell as his “constitutional advisor.” Nevertheless, Mell's defense of the State College in the 1880s justified Mitchell's faith. True to the longstanding aims of the university, Mell defended the university against lingering agricultural criticism, praised its production of engineers and chemical scientists as a practical benefit to a new economy, and intended to continue curricular additions in that direction.

Under Mell's guidance, the State College would serve agriculture and the state in two ways. It would train scientists and professionals for agriculture related industries, and it would conduct agricultural research on the college farm. Rather than training farmer's as trades- or businessmen, the state college provided “instruction in those departments of science that have the most intimate relations with scientific agriculture.” This was at odds with the interpretation of the Morrill Act espoused by some members of the Agricultural Society and editors of agricultural journals who believed instruction should be directly about agriculture.⁴⁵ Rather than return to farms as owners or managers, Mell believed graduates would themselves train farmers in scientific and

⁴⁵ This is the same difference of opinion over the use of money from the Terrell endowment in the late 1850s and 1860s. The two types of agriculture education reform were intertwined throughout the century.

modern land use or work in associated areas like the rapidly proliferating fertilizer industry. Simultaneously, the college farm would act like an experiment station, rather than a teaching/model farm and would create agricultural knowledge that could then be distributed through the State Agricultural Society.⁴⁶

Mell and the trustees' opinion on the function of the State College came into sharper focus when he addressed the relationship between agricultural education and other professional education. In 1886, he explained why so many students enrolled in the engineering program rather than the Bachelor of Agriculture course after finishing the required two-years of general studies. In the past ten years, he said, the university has graduated 26 engineers and 16 chemists, men who could find employment in any one of the many "great enterprises" emerging across the nation. In his estimation, the "supply [of these professionals] seems to be commensurate with demand." The opposite was the case with agriculture. Eight students took degrees in agriculture and only two of those worked in farming. Mell claimed that one could be a professional engineer or chemist, but he belittled the notion of farmers as professionals, saying "That word "profession" in this connection is a misnomer." He asserted that students were smart not to pursue degrees in agriculture for several reasons. For those who intended to return to their family farms, there would be little incentive to apply what they learned and risk experimenting with portions of their crop. Perpetual debt to merchants would require a consistent and universal use of the land for marketable cash crops. For many, their father's farms seemed to be "slipping away," so they would logically pursue an

⁴⁶ Just as the faculty and trustees had worked to bring other elements of higher education under the university's influence, such an arrangement would ally the state college with the Society, keeping potential enemies close to oneself. 1886 University of Georgia Chancellor's Report (Patrick Hues Mell Collection, Hargrett Rare Book and Manuscript Library, University of Georgia Libraries, Athens, Georgia).

alternative course of study and career path anyway. For those without family farms, it was difficult for a Bachelor of Agriculture to find work, especially since his salary as a college man would be prohibitively high. Clearly, Mell saw the Bachelor of Agriculture as a useless degree. If a student wanted to be a professional in agriculture, he should take a degree in chemical science in the State College or a Bachelor of Science in Franklin College and be an agricultural chemist or scientist.⁴⁷

Mell was also eager to resume the educational diversification at the university that had been stalled by Henry Tucker and the Agricultural Society. He was obviously pleased that the State College graduated professionals in chemical science and engineering. In 1872, however, the university's application for the Morrill funds had also called for adding mechanical engineering to the school's offerings. This manifested itself in the short-lived M.E. degree that was eliminated amidst the controversies of the 1870s and as part of an effort to streamline the school's structure. By the 1880s, the university offered two bachelors degrees essentially in chemical and civil engineering and two advanced degrees in civil and civil and mining engineering. Mechanical engineering and industrial education were growing educational trends, however, that rose with the rapid acceleration of manufacturing and industry. Mell was unclear on what form the new education should take at the university. There seemed to be two choices. The university could embrace the school culture or the shop culture in this relatively new area of the curriculum? The university's focus on theory and science in training future professionals seemed to indicate that the academic or school culture would be the natural way to expand the university in the budding area. Mell's perception of the research (rather than

⁴⁷ 1886 University of Georgia Chancellor's Report (Patrick Hues Mell Collection, Hargrett Rare Book and Manuscript Library, University of Georgia Libraries, Athens, Georgia).

instructional) use of the university's farm also indicated he would similarly embrace the school culture. Other institutions, however, were starting with the shop culture in which students learned through a controlled apprentice experience in a productive shop. The issue for Mell was not whether the State College would train professionals or tradesmen, but whether the university should focus on the scientific and academic components of the profession of mechanical engineering or provide what amounted to an in-house internship. Like most educators planning reforms, Mell wrote presidents and trustees of other universities to gather information about their curriculum and teaching practices in technological education in the early 1880s.⁴⁸

While Mell was planning some kind of addition or revision of the university's engineering curriculum in the state college, technological education was appearing in other schools in the state. By 1884 Emory College started a school of Toolcraft and Design with a workshop that would effectively substitute for an apprenticeship in a private enterprise and perhaps even turn a profit for the school.⁴⁹ Mell was no doubt aware of the educational reforms taking place at Emory and even earlier at a school that was technically under his and the Board's supervision—Atlanta University. A little known player in the curricular and institutional battles in Georgia state higher education, this black school indirectly “shared” the Morrill funds with the University of Georgia by

⁴⁸ P. H. Mell, Athens, to Noah Porter, Yale, November 28, 1881; W. Atkinson, M.I.T. Boston, to P. H. Mell, Athens, September 14, 1882; D. H. Hill to P. H. Mell, May 18, 1883 (Patrick Hues Mell Collection, Hargrett Rare Book and Manuscript Library, University of Georgia Libraries, Athens, Georgia); Ray Mathis, ed., “Uncle Tom Reed's Memoir of the University of Georgia,” (Athens: University of Georgia Library Miscellanea Publications, No. 11, 1974), 117-118; P. H. Mell, Jr., *The Life of Patrick Hues Mell* (Louisville, Kentucky: Baptist Book Concern, 1895), 215-216. Patrick Mell's son was the state chemist of Georgia from 1874 to 1877 and from 1878 to 1902 was the geology and botany professor at Alabama polytechnic.

⁴⁹ Henry M. Bullock, *A History of Emory University* (Nashville: Parthenon Press, 1936), 186; Isaac Styles Hopkins, “Industrial Education,” in *Sources and Reprints* (Atlanta: Emory University Publications, 1952), 1-4, 8-10, 14-15.

way of a state appropriation. Like the university, it focused on the liberal arts and engineering or industrial education at the expense of agricultural education. The school was both a model and a political pawn in the efforts to establish the Georgia Institute of Technology in the 1880s.⁵⁰

Atlanta University began as a school headed by Edmund A. Ware in 1865 under the auspices of the Freedman's' Bureau and the American Missionary Association.⁵¹ By the late 1860s it became Atlanta University with its own board of trustees. Several black Georgia legislators soon proposed a \$100,000 grant to make it a black state college. As a temporary measure, the state gave the school \$8,000 p.a. in 1870 and 1871.⁵² The funding stopped once conservatives regained control of the legislature, but appeals for state-supported black higher education continued. Angling for a reinstitution of the payments, Edmund Ware wrote Governor Smith and asked if blacks would be allowed to attend the new State College in Athens and thus partake in the proceeds from the 1862 Morrill Act.⁵³ Cognizant of this threat, the conservative state legislature resumed the \$8,000 payment to Atlanta University out of state coffers in 1874.⁵⁴ Georgia and Georgians were not ready for integrated schools less than a decade after the Civil War. The United States Congress was contemplating a new civil rights act at the time, and the future of educational institutions was uncertain. As a hedge against that uncertainty, funding the black college would insulate the University of Georgia from having to admit

⁵⁰ See Myron W. Adams, *A History of the Atlanta University* (Atlanta: Atlanta University Press, 1930) and Clarence Bacote, *The Story of Atlanta University: A Century of Service, 1865-1965* (Atlanta: Atlanta University, 1969) for full histories of Atlanta University.

⁵¹ An 1863 Yale graduate, Ware was the superintendent for schools in Georgia for the AMA.

⁵² The \$8,000 actually mirrors the state appropriation to University of Georgia based on its original endowment return. *Acts of the General Assembly*, 1870, 8; Willard Range, *The Rise and Progress of Negro Colleges in Georgia, 1865-1949* (Athens: University of Georgia Press, 1951), 21-22, 35-36; Bacote, *Atlanta University*, 17ff.

⁵³ Wallentstein, *From Slave South the New South*, 163-164; Bacote, *Atlanta University*, 72-73.

black applicants, permit the university to keep all of the land-grant funds (sharing them with white institutions like North Georgia College when appropriate), and appease blacks and their advocates.⁵⁵ Even though Atlanta University was not a direct recipient of the Morrill Land Grant funds, the arrangement was legislated in “An Act to Equitably Adjust the Claims of the Colored Race for a Portion of the Proceeds of the Agricultural Land-Scrip.”⁵⁶ Atlanta University operated as Georgia’s “pseudo Land-Grant college of Agricultural and Mechanic Arts for Blacks.”⁵⁷ As a condition of the act, the legislators required that the University of Georgia have some oversight of the school, that three University of Georgia faculty approve the school’s curriculum, and that Atlanta University offer free tuition to one student per state legislature member.⁵⁸

Normal education was a staple of the school because a large part of its mission was to spread basic education to the black population. It operated grammar and preparatory departments to provide lower level education for Atlanta blacks and to prepare students for the normal and collegiate departments. The classical curriculum in the collegiate department had admission requirements similar to those at the University of

⁵⁴ *Journal of the House of Representatives*, 1874, 395-399.

⁵⁵ *Journal of the House of Representatives*, 1874, 395-399; University of Georgia, Trustee Minutes, October 22, 1872.

⁵⁶ *Acts of the General Assembly*, 1874, 32-3.

⁵⁷ Clyde W. Hall, *One Hundred Years of Education at Savannah State College, 1890-1990* (East Peoria, Ill: Versa Press, 1991), 3.

⁵⁸ The UGA oversight was minimal at best, but Mell would have been well aware of the school and its curriculum. *Acts of the General Assembly*, 1874, 32-3. In 1887 the state funding was taken away because whites were taking classes with the black students. These white students, however, were the children of white instructors who had been taking classes and the school since its inception. A new law forbade blacks from attending University of Georgia and any white from attending schools for blacks that were state supported. This is a good example of the hardening of segregation laws in the period. After allocating over \$100,000 to the school in the 1870s and 1880s, the legislature withdrew its support, but by 1891 the state allocated money to a school for blacks that was a branch of the university. It opened briefly in Athens in June 1891, but was placed permanently in Savannah as the Georgia State Industrial College that Fall. This was in compliance with 1890 Second Morrill Act that required some of the educational funds to be used for blacks but not necessarily in integrated institutions. The school received both one third of the funds from the new Morrill Act as well as the original \$8,000. *Acts of the General Assembly*, *Acts of the General*

Georgia, and because Atlanta University offered both literary and industrial studies, many graduates found themselves teaching in black colleges elsewhere in the South. Like the University of Georgia, Atlanta University expanded its curriculum in the 1870s to include scientific and agricultural education. The faculty and trustees instituted a two-year scientific preparatory department and new Bachelor of Science program in 1873. The Bachelor of Science seems to have served as the degree for agricultural students. Ware and his instructors intentionally modeled the agricultural program on that of the Massachusetts Agricultural College at Amherst. Initially, the agricultural department offered practical instruction and had manual labor requirements on forty to sixty acres of fenced land. Students worked one hour per day on the farm or in the barn, as they learned about crop diversification—even trying their hands at silk cultivation. By 1878 the agricultural department ceased to exist independently, and by 1881 agricultural work was placed under the Department of Industrial Training. That year the American Missionary Association conference concluded that a broad range of industrial training should be offered to blacks—both scientific knowledge and its application as well as “mere hand techniques.” Taking their cue from this pronouncement, the faculty and trustees endeavored to add more practical offerings to the teacher training and classical curriculum already at the school. Their new model was the Worcester Free Institute. One of the Atlanta University instructors, Clarence Tucker, was from the Massachusetts school, and the new building for industrial instruction was funded through donations by a prominent Worcester widow. By 1884-1885 Atlanta University had a mechanical course that consisted of two years of woodworking and one year of metalworking. Besides

Assembly, 1886-1887, II, 901, 1890-1891, I, 117; Range, *Negro Colleges*, 59-65; Bacote, *Atlanta University*, 87ff, 100.

wood- and metalworking shops, the school offered training in shoemaking and printing by the late 1880s. Women took courses in homemaking, gardening, cooking, and sewing.⁵⁹

Patrick Mell and the University of Georgia trustees most certainly knew about these developments at Atlanta University in the late 1870s and early 1880s. Even though the school was a black college, it exhibited the growing interest and demand for practical training and industrial education that was being manifested elsewhere. The speeches and events surrounding the 1881 International Cotton Exposition in Atlanta, editorials in the *Atlanta Constitution*, and the movement to found the Georgia Institute of Technology all raised questions about the curriculum in the university, in particular, and state higher education, in general. The eventual founding of the Georgia Institute of Technology as a separate school demonstrated that Mell and the university were neither able to extend the university's earlier reforms nor appropriate the technological education movement. Critics accused the university of not being modern and diverse enough in its academic offerings, claiming that students should not have to take dead languages and study pure sciences and mathematics when the New South needed men able to make practical contributions to society. Fearful that the university might again be in danger of losing the Morrill Funds, Mell defended and tried to expand the State College.⁶⁰ The university provided educational opportunities of all types and was graduating young men into the new professions at a healthy pace. Atlanta University might train students to make shoes

⁵⁹ Bacote, *Atlanta University*, 19, 25, 28, 29, 31-32, 34, 36, 37, 34, 40-45, 52, 178, 182, 186-187; Clyde W. Hall, *One Hundred Years of Education at Savannah State College, 1890-1990* (East Peoria, Ill: Versa Press, 1991), 3; Charles Edgeworth Jones, *Education in Georgia* (Washington, D.C.: Government Printing Office, 1889), 144.

⁶⁰ P. H. Mell, Jr., *The Life of Patrick Hues Mell* (Louisville, Kentucky: Baptist Book Concern, 1895), 217; "Atlanta and the University Fund," *Atlanta Constitution*, July 17, 1887; "The University and the School," *Atlanta Constitution*, January 1, 1888; Mathis, Reed Manuscript, 121.

and cabinets, but the University of Georgia trained and educationally certified the white male state elite, many of whom could rise by their own merits owing to the free tuition awarded many State College students since 1872 and the university's abandonment of tuition in the 1881.⁶¹ The university had adjusted over the previous years to permit students to earn certificates in areas like business and architecture and Bachelors degrees that did not require Latin or Greek, but the university did have to maintain standards even to be an avenue for middle class advancement. Rather than the voice of reaction, Mell and his allies on the Board of Trustees advocated the consolidation and gradual extension of the university's considerable previous reform.⁶² The criticisms leveled at the university in the 1880s over mechanical education, nevertheless, tended to echo those of the 1870s over agricultural education—it was a stodgy bastion of elitism where students learned dead languages rather than practical skills. Sadly and ironically, both William Mitchell and Benjamin Hill died in 1882 in the midst of these debates. They were not able to defend the university against criticism that it was not diverse enough in its educational offerings and that it was not in touch with the needs of the changing economy.

⁶¹ Hull, *Historical Sketch*, 99-100; University of Georgia Trustee Minutes, July 19 and 20, 1881; *Acts of the General Assembly*, 1880-1881, 16.

⁶² Thomas G. Dyer has argued that Henry Tucker's chancellorship signaled the reversal of previous reforms until the advent of the new century. The university's seeming reversal of fortune in the 1870s and 1880s did not, however, come from within the university—as least in regard to the internal diversification of the curriculum and the university's structural expansion to include higher education institutions throughout the state. A failure to continue or expand upon previous reforms did not necessarily indicate either a lack of will to continue them or an outright rejection. While William Mitchell, Andrew Lipscomb, and the university weathered the storms of Civil War and Reconstruction in fine form, they had the benefits of Mitchell's steady and continuous hand, the light touch of Reconstruction in the state, the windfall of Morrill Funds, and the advantage of being the only or primary higher education game in town. By the 1870s, the university was beset by numerous difficulties, as this chapter has related, not the least of which was the growth of state and state-funded educational movements and institutions outside the university's auspices. Mell would liked to have continued the direction of university growth charted in the 1850s, but circumstances had changed and the state's weak economy and meager budgets could not support the changes being contemplated on all fronts—at the university and elsewhere.

In the previous year, the 1881 International Cotton Exposition in Atlanta became a significant factor in the acceleration of manufacturing and a variety of industries in Atlanta and Georgia. It also had an impact on higher education.⁶³ Hannibal I. Kimball—Atlanta financier, railroad investor and president, and 1880 mayoral candidate—was the Director-General of the Exposition. He equated practical education with agricultural reforms, the stimulation of industry, and increased immigration as important factors in creating a New South.⁶⁴ Many speakers at the Exposition repeated this claim, advocating practical schools of all types and the positive influence they would have on the economy.⁶⁵ A few months before the Exposition, Kimball spoke at the National Education Association's annual meeting in Atlanta. It was the first time the Association ever held its annual meeting in the Deep South, and the new president that year was Gustavus J. Orr—the Georgia education reformer.⁶⁶ The *Atlanta Constitution* reported the deliberations of the industrial education department of the Association in some detail. Speaking to the Association, Kimball made a very clear connection between education and the economic improvement of the state. Just as agricultural fairs were educational events where farmers and planters exchanged ideas about successful practices, the “very inception of the cotton exposition was for educational purposes” and would benefit

⁶³ Robert C. McMath, Jr., *Engineering the New South: Georgia Tech, 1885-1985* (Athens: University of Georgia Press, 1985), 13-15.

⁶⁴ H. I. Kimball, “Address before the American Agricultural Association, New York, February 2, 1882,” in *Report of the Director-General, International Cotton Exposition—Atlanta, Georgia, 1881* (New York: D. Appleton, 1882), 583-587.

⁶⁵ Jack Blacksilver, “The International Cotton Exposition of 1881 and Its Impact on the Economic Development of Georgia,” *Atlanta Economic Review* 7 (June 1957): 12. It is important to note that not all conceptions of technological and technical schools were about improving the economy. Class relations played a role as well. Over the years demands ranged from creating a department or new school that would “stop the drift toward communism, and ensure subordination to law and order in all classes of our complex population” to meeting the demands for upward mobility by “the great middle class of the country.” *Journal of the House of Representatives*, July 24, 1883; “The Formal Opening,” *Atlanta Constitution*, October 6, 1888.

⁶⁶ Dorothy Orr, “Gustavus J. Orr,” *Atlanta Historical Bulletin*, entire Fall-Winter 1971 edition.

manufacturers of cotton and other raw materials. Kimball then offered unlimited space at no cost to exhibits specifically about education and hoped formal education institutions would continue the educative efforts of the Expo.⁶⁷

Henry Grady and the editors of the *Atlanta Constitution* began advocating the creation of technical schools in Atlanta and Georgia during the N.E.A. convention. Grady had become an editorial writer for the *Atlanta Constitution*, and by 1880 he was the managing editor. By the early 1880s the editors of the *Atlanta Constitution* had begun to argue that new kinds of higher education were necessary for the economic revitalization of the South. "Cities that hope to become centers of the new industrial life" and "keep pace with the world's progress," they said, would need to make commensurate changes in education.⁶⁸ The new economy needed schools that would produce more than doctors and lawyers. It required men to run cotton seed oil mills and be architects, engineers, and superintendents of factories.⁶⁹ A purpose of higher education, they claimed, is "aiding in the material development of the state" by offering education in the "more profitable fields now open for young men in the South."⁷⁰ Rather than training more men to be physicians, statesmen, and lawyers who offer "very little practical benefit

⁶⁷ Like many New South Advocates, Kimball also believed that the Exposition would be a unifying event for the North and the South, continuing the reunification process to which the NEA and Orr were already contributing. "The State University," *Atlanta Constitution*, July 23, 1881; Willard Range, "Hannibal I. Kimball," *Georgia Historical Quarterly* 29 (1945): 47-70; E. M. Mitchell, "H. I. Kimball: His Career and Defense," *Atlanta Historical Bulletin* 3 (1938): 249-283.

⁶⁸ "Technical Training in Georgia," *Atlanta Constitution*, June 27, 1883; "Practical Education," *Atlanta Constitution*, August 5, 1883.

⁶⁹ "Technological Education," *Atlanta Constitution*, July 29, 1885.

⁷⁰ "The State University," *Atlanta Constitution*, July 23, 1881.

to our section,” higher education should produce men who can make “practical contribution to the industrial and commercial progress of our own state.”⁷¹

Grady and his colleagues on the paper were interested in education both in the form of technical schools for the future worker and technological institutes for the future supervisor.⁷² The *Atlanta Constitution* editors expressed a desire to have training in the new industries at all levels—to train the architect and the carpenter, the blacksmith and the bridge contractor, the machinist and the mechanical engineer. They believed, however, that the place to begin education for the new economy was with a series of technical schools throughout the state, more like manual training high schools than the polytechnic school that the State College tried to be or the Georgia Technological Institute that Nathaniel Harris was trying to start.⁷³

Grady and the *Atlanta Constitution* soon abandoned the notion of a series of technical schools in favor of Harris’s technological institute plan when Harris seemed to be having some success with the state legislature. Funding was a central issue, since politicians were more interested in maintaining a low-tax environment to attract Northern investment and enterprise than they were in spending money on education or other services. Henry Grady’s own ideas regarding the economic development of the state and region tended in this direction as well, but education policies and programs gave him a broad issue to use in his rhetorical campaign to promote a New South. The *Constitution* editors now claimed that the new school should educate “young men to take charge of the

⁷¹ “The State University,” *Atlanta Constitution*, July 23, 1881. See also Nathaniel E. Harris, *Autobiography: The Story of an Old Man’s Life, with Reminiscences of 75 Years* (Macon: J.W. Burke, 1925), 221-222.

⁷² *Atlanta Constitution*, July 23, 1881; February 1, July 1, and June 27, 1883; April 29, 1885; May 19 and September 23, 1889.

⁷³ “Technical Education Again,” *Atlanta Constitution*, July 13 and August 15, 1883.

common labor of the country and give it intelligent direction.”⁷⁴ Graduates would be superintendents rather than workmen.⁷⁵ The editors soon launched an attack of the University of Georgia and its ability to train practically oriented men. They lamented that the university student, “with his classical education, . . . more often than not is inoculated with the idea that manual labor is vulgar and the trades are not respectable,” while “capital and industry stand behind the trades and industries of the country and hold out fame and fortune to the youth of the land.”⁷⁶ Sounding very similar to Walter Hines Page and his criticisms of the University of North Carolina, the editors were concerned that the University of Georgia was producing too many graduates with the traditional Bachelor of Arts, Law, and Medical degrees and not enough students in engineering and agriculture.⁷⁷

Patrick Mell quickly wrote a letter disabusing the *Constitution's* readers of this notion, ensuring them that this was the case only in the early 1870s when overly expectant farmers' sons enrolled in the school with little preparation. Mell also defended the university against accusations that it was not producing enough practically educated young men. He asserted that ten students graduated from the State College in 1886, with an eleventh completing most of the work in the elective program and receiving a certificate. The State College did not, in fact, require classical languages to graduate, and the general curriculum courses neither reduced the graduation rate nor undermined the practical mission of the State College. Even the Mississippi Agricultural College—

⁷⁴ “Practical Education,” *Atlanta Constitution*, August 5, 1883.

⁷⁵ “Technological Education,” *Atlanta Constitution*, July 29, 1885.

⁷⁶ “Practical Education,” *Atlanta Constitution*, May 23, 1882.

⁷⁷ Few students, however, were even choosing to take the agriculture and engineering courses that the university did offer. As Grady and his colleagues realized young men of the state needed to learn enough to manage a factory, not all the theory behind the creative process or how to design new products and

widely considered one of the best A&M schools in the country—could only boast twelve graduates in 1886. Mell went on to remind the *Atlanta Constitution* editors that the State College in Athens had graduated 90 men since its opening, and he was likely not counting those who had graduated from the engineering school in the 1860s. The numbers may seem small, Mell concluded, but the State College offered a staggering variety of educational choices and the percentages of technological graduates to classical graduates was commensurate with any other comprehensively organized school in the country.⁷⁸

Despite Mell's able defenses in the 1880s against lingering criticism of agricultural education in the State College and these new attacks concerning new types of practical education, the movement to establish a separate technological college in the state was gaining steam. Its principal architect was Nathaniel Harris, a Macon lawyer. Harris had been a classmate of Henry Grady's at the University of Georgia in the late 1860s, and they were frequent associates in the years that followed. Harris also acknowledged that Andrew Lipscomb had a lasting effect on him. In the 1870s, Harris had his own newspaper venture in which he wrote articles about education and agricultural reform needed in the state. He hoped that a technological school would "promote diversity of interests and encourage manufacturers in the country" by producing "learned engineers, mechanical engineers, machinists, superintendents of factories, builders of railroads, assayers of metals, geologists, miners, [and] scientific discoverers." With the subsequent development of a home economy, the population would increase, there would be a greater demand for goods, and farmers would prosper

processes. "The State University," *Atlanta Constitution*, July 23, 1881; "Technical Education," *Atlanta Constitution*, September 26, 1886.

by providing the raw materials and foodstuffs for a vibrant economy and society.⁷⁹

Harris did not want to undermine the university or the State College. Like Grady, he simply believed that a school not directly affiliated with traditional education should develop in its own way and be a supplementary rather than competing aspect of state higher education.⁸⁰

Serving in the state legislature in the 1880s based on his advocacy of state-supported mechanical education, Harris convinced the General Assembly to create a commission to investigate the issue.⁸¹ After traveling to technical and technological schools in New York and New England, the committee reported that a new type of school was “necessary to develop our manufacturers, utilize our resources, and keep up our state’s prestige.”⁸² The committee had concluded that the Worcester Free Institute would be the best institution upon which to model a new technological school. This was the same school modeled by Atlanta University, but the legislative record and Harris in his autobiography conveniently ignore this connection. Due to opposition from legislators from the mountain areas of the state and those advocating farmer interests, Harris’ hope of at least incorporating a new school failed in 1883.⁸³ Other factors contributing to the proposal’s failure were the opposition of advocates of the University of Georgia and the

⁷⁸ Patrick Hues Mell to the Editors of the *Atlanta Constitution*, September 27, 1886.

⁷⁹ “Address on Technical Education by the Honorable N. E. Harris of Macon, Georgia, Delivered before the Georgia State Agricultural Society,” (Macon: J. W. Burke and Company, 1884), 5, 7, 12, 16 ; “The Formal Opening,” *Atlanta Constitution*, October 6, 1888.

⁸⁰ Harris, *Autobiography*, 244.

⁸¹ Coleman and Gurr, eds, *Dictionary of Georgia Biography*, I: 405-406; Harris, *Autobiography*, 158, 161, 166, 184-185, 189, 195. Harris was also a classmate and law partner with Walter B. Hill who would do much to resume the University of Georgia’s growth in the early 1900s.

⁸² Harris, *Autobiography*, 209; James E. Brittain and Robert C. McMath, Jr., *A Documentary History of Georgia Tech’s Beginnings* (Atlanta: Georgia Institute of Technology, 1977), 4-5.

⁸³ *House Journal* 1883, 230; Harris, *Autobiography*, 209.

fact that the state debt and preparations for building the state capital made finances low in the early 1880s.⁸⁴

Meanwhile, Patrick Mell was moving quickly to create a technology school at the State College and head off any efforts to create a separate school that might drain Morrill funds from the university. He got approval from the Board to expand the technological curriculum in 1881 and requested \$32,000 from the trustees to start a technology school in the State College.⁸⁵ He also wrote a lengthy letter to Nathaniel Harris, explaining why a technological school should not be created anywhere in the state but at the university. He noted how the trustees had quickly and without reservation approved his plans for the expansion of the technological curriculum and were in accordance with him that such an expansion was merely the carrying out of the plans laid down with the establishment of the State College. Mell gave four specific reasons why a technological school should be placed in the university at Athens. The land-grant money and mission were already placed in the care of the university. The university already had many practical departments, so it would be more efficient to add to the established expertise and capital rather than start from nothing in a new location. Similarly, the university already offered literary and scientific courses, while a new school would also have to make provisions to offer these, albeit at a basic level. Finally, if located elsewhere, a separate technological school would harm the university. The university, Mell reminded Harris, already graduated men “prepared to step into professions,” such as “chemist and civil and mining

⁸⁴ Harris, *Autobiography*, 207.

⁸⁵ Harris, *Autobiography*, 209-214; University of Georgia, Trustee Minutes, VI, 321, 261; Jones, *Education in Georgia*, 51, 55; See also Robert McMath, et al., “The Shop Culture and the New South Creed,” in *Engineering the New South: Georgia Tech, 1885-1985* (Athens, University of Georgia Press, 1985) for the origins and establishment of the School of Technology; and Jack Blacksilver, “The International Cotton Exposition of 1881 and Its Impact upon the Economic Development of Georgia,” *Atlanta Economic Review* 7 (June 1957).

engineers,” and there was no reason to undermine that success.⁸⁶ Before the state legislature voted on creating a new school in 1883, Mell also wrote state officials in Atlanta imploring them to give the university more money to build a “mechanical laboratory and workshop.” The university is afterall, Mell asserted, “the State College of Agricultural and the Mechanical Arts and Sciences . . . [and] we already have a “Technological Institute,” in part, here already.”⁸⁷

By 1885, however, the state legislature incorporated the Georgia Institute of Technology.⁸⁸ While it is not entirely clear what tipped the legislative scales in favor of the new school, the existence of Atlanta University had something to do with it. The agricultural and mountain representatives had opposed the school in 1883, arguing that state appropriations for it would not help their regions. In 1884, however, Harris spoke at the State Agricultural Society’s Annual meeting in Savannah and convinced farmer’s and the Society to back his bill. What seems to have convinced them was his explanation that the federal government was giving money for industrial education for Indians and that the state was paying all-black Atlanta University to help pay for its new Industrial Department.⁸⁹ The next summer the state Board of Visitors to Atlanta University praised the mechanical education it offered and proclaimed the need for this type of education in other schools in the state. It helped that the school was also modeled on the Worcester Free Institute that Harris and the legislative committee intended to emulate with the

⁸⁶ P. H. Mell to N. E. Harris, January 15, 1882 (Patrick Hues Mell Collection, Hargrett Rare Book and Manuscript Library, University of Georgia Libraries, Athens, Georgia).

⁸⁷ P.H. Mell, Athens, to Charles W. Seidell, Atlanta, January 17, 1883 (Patrick Hues Mell Collection, Hargrett Rare Book and Manuscript Library, University of Georgia Libraries, Athens, Georgia).

⁸⁸ “The Legislature,” *Atlanta Constitution*, October 13, 1885.

⁸⁹ “Address on Technical Education by the Honorable N. E. Harris of Macon, Georgia, Delivered before the Georgia State Agricultural Society,” (Macon: J. W. Burke and Company, 1884), 7.

Georgia Institute of Technology.⁹⁰ A few months before the bill passed, at least one Congressman told the *Atlanta Constitution* that he favored the bill for the Institute of Technology because the “the colored people are beginning to receive this education and I think the whites should have a chance at it.”⁹¹ The Institute eventually opened in Atlanta after receiving \$65,000 from the state government. The new school was technically a branch of the University of Georgia and subject to the control of the Board of Trustees.⁹² By the time the Institute opened in 1889, however, it was clear that it would effectively be its own school. The state never gave the Institute any of the Morrill funds, leaving them all under the university’s control. The university would little benefit, however, from the generous \$65,000 allotment for mechanical engineering education.

By this time the educational initiative in the state had moved away from the university in other areas as well. In some ways the university was the victim of the success of broader education reform. A number of educators led by Gustavus Orr had created a State Board of Education which was laying the foundations of a permanent public school system. This system eventually developed public high schools which further undermined the branch colleges as a possible model for secondary education in the state. The University of Georgia also failed to receive outside funding for teacher training. Hoping to create a Normal School at the university, the Board of Trustees applied to the Peabody Fund for seed money in the early 1880s. The Board of Education won the funds in the competitive bid, and the university lost another opportunity to add

⁹⁰ Bacote, *Atlanta University*, 52, 182; Clyde W. Hall, *One Hundred Years of Education at Savannah State College, 1890-1990* (East Peoria, Ill: Versa Press, 1991), 3.

⁹¹ “The Technological School,” *Atlanta Constitution*, July 29, 1885.

⁹² James E. Brittain and Robert C. McMath, Jr., *A Documentary History of Georgia Tech’s Beginnings* (Atlanta: Georgia Institute of Technology, 1977), 11-14.

practical and professional education to its offerings.⁹³ Towards the end of the decade, the university trustees also failed in their effort to get direct control of the funds given by the federal government for agricultural experiment stations through the 1887 Hatch Act. Most who advocated the creation of an experiment station in Georgia perceived it as a unit of the State Commission of Agriculture, not the university.⁹⁴ Henry White who headed the State College and had already been using the university's farm as an experiment station hoped the university would get control of the funds and continue along the path it had been developing.⁹⁵ Here again, the perception of the university as a bastion of elitism and no friend of the farmer, fueled in part by the *Atlanta Constitution*, led to the station being placed in Griffin outside direct control of the State College.⁹⁶

Despite these setbacks, the University of Georgia still offered numerous practical bachelors degrees and certificate programs in the State College, three separate bachelors degrees in Franklin College, and professionals degrees in medicine, law, and civil engineering. The student entering the University of Georgia in the late 1880s could chose to enter the State College and earn certificates in commerce or architecture. He could study for a Bachelors degree in Agriculture, Chemical Science, or Engineering. If he wanted one of the new professional engineering degrees—Civil Engineer or Civil and Mining Engineer—he could stay at the State College for an extra year or two. For the

⁹³ The funding went to establish additional primary schools in the state system. Mitchell and Andrew Lipscomb contemplated creating a Normal school as early as 1872. Andrew Lipscomb, Athens to William Mitchell, Atlanta, 18 April 1872 and Mark Cooper to William Mitchell, Athens, 22 JAN 1880, E. Merton Coulter Collection, Historical Manuscripts Part 1, University of Georgia Libraries, Athens; Also in the Coulter collection is a circular dated 17 JAN 1880 that Mitchell sent to the Trustees asking if they would support his attempts to begin a normal school. For the Peabody funds in Georgia see Dyer, *University of Georgia*, 139-40 and Orr, *Education in Georgia*, 156-78; Jones, *Education in Georgia*, 117.

⁹⁴ *Southern Cultivator* 40 (February 1882): 13 and (November 1882): 12.

⁹⁵ University of Georgia, Trustee Minutes V, 475-476, 484-485.

⁹⁶ University of Georgia, Trustee Minutes VI, 134-135; *Transactions of the Georgia State Agricultural Society*, 1885, 248-260 and 1889, 70-704.

student wanting to study only mining or prepare to be a teacher, the University's branch in Dahlonega—North Georgia College—offered the programs he needed. North Georgia College also offered a way for women to graduate with a degree that said "The University of Georgia" on it. The four preparatory colleges also offered education for women under the auspices of the University of Georgia and gave male students the option of entering the State College or Franklin College as juniors. The more traditional student could still enroll in Franklin College and pursue the Bachelor of Arts degree. If he were more inclined to the sciences or the humanities than to ancient languages he could study toward a Bachelor of Science or a Bachelor of Philosophy degree. Then there was always the traditional professional schools of medicine and law that he could enter without earning a college degree or begin after earning any one of the six Bachelors degree. While the university's expansion and diversification stalled in the 1880s and would not resume until the turn of the century, its policies and structures reflected some of the more advanced of the day. Students could come to the university to study as many fields as the faculty and trustees could afford, especially with the help of the Morrill funds. They fought to hold onto the Morrill funds so they could continue the policies the university had been following since the 1850s. They wanted to train scientific professionals for the new economy, but advocates of reform in other levels and types of education jealously eyed the Morrill funds and tried to take them away. Agricultural forces had wanted to create business schools for farmers as tradesmen, while the university wanted to educate scientific agriculturalists who would teach farmers and work in fertilizer companies. New South advocates wanted to create both manual high schools for technical training and a technological school that could practice the shop culture free

from the university's supposedly too classical-minded scrutiny. The University of Georgia retained the Morrill funds because its officials deftly deflected the criticisms from the State Agricultural Society and because the state legislature was willing to fund the Georgia Institute of Technology separately from the university. In some ways the establishment of the new school was a triumph of the vision William Mitchell set forth for state higher education in the 1850s. Contrary to his hopes, however, the trustees of the University of Georgia would not administer all practical higher education within a comprehensive organization.

CHAPTER SIX

UNIVERSITY REFORM AND THE MORRILL FUNDS AT THE UNIVERSITY OF NORTH CAROLINA, 1876 TO 1890

The University of North Carolina did not fare well in Reconstruction. It had been taken over by a Republican Board of Trustees in 1868, and subsequent opposition by the local and state elite forced it to close in 1871. By 1873, however, the school began coming back to life, as a new constitutional amendment gave the state legislature the authority to appoint the university's trustees. The next year, the conservative General Assembly appointed men who had directed the university in the 1850s and 1860s or who had newly risen to prominence among the state's Redemption rulership. Kemp Plummer Battle returned as Secretary-Treasurer of the Board, and his father William, Paul Cameron, Bartholomew Moore, and William L. Saunders joined him on the Board's Executive Committee. They soon contacted former agriculture and engineering professors John Kimberly and Charles Phillips to resume their old duties.¹ The state supreme court finally confirmed the constitutionality of the new amendment in 1875, allowing the new, old trustees to plot the university's rebirth.²

Not surprisingly, they planned to resume their efforts to make the university's curriculum more utilitarian. They wrote letters and gave speeches claiming that "the days

¹ University of North Carolina Trustee Minutes, February 18 and April 9, 1874; University of North Carolina Catalogue, 1875-1876.

of elegant scholarship are gradually giving place to an era of practical sciences.” The new University of North Carolina will pay more attention to practical endeavors in the new economy such as producing goods and the proper uses of electricity, they said, and “large provision [will be] made for the demands of business and professional life.” William Saunders—a Ku Klux Klan and North Carolina Democratic Party leader—enthusiastically laid forth the idea that university instruction will be for “all useful learning, and not one intended for the manufacture of mere classical scholars.” The creation of diverse programs and the elective or optional course, he believed, would permit students to learn widely at the university, training and disciplining their minds as they acquired practical knowledge.³

To this end, the faculty and trustees at the University of North Carolina first reopened the school’s doors and rectified its finances. They then redesigned the curriculum under Kemp Battle’s guidance, considerably expanding and diversifying it in the late 1870s and 1880s. For Battle, the growing curriculum, with its emphasis on scientific practicality, was part of a larger effort to involve the state in the production and dissemination of information useful to the agricultural and economic improvement of the state. Other manifestations of this aim—in which Battle played significant parts—were the North Carolina Department of Agriculture, started in 1877, and the North Carolina Agricultural Experiment and Fertilizer Control Station that initially operated at the

² Robin Brabham, “Defining the American University: The University of North Carolina, 1865-1875,” *North Carolina Historical Review* 57 (October 1980): 450; UNC Trustee Minutes, February 18 and 19 and April 9, 1874.

³ Benjamin Franklin Grady to Kemp Battle, April 26, 1875, University Papers, University Archives, University of North Carolina Libraries, Chapel Hill; UNC Catalogue, 1875-1876; “The University—The Commencement,” *North Carolina Journal of Education* (November 1875), 117-119. When dedicating new buildings in 1885, Paul Cameron made a similar assertion: “let us seek to make it [the university] more of the useful than the ornamental, not by wide but deep and exact learning, promising us the richest fruitage,

university. Battle and the university's faculty and trustees enjoyed some success in realizing their university reform plans into the 1880s, making a particularly concerted effort in 1885, but events outside the school temporarily checked their plans. Two newly formed organizations—each hoping to shape the state's economy through education—allied against them. The North Carolina Farmer's Alliance and the Watauga Club successfully advocated the creation of a separate Industrial College for North Carolina in the late 1880s that reduced the University of North Carolina's funds and removed some of the studies that the university's leaders had proudly been incorporating. The university continued its reforms, despite the losses, laying the foundations for the more explosive reforms of the 1890s and beyond. The same type of men—sometimes the very same men—had been working incrementally to reform the university since the 1850s. The setback of the late 1880s was a blow to the university; but it did not diminish the fact that the university's leadership had embarked on a partly successful effort to improve and diversify their state through higher education.

The University of North Carolina's reforms in the late 1870s and 1880s were comparable to those elsewhere across the nation and the South. As with the University of Georgia, students at the University of North Carolina could pursue many of the same studies as they might at major universities in the Northeast or Midwest.⁴ The University of North Carolina began offering Ph.D.s in the 1880s and awarded its first one in agricultural chemistry as had Cornell University. Kemp Battle also redesigned the University of North Carolina in 1875 to embrace the elective principle that had been

with good material in the hands of thorough masters.” Kemp P. Battle, *History of the University of North Carolina*, 2 vols. (Raleigh: Edwards, Broughton, and Co., 1907-1912), II, 326.

championed so vociferously by Charles Eliot at Harvard starting in 1871 but only partially embraced by the University of Georgia. It was also in 1875 and 1876, while the University of North Carolina was re-opening and Battle and the trustees were planning reforms that Vanderbilt University and Johns Hopkins University opened in Tennessee and Maryland. Vanderbilt was initially planned as a highly comprehensive institution with new kinds of professional education and even had former University of Georgia Chancellor Andrew Lipscomb as one of its faculty members. Johns Hopkins University eventually became a leader in bringing the research ethic and graduate education to the United States.⁵ Far from looking back to the past and being simply content that they were open after the Civil War and Reconstruction, Southern universities like the University of North Carolina, reached to the future and struggled to expand their curricular offerings alongside universities in other parts of the nation.

Before redesigning and reopening the University of North Carolina in 1876, the trustees needed to secure the school's financial footing. With the help of Cornelia Phillips Spencer who had done so much to oppose the Republican Board of Trustees, they organized a fund-raising drive to fix the university's buildings and restock its laboratories with demonstration and experimentation equipment. Kemp Battle borrowed money on his individual credit with donation subscriptions as eventual collateral,

⁴ 1877 Report of the United States Board of Education, *American Journal of Education* IV (1879): 568-569; 1879 Report of the Commissioner of Education printed as *American Journal of Education* 25 (1881), 40, 44, 56, 60, 122, 183, 191, 338, 376-380, 396, 407, 423, 445.

⁵ Robert F. Brabham, Jr., "Search for a Purpose: The University of North Carolina, 1875-1891" (M.A. Thesis, University of North Carolina, 1977): 89; Edwin Mims, *History of Vanderbilt University* (Nashville: Vanderbilt University Press, 1946), 63ff; Richard J. Storr, *Beginnings of Graduate Education in America* (Chicago: University of Chicago Press, 1953), 129ff; Hugh Hawkins, *Pioneer: A History of Johns Hopkins University, 1874-1889* (Ithaca: Cornell University Press, 1960), 1-25; Samuel Eliot Morrison, *Three Centuries at Harvard, 1636-1936* (Cambridge: Belknap Press, 1936), 344-345.

soliciting \$18,000 in private contributions. This was a substantial sum considering the economic condition of North Carolina at the time. It confirms the faith of North Carolina's elite—men like Paul Cameron who donated large amounts—in the university and its social and economic role. Cornelia Spencer focused her efforts on organizing North Carolina's women to make specific donations of chemicals and equipment to the university's laboratories that would train young men to be the agricultural chemists and engineers who would revitalize the state. Battle was particularly proud of the Holz Electrical Machine, "giving a 20-inch spark," that the faculty would use to teach young men about electricity and its practical applications.⁶

The most important financial issue for the trustees was to ensure that the University of North Carolina would finally receive the funds from the 1862 Morrill Land Grant Act that it had been promised in 1866. In February 1875 they requested the state legislature restore the principal of \$125,000 to the university. The Reconstruction trustees had invested most of the funds in state bonds and had never seen any returns in the confusion of the period. Amid some opposition, the General Assembly restored payments of \$7,500 p.a. to the university based on the \$125,000 principal theoretically still held by the state. In recognition of her importance in undermining the Reconstruction board and reopening the university, the legislators sent a message to Cornelia Spencer on March 20, 1875 announcing their decision. It was her fiftieth

⁶ Materials were so scarce in the university's first few years after reopening that Battle reported a "short physical struggle" that erupted between two professors over the use of an air pump for class. 1876 Circular reprinted in Wilson, ed., *Papers of Cornelia Phillips Spencer*, 689-91; Battle, *University of North Carolina*, II, 74-75, 125, 184.

birthday. She promptly went to the university chapel and rang its bell, celebrating the liberation of the university.⁷

With the private donation campaign under the watchful eye of Cornelia Spencer and the guarantee of \$7,500 per year from the Morrill Funds, Battle and the trustees redirected their efforts toward determining the shape the university would take. As secretary-treasurer, Battle received numerous suggestions about how the university should be structured, and by late Spring 1875, the trustees had six reorganization plans in front of them.⁸ After two days' deliberation, they adopted the proposal submitted by Carruthers Kerr. Kerr had graduated from the university in 1850, studied at the Lawrence Scientific School in Harvard, and taught chemistry and geology at Davidson College from 1856 to 1865. After the Civil War, he became North Carolina state geologist, serving in this post until 1883. Kerr submitted his university organization plan at the request of Kemp Battle. Battle valued his opinion as a scientific professional involved in the internal improvements of the state—the kind of new professional he wanted to train at the university—and the two would work closely together over the next several years.⁹

The structure of the revived university resembled the plans laid forth by Battle in 1866 and the Reconstruction trustees in 1869. The university would consist of several

⁷ UNC Trustee Minutes, February 10 and 11, 1875; “Memorial of the Board of Trustees of the University of North Carolina,” Document No. 24 in North Carolina General Assembly, Session 1875-1876, *Executive and Legislative Documents* (Raleigh: Josiah Turner, State Printer, 1875). Battle, *University of North Carolina*, II, 16, 64-71; Phillips J. Russell, *The Woman Who Rang the Bell: The Story of Cornelia Phillips Spencer* (Chapel Hill: University of North Carolina Press, 1949)149-150. The University Papers in the University of North Carolina Archives have many letters from Cornelia Spencer to Battle about a wide range of topics related to the university. She seemed to consider herself one of his advisors.

⁸ UNC Trustee Minutes, May 4 and 5, 1875; William Martin to Kemp Battle April 21 and May 13, 1875; Charles Phillips to Kemp Battle, April 29, May 12, June 8 and 25, 1875; Carruthers Kerr to Kemp Battle, April 21 and June 14, 1875; John Kimberly to Board of Trustees, August 22, 1875, all in University Papers.

⁹ UNC Trustee Minutes, May 4 and 5, 1875; Carruthers Kerr to Kemp Battle, April 21 and June 14, 1875; Charles Phillips to Kemp Battle, May 12, 1875, University Papers; Brabham, “Defining the American University,” 452.

colleges, each comprised of numerous schools or departments. The Colleges of Natural Sciences, Literature, Mathematics, and Philosophy generally housed the pure sciences and traditional courses, while the College of Agriculture and the College of Engineering and Mechanic Arts took responsibility for the practical subjects. Under the new plan, students could earn a bewildering array of certifications that accumulated to constitute degrees. In his first one to two years at the university, a student could take any courses he wanted and earn a certificate of proficiency for subjects in which he worked two years. A third year of work in certain subjects or departments like Latin or engineering guaranteed the student a diploma. He could then combine various diplomas and certificates to earn a certificate of graduation from one of the colleges, but this was still not a degree. To earn one of the four possible degrees—the Bachelors of Arts, Science, and Agriculture and the Master of Arts—the UNC student had to acquire yet another combination of certificates and diplomas. For those not wishing to pursue a particular certificate, diploma, or degree, the Optional Course permitted open enrollment. Embracing the elective system that was making its way into colleges and university across the country to its logical end, the optional course permitted students to take any courses they wanted. In some sense, however, all of the university's students were optional course students, since they could take any courses they wanted, earning the certificates as they went. Here the experimental nature of the college, department, and degree structure in the nineteenth century becomes apparent.¹⁰

¹⁰ UNC Trustee Minutes, May 4 and 5 and June 30, 1875; Carruthers Kerr to Kemp Battle, April 21, 1875, University Papers; George T. Winston, "The First Faculty: Its Work and Its Opportunity," *University Record* n.s. I, no. 2 (1901-1902): 18-31; George T. Winston "The University of To-Day," *University Magazine* 13 (March-April 1894): 325-328; UNC Catalogue, 1875-1876.

Several aspects of this organization plan stand out. It allowed for numerous types and levels of educational certification. A student wanting a job as an engineer, for example, could leave the university with certificates in English and mathematics and a diploma in engineering without ever earning a bachelors degree. These finer gradations of certification never became a universally accepted and transportable feature like the different bachelors degrees in the nineteenth century, but similar concepts are receiving attention in the twenty-first century. The second fascinating element is the degree to which the plan indicated a hope to incorporate all manners of practical education. The College of Agriculture was to have both a school of scientific agriculture for theoretical work and the training of agricultural scientists and a school of practical agriculture to teach book-keeping and commercial arithmetic to farmers as agricultural businessmen. The three-year Bachelor of Agriculture degree would draw most heavily from the school of scientific agriculture, but under the new plan the university clearly would offer different types or levels of education. Similarly, the College of Philosophy was to have a school of commercial science, and the College of Engineering and Mechanical Arts would expand the university's previous offerings in civil engineering. Students would study construction, surveying, drawing, materials, and planning and would have field experience before graduation.¹¹

All these colleges and schools with their various certificates and diplomas existed only on paper. The attendance at the university at this time was very low and the enrollment and graduation from any particular course or college was small. The reorganization reflected little change in the university's buildings or faculty. University

¹¹ UNC Trustee Minutes, May 4 and 5 and June 30, 1875; UNC Catalogue, 1875-1876; Carruthers Kerr to Kemp Battle, April 21, 1875, University Papers.

professor and later president George Winston claimed that when the school reopened he “represented in his single person five independent schools conferring certificates of proficiency and two complete colleges conferring certificates of graduation.”¹²

The actual attendance and execution were not as important, however, as the meaning of the plans themselves. The educational policy of the university had come a long way from that of the antebellum college. Its self-proclaimed mission was no longer to mold young gentlemen through mental discipline by leading them lock-step through a series of courses consisting largely of classical languages and literature. Just as it had been developing ever since the 1850s, the new university would serve many educational needs of the state, admitting and “graduating” young men who might study any number of theoretical and scientific subjects as well as their practical applications. The complex structure that the trustees accepted represented one attempt to bring substance and shape to that educational policy. Furthermore, the state’s economic and political elite like Paul Cameron and William Saunders worked closely with Kemp Battle on the Board’s Executive Committee, and the plans reflected their longstanding hope that the university’s evolving policy would serve the state in its own economic evolution.

Not all of the faculty and trustees supported the educational policies inherent in the new plan, but there were other, more political reasons for enacting it. Some of the university’s past and future faculty expressed consternation at the new organization, saying that it was “too hi falutin” and beyond the university’s resources. They hoped, rather, to expand and diversify the university in the future when available capital and

¹² George T. Winston, “The First Faculty: Its Work and Its Opportunity,” *University Record* n.s. I, no. 2 (1901-1902): 18-31; George T. Winston “The University of To-Day,” *University Magazine* 13 (March-April 1894): 325-328; UNC Catalogue, 1875-1876.

present demand justified it.¹³ The sometimes confusing structure served other purposes, however, that the trustees no doubt considered vital to the university's survival. The state's denominational colleges had enjoyed unusual prosperity while the university was closed and were concerned that the reopened university would draw from their enrollments. Officials of the denominational colleges as well as Kemp and William Battle, considered the possibility that the university would offer education above that offered in the colleges. One recent scholar has argued that the new university with its multiple colleges blunted the denominational colleges' fear.¹⁴ Added to this, the multi-college organization ensured that the university followed the letter of the law of the 1862 Morrill Act. Lawyer Kemp Battle defended his ideas about the University of North Carolina and its uses of the Morrill funds, strictly interpreting the law's call for the "endowment, support, and maintenance of at least one college."¹⁵ With the new organization, the state's university now had two separate colleges serving in compliance with the federal law—a college devoted to agriculture and a college devoted to engineering or the mechanical arts. Finally, offering an optional course and numerous certificates and diplomas far short of the bachelors and masters degrees gave the appearance that the university was indeed more democratic than it was. The trustees may

¹³ Charles Phillips to Kemp Battle, May 12, June 25, and April 29, 1875; William Martin to Kemp Battle, May 13 and April 21, 1875, University Papers.

¹⁴ This idea of the university being above the colleges reflects both the notion of the university as a collection of colleges—therefore above them—and Thomas Jefferson's modified original plan for the University of Virginia and its awarding only of the M.A. The University of Georgia's distinction between university and college degrees mirrors this conception and reinforces the idea that while the college provided basic education, the university offered professional education. While the University of North Carolina clearly was not offering only "university" education, organizing it as a collection of colleges undermined the denominational critique because the university was offering education organized by discipline at *potentially* higher levels and not organized as a traditional, therefore competitor, college. This is likely why the university's 1875-1876 catalogue placed unusual emphasis on earned M.A. degrees. North Carolina, State Superintendent of Instruction, *Annual Report*, 1873, 43-44. Robert F. Brabham, Jr., "Search for a Purpose: The University of North Carolina, 1875-1891," (M.A. Thesis, University of North Carolina, 1977), 36; UNC Catalogue, 1875-1876.

very well have been intent on widely opening the university's doors to those unable to afford it or those unwilling or unprepared to pursue degrees, but they were also very conscious of public opinion and endeavored to appease it when they could.¹⁶

With the new organization in place, the university reopened its doors in September 1875 with Charles Phillips as Chairman of the Faculty and no president.¹⁷ Within a year, however, Kemp Battle finally took full charge of the university and became president.¹⁸ Speaking to the trustees in the summer of 1876, he clearly laid forth his ideas about the university, its compliance with the 1862 Morrill Land Grant Act, and the guiding principles of the curriculum. "It is the intention of the act of Congress," he asserted, "to elevate the business of the farmer and the mechanic to make theirs as much a "profession" as any other, and in that line the University throws itself with enthusiasm."¹⁹ He went on to explain that the Morrill Act did not require—nor did he plan to initiate—a relaxing of academic standards or the abandonment of the classical and theoretical elements of the curriculum. The law stipulated that colleges receiving the funds not necessarily teach agriculture and the mechanical arts but "such branches of

¹⁵ Battle, *University of North Carolina*, II, 72 quoting the law in his own explanation and defense.

¹⁶ As secretary-treasurer of the board of trustees, Battle received correspondence exchanging ideas about the public relations benefit of having agricultural and Normal programs at the university. Alexander McIver to Battle, November 1, 1876; Charles W. Broadfoot to Battle, July 17, 1877; Charles Phillips to Battle, May 12 and June 25, 1875, University Papers. Dabney, *Universal Education in the South*, I, 179. After the university opened under the new plan, Charles Phillips wrote Battle that the university's weakest point to criticism was that it offered little educational benefit to "the men of bone and muscles." As Battle's 1877 revisions of the university would indicate, this inability did not bother him. Phillips to Battle, March 3, 1876, University Papers. Yet, Battle also spoke in 1876 about accepting poor young men to the university. UNC Trustee Minutes, June 13, 1876. This fit into Battle's overall vision of higher education in which the university would offer education of many types but would maintain the meritocratic notions of degrees and high standards. This is why the university in later years emphasized openness and the beginnings of Masters and Ph.D. programs.

¹⁷ UNC Trustee Minutes, June 16 and September 1, 1875.

¹⁸ Battle believed that as a moderate he was an acceptable choice for president that would not antagonize Republicans, despite coming from an old and establish North Carolina family. Battle, *University of North Carolina*, II, 116.

¹⁹ UNC Trustee Minutes, June 13, 1876.

learning as are related to” them.²⁰ He, therefore, interpreted the act as saying that “students were to have a liberal as well as a practical education so as to be fitted for any profession or pursuit.”²¹ To make this vision a reality at the University of North Carolina, Battle instigated and oversaw a period of rapid growth and diversification in the curriculum in the late 1870s and early 1880s. Just like earlier plans, many of the changes were on paper or only affected a small segment of the students at UNC much less in the state. At the end of the period, Battle clearly stated that despite all the rhetoric and politically motivated adjustments in the curriculum, the university was the place to educate professionals, not the masses. Proudest of the graduates of the department of chemistry who “emphasize the superiority of the University,” Battle prayed they would go on to improve agriculture as scientists and educators and to stimulate the all too slow growth of industry in the South. “Although the number of students is not very large yet,” he maintained, “they are the men seeking to become experts.”²² While North Carolina lacked the resources, lower schools, and an extensive middle class to create a strong demand for the “expert-training” university curriculum that Battle, the trustees, and faculty forged over the next decade and a half, their efforts were indicative of the intellectual ferment in higher education in North Carolina in the 1870s and 1880s.

²⁰ UNC Trustee Minutes, June 13, 1876; Battle, *University of North Carolina*, II, 72. Battle here is quoting both from the actual law and the trustee minutes many years after the fact, in part, defending his interpretations and actions.

²¹ UNC Trustee Minutes, June 13, 1876; Battle, *University of North Carolina*, II, 72. Battle admitted that he was interpreting the act as a lawyer, and a statement by Justin Morrill to the Vermont legislature in the 1880s confirmed that he had correctly interpreted the letter and the spirit of the law. Morrill affirmed both Battle’s vision of university reform and federal money at the University of North Carolina and Mitchell’s at the University of Georgia. Morrill proclaimed that his act proposed a truly liberal education. The object of the law was to add practical and scientific studies not abolish the liberal arts, and any school that provided only practical instruction rather than a more rounded education was actually in violation of the law. Morrill believed that to eliminate the classics or at least the sciences and humanities at the expense of practical studies would leave colleges “limited to a superficial or dwarfed training.” Quoted in Eddy, *Colleges for our Land and Time*, 38-39.

²² UNC Trustee Minutes, February 27, 1889.

The reforms that Battle and the trustees undertook in the late 1870s and early 1880s occurred in a particular political economic context.²³ They were a conscious part of a larger trend to involve the state government in the production and dissemination of information useful to the state's agricultural and economic development. The rapid period of change at the University of North Carolina must be seen in relief against this intellectual current and its other manifestations—the emergence of the North Carolina Department of Agriculture and the creation of the State Agricultural Experiment and Fertilizer Control Station. Kemp Battle had a hand in both. The design, creation, and early operation of these two new institutions shed much light on the development of the University of North Carolina in the 1870s and 1880s.

After Battle became president of the University of North Carolina in 1876, he undertook extensive tours—one throughout the state, the other to the North.²⁴ With the university finally receiving the Morrill Land Grant funds in 1875, the national and state Grange questioned its control and use of the funds. The Grange and its members raised such issues in states where old, seemingly aristocratic and conservative institutions received the monies.²⁵ Like the State Agricultural Society in Georgia and its opposition to the University of Georgia receiving the funds, the state Grange in North Carolina felt that an independent school or perhaps the Grange itself could better use the funds to help

²³ At the University of Georgia in the late 1870s and early 1880s that context had been the rise of the Bourbon Triumvirate, the Constitution of 1877, and criticism by and competition with the State Agricultural Society over the use of the Morrill funds and the type of practical education offered within the university. Into the 1880s both schools lost significant battles to remain the loci of all state-supported practical education.

²⁴ Like William Mitchell's idea of a university chancellor at the University of Georgia where the chancellor would represent the university and its colleges to the people and the state, Battle saw himself at first as a new kind of president that would spend less time teaching and more time "making addresses and popularizing the University." Battle, *University of North Carolina*, II, 111.

the farmers of the state.²⁶ Battle ably defended the university in speeches throughout the state at local agricultural fairs and in county seats during court weeks. With the Grange pacified, he and his recent collaborator in curriculum reform, Carruthers Kerr, took a trip North to investigate how best to fulfill the duties of the Morrill funding. They assembled course catalogs for the UNC faculty to examine and visited the Massachusetts Institute of Technology, the Sheffield Scientific School at Yale, the Connecticut State Experiment Station, and several other Northeastern institutions. When they returned at the end of 1876, they undertook new and accelerated reform at the university while simultaneously playing a pivotal role in a coalition that induced the state to create the North Carolina Department of Agriculture and the North Carolina Agricultural Experiment Station.²⁷

The 1875 state Constitution that marked the end of Congressional Reconstruction in North Carolina had permitted the creation of the Department of Agriculture, but it did not actually take shape until 1877. Like the emergence of the Morrill Land Grant Act and the eventual creation of the United States Department of Agriculture, the North Carolina state agency was the culmination of efforts by private institutions, organizations, and associations to aid farmers and planters. Three stood out. By 1875 there were almost 600 local Granges in North Carolina loosely under the direction of the State Grange and its Master, Columbus Mills. Grange members advocated pro-farmer legislation, and the local Granges acted as educational institutions in their own right, sharing information

²⁵ *National Grange Proceedings*, 1876, 96-96, 102-103, 106-108 and 1877, 128-132, 1879, 112-113. D. Sven Nordin, *Rich Harvest: A History of the Grange, 1867-1900* (Jackson: Mississippi State University Press, 1974), 62-63

²⁶ Similarly, at least one North Carolina newspaper in 1870 had called for the State Agricultural Society to start its own college. *Tarboro Reconstructed Farmer* II (May 1870): 20-21.

²⁷ UNC Trustee Minutes, June 13, 1876; UNC Executive Committee Minutes, July 21, 1876; Battle, *Memories*, 247; David A. Lockmiller, "The Establishment of the North Carolina College of Agricultural and Mechanical Arts," *North Carolina Historical Review* 16 (July 1939): 277; Battle, *University of North Carolina*, II, 123.

about farming and new agricultural techniques. The North Carolina press, particularly *The Ansonian* and its editor Leonidas L. Polk, espoused government programs or laws that would aid agriculture and the state's economy. Polk was a delegate to the 1875 constitutional convention and held several Grange offices. The third leg to support the creation of a state Department of Agriculture was the North Carolina Agricultural Society, which Battle had helped revive after the Civil War. As with the other two institutions, the Society had been disseminating information deemed useful to the farmer and agriculture for several years through fairs and publications. Columbus Mills, Leonidas Polk, Kemp Battle, and Carruthers Kerr as State Geologist (the state's official scientist) collaborated to create the new state agency in 1877 that would assume this role on a regular basis. Battle, in particular, gave speeches throughout the state and wrote newspaper articles praising the department and how it would help all farmers.²⁸ Not surprisingly, the seven-man State Board of Agriculture that oversaw the new department included: the President of the University of North Carolina (Battle), the Head of the State Grange (Mills), the state geologist (Kerr), the head of the State Agricultural Society, the governor, and two farmers. The Board quickly named Leonidas Polk the first commissioner in early April 1877.²⁹

When it was finally created, the North Carolina Department of Agriculture undertook far more political economic responsibility than simply dealing with

²⁸ Stuart Noblin, *Leonidas LaFayette Polk, Agrarian Crusader* (Chapel Hill, University of North Carolina Press, 1949), 103, 133; Laws of North Carolina, 1876-1877, 507-512; Clarence Poe, "L.L. Polk: A Great Agrarian Leader in a Fifty-Year Perspective," *The South Atlantic Quarterly*, XLI (October 1942): 407; Battle, *Memories*, 247-8; The National Grange of the Patrons of Husbandry, *Proceedings of the Eighth Annual Session: 1875*, 18, *Proceedings of the Tenth Session: 1876*, 106; North Carolina State Grange, *Proceedings of the Third Annual Session: 1876*, 18; Charles M. Gardner, *The Grange: Friend of the Farmer* (Washington, D.C.: The National Grange, 1949), 330-331.

²⁹ Public Laws of North Carolina, 1876-1877, c. 274, c. 291; Battle, *University of North Carolina*, II, 137; Battle, *Memories*, 247-8.

agriculture. The title of the law that created the department was “An Act to Establish a Department of Agriculture, Immigration, Statistics, and for the encouragement of Sheep Husbandry.” The legislation went on to say that the department would encourage crop diversification, fight animal disease, regulate animal transportation, improve fishing, and regulate both seeds and fertilizer. Proclaiming a more general stewardship of the state’s economy, the department charged its six commissions to collect and distribute statistical and educational data, analyze fertilizers and soils, restock streams with fish, encourage sheep husbandry, encourage immigration, and foster new industry.³⁰ Writing in the department’s *Handbook of North Carolina*, Commissioner Polk further captured the new department’s goals. He praised the new university curriculum that Kerr had designed and Battle had implemented, saying that it offered “immediate practical value to those wishing to be farmers, mechanics, stock-breeders, physicians, druggists, engineers, etc.”³¹ The university was one element in the state’s effort to encourage economic growth and diversification. He pointed out that North Carolina’s economic mainstay was and would likely continue to be agriculture, but he predicted that “the day is not distant when, by the influx of capital, energy and enterprise, and the restored strength of our people, we may hope to see our State teeming with those varied industries to which she is so well and favorably adapted.” It had been difficult for the state to recover from the loss of people, capital, and credit from the Civil War, but it was making rapid strides in mechanizing agriculture, laying railroad tracks, and building cotton factories.³²

³⁰ Public Laws of North Carolina, 1876-1877, c. 274, c. 291, 508-509; Noblin, *Polk*, 110; James Finley Kretschmann, “The North Carolina Department of Agriculture, 1877-1900,” (M.A. thesis, UNC, 1955), 33-42. Kretschmann’s thesis is the only comprehensive look at the department in its early years.

³¹ Leonidas L. Polk, *Handbook of North Carolina* (Raleigh News Steam Book and Print Job, 1879), 184.

³² Polk, *Handbook*, 148, 158-159.

For Polk, Battle, and Kerr, it was the purpose of the North Carolina Department of Agriculture to realize these hopes and foster these trends. Crucial to its broad mission was the establishment of the Agriculture Experiment and Fertilizer Control Station and the office of State Chemist to head it. Created as a part of the Agriculture Department, the station and its director would be the state's official science office, providing (with a modest staff) a staggering array of studies and research designed to help state farmers and encourage new economic ventures. The station embodied the application of science to practical problems, and Battle was no doubt pleased when it was initially placed at the University of North Carolina. He had offered the university's laboratories to the Department of Agriculture for the new station from the beginning, and both he and Kerr had hoped that an experimental farm connected with the university would soon follow. Furthermore, the first public pronouncements about the station appeared in the university's catalog, explaining how it would scientifically serve the public and the state's economy, in the same pages that the university purported to do the same things. The station's first director was Albert Ledoux who eventually went to New York to work for a chemical laboratory. After Ledoux's short tenure, Charles Dabney took over. Unlike Ledoux, Dabney remained in higher education, pursuing reforms over the next several decades. Both men had attended the University of Goettingen, a premier mark of scientific distinction in the United States and the South. Eventually, the station went to a more permanent home near the offices of the Agricultural Department in Raleigh and acquired an experimental farm overseen by a veteran of the Connecticut Experiment Station that Battle and Kerr had likely met on their trip. By 1887, a decidedly homegrown scientist had become State Chemist. Herbert Battle (son of Kemp Battle)

became the station's director after serving as a scientist in the station for some years and earning the first Ph.D. granted by the University of North Carolina. His assumption of the position of State Chemist signified that the university itself had become a seat of science.³³

The most important or publicly visible work of the station in its first dozen years of operation was the inspection of fertilizers. There were over 100 brands of commercial fertilizer in North Carolina before the station began work, and Carruthers Kerr estimated that half of the two million dollars spent annually on fertilizer in the state was lost to fraud. Many fertilizers contained sand and had been condemned in other places for one reason or another. Funded by a \$500 annual tax on commercial fertilizer companies who would need the station's license to sell their goods, the station's scientists analyzed fertilizer content and published the results.³⁴ The studies aimed to reduce fraud and improve the state's agricultural output by ensuring that farmers were using fertilizers that actually worked. In one case, the station exposed Vitative Compound that claimed to be a comprehensive pesticide, bird repellant, and fertilizer, concluding that it "has no fertilizing value . . . costs 24 times what it is worth . . . [and] is most decidedly poisonous to animals."³⁵

³³ Ira O. Schaub, *The First Sixty Years, 1877-1937* (Raleigh: North Carolina Agricultural Experiment Station, 1955), 14-32; Battle, *University of North Carolina*, II, 137-139; Noblin, *Polk*, 87-109; Report of Albert R. Ledoux to the Board of Trustees, June 4, 1877, University Papers; University of North Carolina Catalog, 1876-1877; Battle, *Memories*, 247-8.

³⁴ The tax was overturned in 1890, but the state replaced it with a 25 cents per ton fee. For more on these early regulations battles, see Rhett Y. Winters, *Early Fertilizer Control Laws Challenged by the Fertilizer Industry* (School of Agriculture and Life Sciences, North Carolina State University, History Series No. 4, 1967).

³⁵ Experiment Station Annual Report 1879, 146-147, 181; Battle, *University of North Carolina*, II, 137; Noblin, *Polk*, 112; Raleigh *Observer*, March 11, 1877; Kretschmann, *Department of Agriculture*, 14, 91-92; Annual report of the North Carolina Agricultural Experiment Station for 1879, 181; William L. Carpenter and Dean W. Colvard, *Knowledge is Power: A History of the School of Agriculture and Life Sciences at North Carolina State University, 1877-1984* (Raleigh: North Carolina State University, 1987), 23-27; Schaub, *First Sixty Years*, 16.

The Agriculture Station and Department undertook countless other projects to improve and diversify the state's economy, conducting over 110 experiments in their first year. The station operated as a public research center—"public" in that it was open to the public. If a farmer needed information about the soil, plants, water, or animals on his farm, he could send samples to the station for analysis, as the time Polk sent a "Bug" in an envelope to the station because a farmer wanted to know if it was a potato bug or not.³⁶ Aside from fertilizers and public items like the purported potato bug, the scientists analyzed all chemicals sold for composting and home use and—in conjunction with an experimental farm—experimented with seeds, soils, and alternative agricultural products.³⁷ The State Chemist doubled as the scientist of the Board of Health, directing his staff to analyze bodies when poison was suspected in human and animal deaths as well as to study potential health hazards.³⁸ The station directors coordinated field testing with volunteer farmers to experiment with soybeans and distribute seeds for sugar beets and other possible alternative crops.³⁹ Similarly, the Department of Agriculture established fish hatcheries in 1877 to restock the state's rivers and streams, creating a whole sub-department of fish and fisheries in 1881. Hoping to stimulate a new industry, the department conducted a survey of the North Carolina coastline, locating over a half million acres suitable for oyster beds in the late 1880s. The station and department also conducted phosphate and coal surveys in the 1880s that led to a spate of new industries and encouraged gold mining in the department's *Bulletin*. The *Bulletin* was the

³⁶ L.L. Polk, Raleigh, to Kemp Battle, Chapel Hill, n.d., University Papers.

³⁷ Carruthers Kerr to Kemp Battle, June 14, 1875, University Papers; UNC Trustee Minutes, January 31, 1877; *Memorial of Agricultural Societies and Trustees of the University*, Executive and Legislative Document no. 29, 1876-1877. Noblin, *Polk*, 103-108.

³⁸ Battle, *University of North Carolina*, II, 138; Laws of North Carolina, 1885, 463, 615-616 and 1899, 416-417.

department's great educational tool in which it published the results of experiments, surveys, and studies as well as articles about farming and business methods. University professors regularly contributed to the *Bulletin*, warning farmers about specific insects and encouraging them to adopt new methods.⁴⁰ By 1889 this educational mission expanded to Farmer's Institute's meant to take short educational and demonstration sessions out to the farmers in their towns and counties. In some ways these educational efforts simply mimicked and extended those of the Grange and the State Agricultural Society in previous decades, only now the programs were under state guidance and funding. The Agricultural Department also tried to attract immigrants and new industry to the state. The department submitted articles to Northern newspapers, encouraging settlers and investors to come to North Carolina and even paid commissioners to get middle class immigrants from the North to move but could not compete with the western territories and states as migration destinations.⁴¹ The department even operated unsuccessfully as a land agency for a brief time. The Immigration sub-department was also responsible for attracting manufacturing to North Carolina and sponsored numerous expositions, fairs, and institutes. The department entered expositions in Atlanta (1881) and Boston (1883), sponsored a North Carolina exposition in 1884, and entered the

³⁹ Carpenter, *Knowledge is Power*, 23-28; Annual report of the North Carolina Agricultural Experiment Station for 1879, 25.

⁴⁰ The department's *Bulletin* began as the *Raleigh Farmer and Mechanic*, reporting both Agriculture Department and Grange news.

⁴¹ There had been private attempts in North Carolina before this, like Kemp Battle's ill-fated Battle, Heck and Company, the North Carolina Land Company founded in 1869 to induce immigration, two other companies in 1869, and the Railroad Immigration Association formed in 1873. *Raleigh Farmer and Mechanic* October 2, 1879; Board of Agriculture of North Carolina, Biennial Report, 1885, 20-22; Board, Biennial Report, 1888, 5-7; Kretschmann, "Department of Agriculture," 2-4; Noblin, *Polk*, 91, 151.

Columbian Exposition of 1893 and the Paris Exposition of 1900 in an effort to showcase the economic potentials of North Carolina.⁴²

Kemp Battle had been instrumental in establishing and laying the foundations of the North Carolina Department of Agriculture and its Experiment Station that worked with limited success on so many of these economic fronts. His reforms at the university in the late 1870s and 1880s similarly reflected a desire to see the state's economy expand and diversify under the guidance of applied science. The university's role, he believed, was to train the men who would work in the Department of Agriculture (like his son) and who would work in the new industries that the department would help foster and—in the case of fertilizer—regulate. The university would be a place for the practical education of professionals grounded in science.

Upon taking full charge of the university as president and after returning from his trip North with Carruthers Kerr in 1876, Battle again revised the university's curriculum.⁴³ He gradually removed the wide open curriculum where students built their own courses of study through certificates, diplomas, and degrees. Like at the University of Georgia, the early experimentation with a more radical form of the elective principle gave way to a series of Bachelor's degrees from which students could choose. Eventually, students received increasing freedom within the last few years of study for those degrees. Battle also worked to make the University of North Carolina what he

⁴² For these and various programs of the department and station, see Department Bulletin March 1886, August 1887, and May 1888; Kretschmann, "Department of Agriculture," 33, 56 101ff; UNC Catalog, 1878-1880; Laws of North Carolina, 1887, 689-690; Board of Agriculture, Biennial Report, 1889, 506; Plan of Buildings, Rules and Regulations Governing Exhibitors at the North Carolina State Exposition, Raleigh, North Carolina, October 1st to October 28th, 1884 also premium lists of the North Carolina Agricultural Society and the North Carolina Industrial Association. (Raleigh, North Carolina: Edwards, Broughton, and Co., Steam Printers and Binder, 1884).

considered a proper university with formal professional education as well as graduate-level education in the humanities and sciences. This fit the curricular pattern (or at least the hopes) more common at the universities Battle had visited in the North and was appearing elsewhere in the nation.

The first change that Battle made upon his return was to eliminate the Bachelor of Agriculture degree. Students who wanted to take courses related to agriculture could instead enroll in the optional course and take any classes they wished or they could work toward the Bachelor of Science, since it concentrated on subjects—the sciences—related to agriculture. The university's real focus had always been on science and its application, not manual training or formalized apprenticeships that purely practical farmer training would no doubt become. When the school reopened in 1875, the agriculture professor received a scant \$200 for equipment and materials, while the professor of Chemistry and Physics received \$1000. As Battle had claimed upon becoming president, the university would *educate* in the sciences related to agriculture and not *train* in farming alone. Furthermore, he did not see anything at the Massachusetts Institute of Technology, Yale's Sheffield Scientific School, or the Connecticut Experiment Station that convinced him that a 'university' should offer such 'training.' Even if the trustees really wanted to offer more hands-on practical training, Battle recognized, the Morrill Act prohibited using its funds to buy farm equipment and machinery. It was for all of these reasons that the trustees and Battle focused their reform efforts on "theoretical teaching, combined with laboratory work." Upon reviewing the university's condition after his trip, he concluded there was no demand or real need for a full-fledged Bachelor of Agriculture and that it

⁴³ Battle had the consistent backing of the trustees whose executive committee, composed of men like William Saunders, Paul Cameron, and Richard H. Battle, encouraged Battle and the faculty to constantly

“was a failure and would probably continue to be so.” The agriculture professor’s salary of \$1,000 could go to more scientific and theoretical work that should form the basis of real agricultural studies.⁴⁴

As the university’s later curricular additions would show, agriculture was only one field in which Battle and the trustees hoped to scientifically train new professionals. When the university’s trustees had begun to reform the school’s curriculum away from a one-size-fits-all Bachelor of Arts program in the 1850s, they designed the Bachelor of Science degree as the only formal alternative. Students wishing to study the sciences and focus upon agricultural or engineering education (and presumably any other practical subjects later introduced) could earn a B.S. in fewer than four years. In the 1870s and 1880s other degrees emerged alongside the Bachelor of Science as humanities-centered alternatives to the more difficult to obtain Bachelor of Arts. The Bachelor of Philosophy was a popular degree in the nineteenth century. Numerous colleges and universities offered it to students, but the requirements varied widely. When Battle introduced it at the University of North Carolina, it called for students to study all the same subjects as for the B.A. minus a classical language. As a watered-down B.A., the B.Ph. was a concession to the lack of preparatory institutions in the state prepared to offer and students willing to study Greek. The B.Ph. proved popular at the University of North Carolina, with graduates sometimes outstripping the number of B.A. graduates in the 1880s. Another alternative Bachelor’s degree was the Bachelor of Letters which required students to concentrate on languages for four years while only studying mathematics,

find ways to extend the university’s offerings and hire new faculty. UNC Trustee Minutes, June 1, 1881.

⁴⁴ Battle, *Memories*, 247; Battle, *University of North Carolina*, II, 109, 111; UNC Trustee Minutes June 13, 1876; UNC Catalogue 1877-1878,

Latin, and science at very basic levels. Introduced in 1889, it was a short-lived program.⁴⁵

Meanwhile the Bachelor of Science became the repository of applied science studies. It was where Battle and the trustees focused their efforts to revise and expand the university's curriculum. The bulk of curricular discussions and reforms of the period revolved around practical science. Made into a four-year degree that was fully "equal in dignity" to the B.A. and the B.Ph, the B.S. was how the university provided for "the special needs of the Southern people . . . instruction being given which will be of inestimable value to men of all professions and of every business." Students built upon courses in the fundamental sciences by studying agricultural chemistry, industrial chemistry, surveying and engineering, and business law in their third and fourth years. The newly revised Bachelor of Science degree would elevate men educated in the practical sciences to the same educationally-bestowed social level as those educated in the arts and humanities—more specifically Latin and Greek languages and culture.⁴⁶

Chemistry professor Francis Venable captured the university's spirit of curricular reform when he noted that the idea of the Bachelor of Science and its required courses was to educate the student about the "principles of the various manufactures going on around him."⁴⁷ Carruthers Kerr also made an interesting connection in a toast at the 1881 Alumni Association Banquet. Some time after two toasts that exhorted young men to stay in North Carolina and develop its resources and for the state government to stimulate manufacturing, Kerr proclaimed "The University has included in the scope of her plans

⁴⁵ UNC Catalogue 1877-1878 and 1889-1890.

⁴⁶ UNC Catalogue, 1876-1882; Flyer *University of North Carolina*, August 16, 1878, University Papers.

⁴⁷ Francis P. Venable's report to the trustees on the chemistry department, UNC Trustee Minutes, May 1881.

and work, with a true University spirit, the whole circle of scientific culture and development.” He continued that the university should continue its association with internal improvements and traced the origins of this potentially fruitful relationship to university President Caldwell’s plans for internal improvements in the 1820s.⁴⁸ For president Battle in the 1880s, the Bachelor of Science degree provided education relevant to “industries [that] are of special importance to our people and . . . would be of vast advantage in developing the wealth of our state.”⁴⁹ By studying “the application of chemistry to the industrial arts,” students would better understand “industrial processes” and contribute to the “needs of the state.” When discussing the need for a certification or degree in mining engineering, Battle echoed his statement about the university educating “experts,” claiming that the state has a “need of specialists to develop her mining interests” that the university can provide.⁵⁰ More than just studying the scientific processes behind agriculture and animal husbandry, students taking courses in the B.S. program would study metallurgy; the manufacturing of glass, porcelain, earthenware; the production and adulteration of food; clothes production, dying, tanning; building materials and wood preservation techniques; and the manufacture of soap, candles, matches, and ink. They would prepare “to become Analytical Chemists, Chemists of Manufacturers, Teachers of Chemistry, or Druggists as well as Farmers and Physicians.” By 1885, students could specialize in agriculture or engineering in their last two years and by 1890, Battle and the faculty were discussing adding civil and electrical

⁴⁸ Battle, *University of North Carolina*, II, 213.

⁴⁹ Battle Report to UNC Trustees February 28, 1884.

⁵⁰ UNC Trustee Minutes January 26, 1886.

engineering to the university's offerings and created a Bachelor of Engineering degree.⁵¹

Battle also wanted to hire an assistant professor capable of offering courses in architecture. One of the new science faculty that Battle hired in the 1880s demonstrated the types of professions and skills graduates of the growing Bachelor of Science were expected to attain. Upon advertising for a new science faculty position, Battle received many letters from educators but also many from the business world.⁵² The man that Battle finally hired—aside from being the son of Charles Phillips and a namesake of Battle's father—clearly demonstrated the kind of professional life for which the university aimed to prepare its young bachelors of science. William Battle Phillips worked for the Standard Southern Fertilizer Company as a “Analytical and Consulting Chemist.” An 1877 UNC graduate, he was an assistant to Ledoux and Dabney and was acting state geologist in 1883.⁵³ Like business schools today, Battle was happy to have as a professor someone who had pursued a practical profession for which he would be preparing students. Aside from the formal degree requirements, the University of North Carolina fostered the learning of science in other ways. The old mineralogical cabinet which was intended as a museum of North Carolina geology, plant, and animal life became the Industrial and Agricultural Museum, growing considerably to encompass its expanded archival/collecting task. Similarly, the Elisha Mitchell Scientific Society began

⁵¹ UNC Trustee Minutes, February 27, 1889; February 20, 1890; March 7, 1890; February 11, 1891; Battle, *University of North Carolina*, II, 45-2453.

⁵² Ledoux to Kemp Battle, March 31, 1885, University Papers. Like science educators at UGA and elsewhere, Albert Ledoux who had been the first head of the Agricultural Station had gone on to form a company—Ledoux and Ricketts, Engineers, Chemists, and Assayers. Many of the letters Battle received were from junior scientists in companies like this.

⁵³ C. L. Graffin to Kemp Battle, March 19, 1885; D. MacRae to Kemp Battle, March 20, 1885; W. B. Phillips to Julian Carr, March 28, 1885.

meeting in the late 1880s in which students and faculty presented papers and held discussions on the various scientific issues of the day.⁵⁴

With the expansion of the Bachelor's degrees and inclusion of more practical science, several other courses and programs appeared and reappeared at the University of North Carolina in the late 1870s and 1880s. The optional course which had been in place since before the Civil War continued. It represented the logical conclusion of the elective system that was taking hold all over the country—most visibly under Charles Eliot at Harvard—that students could come to the university and take any courses that they wanted. Optional students were designated by the number of years they had been taking courses, and it is likely that many took a significant portion of the courses required for degrees, simply omitting a course or two that they found too challenging or irrelevant. The university's trustees also made it very clear that students wishing to take courses only related to agriculture should enroll as optional students, since they had dropped the formal B.Ag. In the 1881-1882 school year there were 47 optional students, making up a sizable portion of the undergraduate student body, but there is no indication how many of these took only agriculture courses.⁵⁵ The continuation of the optional course also preserved the possibility or at least the image that the university offered higher education to all North Carolinians.

One short-lived experiment along this same line was the introduction of remedial courses. The University of North Carolina did not have a preparatory department, and

⁵⁴ In a 1900 edition of the *University Record* university professor and president George Winston noted that “if any age might be called the age of science, it was that in which the new University was born. Such wonderful advances have been achieved in all departments of science, such universal application of scientific knowledge in the industrial arts” that required them. Battle, *University of North Carolina*, II, 580. UNC Catalogue 1877-1890; Battle, *University of North Carolina*, II, 261-262. See the circular addressing changes at the university cited in Battle, *University of North Carolina*, II, 338-339 for the university's official announcement of changes in 1885.

the private academies and still-fledgling public schools could not prepare enough students both willing and able to attend the university. Battle and the trustees designed the remedial program to buttress the core of courses that comprised the Bachelor of Arts degree as well as the traditional mental discipline curriculum. Students unable to handle the Freshman-level courses could enroll in algebra, Latin, Greek, and English courses, preparing to enter the university proper. By 1884, the university discontinued the remedial program in favor of growth in the direction of graduate education.⁵⁶

The optional course gave the university a patina of democratic openness, while the remedial course showed that the university would nurture talent where it could and give students of various preparation and backgrounds the opportunity to excel. The abandonment of the remedial courses combined with the introduction of graduate courses, however, indicated a desire to elevate the level of education at the university. There were six post-graduate students at the university in 1881-1882, and throughout the 1880s, Battle and the faculty laid forth ever more detailed plans for their slowly growing number of graduate students.⁵⁷ By the late 1880s, they had designed a graduate program that mirrored the Bachelor's degrees at the Master's level with the Master of Arts, Master of Science, and Master of Philosophy. To earn these degrees a college graduate (a holder of a Bachelor's degree) would reside at the university for at least one year, focus on a particular subject or two in more or less independent study with the faculty, and write a thesis. To earn a Ph.D., the UNC graduate student would have to reside at the university for two years and complete the same requirements as the Master's students, simply on a larger scale. The university's first Ph.D. went to Herbert Battle in 1888 who studied

⁵⁵ UNC Catalogue 1877-1878, 1881-1882.

⁵⁶ UNC Trustee Minutes, June 10, 1881; December 1884; UNC Catalogue 1878-1885.

agricultural chemistry and worked as an assistant at the Agricultural Experiment Station before becoming its head.⁵⁸ It is not surprising that the university's first Ph.D. would be in this field, since the Experiment Station had originally started at the university and had been an early infusion of scientific research. Chemistry had also been one of the university's primary scientific offerings, since it served both agriculture and newer industries. While nearly a dozen students enrolled each year throughout the 1880s for graduate work—like the undergraduate students—few graduated.⁵⁹

Battle and the trustees also embraced new programs for the university that were more directly professional preparation. Professional education for teachers became a regular feature at the University of North Carolina in 1877 with the advent of the Summer Normal School. The university received \$2,000 from the state to host the six-week summer program for teachers. Only required by law to offer education instruction for male teachers, Battle went out of his way to invite female teachers as well. From 1877 to 1884, 2,480 men and women came to Chapel Hill in the summer time to hear lectures by university professors, well known journalists and politicians, and accomplished teachers and professors from other institutions. Many of the lectures were meant to expand the teachers' knowledge of the many fields in which they were called upon to teach. Journalist Walter Hines Page, for example, gave a talk on Shakespeare. By 1881, Kemp Battle had developed a series of lectures on the science of teaching. If teaching were to be a proper profession, he believed, it should have a scientific or at least systematic basis. Battle had two other reasons for encouraging and participating in teacher education. It was good public relations for the university beset by charges—like

⁵⁷ There were eleven graduate students in 1882 and 1883, twelve in 1884 and thirteen in 1885.

⁵⁸ The university also awarded two Master's degrees that year.

most state universities—that it served an educated elite rather than the people of the state. It also might stimulate improved education in the lower schools that would in turn create a greater supply of students for the university. By 1884, the Summer Normal School's success took it away from the university, regionalizing the program into four schools throughout the state.⁶⁰

By 1879, however, Battle was already making normal education a regular part of the UNC curriculum. A new two-year teacher's course went above the state requirements for teacher education and certainly above the offerings of the Summer Normal School. In addition to Battle's course on the science of teaching, Teacher's Course students took English, rhetoric, history, reading, algebra, composition, Latin or Greek, surveying, and business law. In reality, the new course was not just a course for would-be professional teachers but a truncated degree program for "all persons intending to enter into any business or profession" but not willing or able to complete one of the regular courses. The students could also enroll in any other courses at the university. Here again Battle was pulling back from the elective principle, trying to get students into a routinized program, however short, and out of the Optional Course. The teacher's course would be an alternative two-year "degree."⁶¹ Despite, this stealthy use of teacher training as a way to offer a new kind of general program at the university, Battle, the trustees, and the faculty did want to offer education for teaching professionals at the university. By 1883,

⁵⁹ UNC Catalogue 1881-1889.

⁶⁰ For the emergence of graded schools in North Carolina and the role of the Summer Normal School and the University of North Carolina, see James L. Leloudis, *Schooling the New South: Pedagogy, Self, and Society in North Carolina, 1880-1920* (Chapel Hill: University of North Carolina Press, 1996), 74. *Annual Report of the State Superintendent of Public Instruction*, 1879, 36-37. Battle received correspondence exchanging ideas about the public relations benefit of having agricultural and Normal programs at the university. Alexander McIver to Battle, November 1, 1876; Charles W. Broadfoot to Battle, July 17, 1877; UNC Catalogue 1876-1884; "University Normal School," *The Raleigh Observer*, July 1877; Dabney, *Universal Education in the South*, 177-178; Battle Report UNC Trustee Minutes, February 28, 1884.

Battle and the faculty asked the trustees to establish a professorship of education. Once the state removed the Summer Normal School from the university in 1884, plans got underway to create a regular School of Normal Instruction and from 1886 to 1890, the university offered the short-lived Bachelors of Pedagogics degree.⁶²

Battle, the faculty, and trustees also experimented with education for business. In 1876, the university offered a course in “the Science of Accounts” where students “preparing for any pursuit in life who wish to preserve a clear and concise record of their business transactions” could learn single entry and double entry bookkeeping. The next year, nineteen students enrolled in the bookkeeping short course.⁶³ By 1879, this became the School of Stenography. Designed to help prepare students to be editors, reporters, railroad officials, stenographers, and teachers, the one-year program was a more or less private enterprise. The trustees did not regulate or oversee the curriculum, students had to pay a fee to take it (it was not a part of the tuition system), and graduation from the course did not technically confer upon the student a certificate, diploma, or degree from the trustees of the university.⁶⁴ The course was, however, what one historian of the University of North Carolina has called an example of how the university grew “by absorbing private enterprises set up around it.”⁶⁵ Whether the programs and courses were full-fledged parts of the university curriculum or private enterprises the university had absorbed and still kept somewhat at arm’s length, they were all a part of Battle and the trustees’ attempt to marshal professional education under its aegis.

⁶¹ UNC Trustee Minutes, September 20, 1881; February 1, 1883; UNC Catalogue, 1879-1881.

⁶² The Bachelor of Pedagogics degree likely suffered acute competition from a teacher’s short course that the university began offering annually from February to April. UNC Trustee Minutes, February 1, 1883; February 5, 1885; June 4, 1885; January 26, 1886. Battle Report, UNC Trustee Minutes, February 28, 1884; UNC Catalogue, 1884-1890.

⁶³ UNC Trustee Minutes, September 20, 1881; UNC Catalogue 1876-1878.

⁶⁴ UNC Catalogue 1879-1880.

One semi-private professional program that the university similarly offered but proudly claimed it wholly as their own was the law school. In 1877 trustee William Horn Battle reopened the university's law school. A supreme court judge from 1852 to 1868 and the sole reviser of North Carolina statute law for the new redemption government in the 1870s, Battle had run the school from 1845 to 1868. Just before his son took over as president of the university and Battle resumed his duties as law professor, he had been president of the Raleigh National Bank. Under the elder Battle, the proprietary law school—it was in no way supported financially by the university of the state—offered the same option to students as before Reconstruction and the Civil War. Students could enroll as university students, taking law classes as full-fledged members of the university community and perhaps working toward other degrees, or as Independent students, taking only law classes and not necessarily participating in other university functions. Both types of students would study two years for the Bachelor of Laws and a state license to practice. By 1881, John Manning took over the school and created a regular curriculum with three parts. There was a summer course for part-time students, a course that culminated in a license to practice by meeting state supreme court requirements, and a course that lead to the Bachelor of Laws.⁶⁶ Despite the tenuous connection between the university and the law school, the trustees proudly advertised the school in the university catalogue.

Lawyers, along with doctors and clerics, were one of the traditional professions. If the University of North Carolina were to be a true university with professional and scientific schools it would have to have this most fundamental professional education.

⁶⁵ Wagstaff, *Impressions*, 36.

⁶⁶ Battle, *University of North Carolina*, II, 126, 239; UNC Catalogue 1978-1883.

Another fundamental profession that the trustees added to the university in the 1870s and 1880s was medicine. Local doctor Thomas W. Harris organized the university's medical department in February 1879. As professor and dean, Harris taught the more specifically medical courses, and the science faculty offered courses in biology, chemistry, anatomy, and physiology. Harris had no intention of offering medical degrees, but established the department as a pre-med program "to prepare students for attendance on the lectures of the leading medical colleges." Students in the two-year program had the opportunity to operate on cadavers and observe Harris' work in a free clinic. Harris and the science faculty also created a College of Pharmacy in 1880 that awarded a certificate of graduation for one year of study and—in the traditional way American colleges had previously conferred Master's degree—the degree Graduate of Pharmacy to any student who subsequently practiced as a pharmacist for three years. Both programs left the university in 1885 when Dr. Harris was unable to balance the demands of teaching and simultaneously maintaining his own medical practice. By 1889, however, the trustees were busily adding a one-year Preparatory School of Medicine and a one-year Pharmacy program back into the university's curriculum.⁶⁷

Throughout the 1870s and 1880s, then, the University of North Carolina experienced an intense period of curricular experimentation and expansion. By the late 1880s, a student contemplating entering the university had an incredible array of options before him.⁶⁸ He could earn the traditional Bachelor of Arts or one of the easier

⁶⁷ UNC Trustee Minutes February 27, 1889, February 20, 1890; Battle, *University of North Carolina*, II, 166-167; UNC Catalogue 1878-1890.

⁶⁸ In the 1880s, the United States Government Printing Office published a series of studies on the history of education in different states. Charles Lee Smith's *The History of Education in North Carolina* provides an ample, impartial survey of the university's offerings. He recorded that the university offered three regular Bachelor degrees (B.A., B.Ph., B.S.), certificates in agriculture and engineering for particular studies within the B.S. program, a two-year agriculture course, a two year teacher course, two law school

humanities degrees—the Bachelor’s of Philosophy or the Bachelor’s of Letters. While he had to take required courses in his first two years of studies for these degrees, he would have enjoyed electives by his junior year.⁶⁹ He could study for the Bachelor of Science, earning certificates in agriculture or engineering or focusing on mining, architecture, or industrial chemistry. He could study in the Law School while concurrently enrolled in a university undergraduate program or just take law classes. He might take the medical course to prepare to enroll in a medical school or he might take the teacher’s course and leave the university after two years with a certificate. He could always just enroll as an optional course student, taking the classes he felt interested in or were relevant to his perceived needs.

Providing such options to students required money. It was comparatively inexpensive to teach basic literature and mathematics courses to students in the antebellum college, but as science worked its way into the curriculum, costs must have risen. The destruction of war and Reconstruction did not, of course, help matters. It took even more money to build the laboratories and purchase the equipment necessary to teach all of these practical sciences. The Morrill funds helped considerably as did the private fund-raising efforts spearheaded by Cornelia Spencer. By the 1880s, however, the state of North Carolina finally began aiding the financially strapped university. When the state legislators had awarded the Morrill Land Grant funds, they had required the school to accept one student tuition free from each county. By 1881, Battle successfully made the case to the legislature that the state would need to help support the school, since more

courses, three Master’s degrees, and the Ph.D. Charles Lee Smith, *The History of Education in North Carolina* (Washington, D.C.: Government Printing Office, 1888), 87-91.

⁶⁹ Battle praised the combination of degrees with required courses but election within the last few years of study in his history of the university. Battle, *University of North Carolina*, II, 509.

students were taking advantage of this clause and draining the university's resources. Opposition from denominational schools reduced the proposed \$7,500 annual appropriation to \$5000 per year for four years. In 1884 Battle again appealed to the legislature for money to build new laboratories for agricultural and industrial chemistry. He argued that the state and the university must foster scientific discovery and pass it on to the state's youths who would, in turn, improve old and develop new economic ventures. The legislature awarded the university \$20,000 per year, a huge addition to the \$7,500 per year generated from the Morrill funds.⁷⁰

Unfortunately, this new wealth, combined with the reforms and the university's often stated intent of educating scientific "specialists" and "experts," ushered in an era of intense criticism of Battle and the university that resulted in the loss of the Morrill funds. The North Carolina Farmer's Alliance, headed by one-time Battle ally and Agriculture Department Commissioner Leonidas Polk, and the Watauga Club which included among its membership William Peele, Charles Dabney, Josephus Daniels and Walter Hines Page, shared Battle's desire to improve the economy through higher education. Their

⁷⁰ Battle considered acquiring the funds and the reforms they made possible his great contribution to the university. *Memorial of the Board of Trustees of the University of North Carolina*, Executive and Legislative Document no. 22, 1885. UNC Trustee Minutes, January 20, 1887; UNC Catalog 1884-1885; Battle, *University of North Carolina*, II, 205ff, 304-312, 374, 375.

In the 1870s, it had been clear that the denominational schools were against the university only if it competed with them. They hoped the university would offer courses at and above the junior year. Denominational conflict with the university accelerated when this division failed to materialize. The faculty of Wake Forest even hosted a meeting for people opposed to the 1881 appropriations bill in Raleigh. Protest broke out again in 1885 but could not prevent the university from receiving additional funds. A part of both appropriations bills had been to double the number of students the university accepted tuition free. Fearing that their students would flock to the state college, the denominational colleges and their allies defeated this measure both times. Consequently the University of North Carolina received new funds without the burden of accepting increased numbers of tuition free students. *Report of the Superintendent of Public Instruction*, 47; Battle, *University of North Carolina*, II, 45-46; Pachal, *History of Wake Forest College*, II, 70-71, 99-106; Luther L. Gobbel, *Church-State Relationships since 1776* (Durham: Duke University Press, 1938), 74-171, specifically 105-106 and 121; Frederick A. Bode, *Protestantism and the New South: North Carolina Baptists and Methodists in Political Crisis, 1894-1903* (Charlottesville: University of Virginia Press, 1975), 20-38; *Carolina Watchman*, February 24, 1881; *Wilmington Morning Star* January 27, 1881; *Raleigh Biblical Recorder*, January 5, 1881.

ideas, however, on how this would work were quite different from Battle's. They disagreed with Battle's emphasis on a scientific and a more traditionally liberal education as essential components to practical and professional education. They preferred a more directly practical and hands-on approach to education that focused on the development of immediately practical skills with only a minimum of attention to theory, pure science, and courses like Latin whose utility they doubted. One focused on agriculture and the plight of farmers, the other on industry. They allied in the middle 1880s to force the state legislature to remove the Morrill funds from the University of North Carolina and create an alternative state institution for practical education.

Kemp Battle had been able to work with the coalition of the State Agricultural Society, the Grange, and the farmer press to ensure the foundation of the Agricultural Experiment Station and to secure for himself a place on the new Agricultural Department's governing board in the 1870s. By the 1880s, however, he was not able to maneuver so successfully. One of his former allies became one of his most severe public and political critics. Leonidas Polk had been at odds with Battle while Polk was the commissioner of the Agriculture Department, but when financial cutbacks to the department in 1879 forced Polk to resign in 1880, their acrimony increased.⁷¹ After being involved in several failed ventures, Polk returned to the North Carolina political and economic stage in the middle 1880s. By then the Grange was in decline in North Carolina and much of the nation. The price of cotton had continued to drop—going from 11 cents per pound in 1879 to 8.7 cents per pound in 1887—and the state's farmers were coping with the entrenchment of commercial agriculture. Like the agitation within the

Grange to form the Department of Agriculture, Polk and the farmers wanted the government to do something to help them amidst the economic changes of the time. In 1886 Polk founded the *Progressive Farmer* and started a new farmer's club that quickly gave rise to other clubs and spread to become the North Carolina Farmer's Association. When officially organized statewide, the Association had clubs in forty counties. Polk would eventually lead his new organization into the Southern Farmer's Alliance and become a key officer in this regional and national organization that fostered the Populist Party.⁷²

Polk laid out his plans and the mission of the nascent farmer's organization in the pages of his new periodical. Echoing his concerns as the editor of the *Ansonian* and as the commissioner of the Department of Agriculture, Polk feared that farmers were missing out on the boom he observed in railroads and towns.⁷³ He advocated crop rotation and some of the other familiar ways farmers could help themselves, but he focused his efforts upon making the Department of Agriculture and state-funded education more directly useful to the farmer.⁷⁴ Under his paper's masthead Polk wrote:

⁷¹ Clarence Poe, "L.L. Polk: A Great Agrarian Leader in a Fifty-Year Perspective," *The South Atlantic Quarterly*, XLI (October 1942): 407; Noblin, *Agrarian Crusader*, 125ff, 133, 167ff, 173, 168; Battle, *Memories*, 249.

⁷² *Progressive Farmer*, May 5 and 12 1886, January 5, February 2, March 16 and July 14, 1887; L.L. Polk, An Address Delivered before the Interstate Convention of Farmers, Atlanta, 1887; William T. Poe, *The Progressive Farmer, 1886-1903* (M.A. Thesis, University of South Carolina, 1971); Stuart Noblin, *Leonidas Lafayette Polk: Agrarian Crusader* (Chapel Hill: UNC Press, 1949), 149ff; Adolph Jenkins Honeycutt, "The Farmer's Alliance in North Carolina," (M.A. thesis, North Carolina State College, 1925), 1-5, 12; Lala Carr Steelman, *The North Carolina Farmer's Alliance: A Political History, 1887-1939* (Greenville, North Carolina: East Carolina University Publications, Department of History, 1985), 1-20. Robert C. McMath, *Populist Vanguard: A History of the Southern Farmer's Alliance* (New York: W. W. Norton, 1975), 38-40. John D. Hicks, "The Farmer's Alliance in North Carolina," *North Carolina Historical Review* 2, (April 1925): 171. The Grange still had enough power to lobby in the U.S. Congress in 1890, hoping to make the funds from the Second Morrill Act contingent upon offering agricultural and specifically practical training. Eddy, *Colleges For Our Land and Time*, 73, 101.

⁷³ *Progressive Farmer*, April 28, 1887.

⁷⁴ *Progressive Farmer*, November 10, 1886, February 16, 1887. Interestingly Polk's organization came to reject some of the tenets he had espoused as commissioner to the Department of Agriculture. In early

“The industrial and educational interests of our people paramount to all other considerations of state policy.” He wanted the state to provide for “the practical, industrial education of the masses of our young people,” and he took this message outside of North Carolina, addressing the Interstate Farmer’s Convention as its president in 1887.⁷⁵ He early praised the University of Georgia’s four branch colleges, serving a student population of 1097 in 1884, as an example of the broader based state-supported higher education he envisioned.⁷⁶ Even before allying with Battle to form the Department of Agriculture and the Experiment Station, Polk had advocated an agricultural college “with its branch schools in every county as feeders to the main school.”⁷⁷

He consequently criticized the University of North Carolina. It was the only state-supported school for practical training, yet it only offered scientific and still somewhat traditional education for the upper classes and professionals. Not only had the state awarded the university the Morrill funds, it was giving the university money from the farmers’ taxes every year. “Give us a system,” he demanded.⁷⁸ “The plain, unvarnished truth” he lamented, “is this money has been used for all these years, not for the benefit of the farmers’ sons but for the benefit of the University.”⁷⁹ Criticizing the university’s use of the funds for the education of scientific professionals, he concluded

1888 the North Carolina Farmer’s Association voted to oppose the use of state funds to encourage immigration into the state. Steelman, *The North Carolina Farmer’s Alliance*, 13.

⁷⁵ L.L. Polk, An Address Delivered before the Interstate Convention of Farmers, Atlanta, 1887.

⁷⁶ Polk here mirrors the early hopes of the *Atlanta Constitution* editors and Henry Grady who would originally have preferred a series of lower level technology/practical education schools but eventually threw their support behind the Georgia Institute of Technology. *The Progressive Farmer*, February 10, 1886.

⁷⁷ He made this statement at the 1872 State Agricultural Fair in Raleigh. Lockmiller, “North Carolina College,” 279.

⁷⁸ *The Progressive Farmer*, February 10, 1886.

⁷⁹ *The Progressive Farmer*, June 23, 1886.

that “as far as we know no farmers’ son has ever derived a nickels worth of benefits from it.”⁸⁰ Polk complained that farmer’s could not afford to send their sons to the university and even when they did go, they spent more time parsing Greek verbs and studying pure sciences than learning about how to improve their farms or work in any of the new industries that he hoped would be coming to North Carolina. Seizing upon the university’s most recent curricular growth and changes, Polk castigated Battle and the university for deceiving the populace. Despite the fact that Battle had eliminated the agricultural program at the university in 1877, he and the faculty created a non-degree two year course in agriculture and fashioned a new college at the university—the college of agricultural and mechanical arts. Like a number of the university’s structural and curricular revisions, these were paper changes, since they had no impact on the courses students could take or degrees or certificates they could earn at the university. The changes merely put new names on the already in place and expanding Bachelor of Science program and its specializations. They were clearly an attempt to appease growing political/farmer unrest over the school. Polk called them what they were. Responding with considerable vitriol, he called the “elegant paper college . . . a sham, a mere pretence . . . under cover of which the University continues” to use the Morrill funds without consideration for farmers. The university had received the money for several years, and Polk believed the result was nowhere near what was intended. Not subscribing to Justin Morrill or Kemp Battle’s views of practical education augmenting liberal education, Polk made fun of the supposed school’s “long, very long hatching period for such a small chicken.” Ignorant of what really went on at the university and opposed to teaching the core sciences first, he asserted that the university only offered the

⁸⁰ *The Progressive Farmer*, April 14, 1886.

farmer “an occasional lecture on agricultural chemistry, botany, bugology, or something of that sort.” This, of course, neglected entirely the notion that the scientists of the university created useful knowledge for the farmer or trained future researchers, educators, and businessmen in the agricultural sciences like fertilizer companies. Polk urged the state legislature to let the farmer’s see a direct educational return on their taxes, and he encouraged the farmers to elect a legislature that will give them the land-scrip money for use as he believed it was intended.⁸¹

Leonidas Polk, the *Progressive Farmer*, and the Farmer’s Association attacked the University of North Carolina’s control and use of the Morrill Funds in defending their understanding of agricultural education. The members of the Watauga Club also questioned the way the university was educating young men but focused upon industrial rather than agricultural education. The Club worked to get the state to create an industrial school that would train students through practical application and experience with only a minimum of traditional studies and sciences. These were the same battle lines that were being drawn at the University of Georgia, as Chancellor Patrick Mell defended the university against criticisms leveled by the State Agricultural Society and the movement to establish the Georgia Institute of Technology. In North Carolina, Leonidas Polk and the Farmer’s Alliance wanted state-funded practical training for farmers as businessmen, while Kemp Battle and the leading trustees of the university wanted to educate agricultural scientists and educators. Similarly, the Watauga Club’s members wanted a state institution to embrace the shop culture and train mechanics and floor bosses who might rise to prominence, while Battle had adopted the school culture to train engineers

⁸¹ Polk pointed out that this supposed new college that was in compliance with the Morrill Act did not appear in the university catalogue until page 49. UNC Catalogue, 1885-1886; *Progressive Farmer*, May

and industry leaders. Both sides recognized the need for changes in agriculture and the general diversification of the state's economy, they simply differed on how best to spend their few educational dollars to those ends.

Josephus Daniels, Walter Hines Page, Charles Dabney, William J. Peele, Arthur Winslow and others organized the Watauga Club on May 26, 1884 to discuss and devise ways to improve the educational, agricultural, and industrial prospects of the state. These newspaper editors, scientists, educators, and businessmen met to present papers to one another and discuss how to rid North Carolina of the colonial economy that plagued the state's agriculture and fledgling manufacturing industry. Just like Kemp Battle at the University of North Carolina, the Agriculture Department, and the Farmer's Association, the Wataugans were concerned with the production and dissemination of economically useful knowledge. They intended to remedy the "serious lack of accurate and practical information upon the most common economic questions" in the state and explore any and all new ideas for economic progress. Page's *State Chronicle* was their unofficial information outlet, but they contributed to the Department of Agriculture's *Bulletin* and other newspapers like the *Charlotte Observer* under Augustus Thompson when they could. Some of them directly contributed to the efforts of Battle, the University of North Carolina, and the Department of Agriculture to bring science and diversification to the economy. Dabney served as the state chemist and head of the experiment station for a time, and Winslow conducted the survey of the North Carolina coast that identified areas for oyster cultivation. They chose the odd name Watauga Club in reference to the formation of the state of Tennessee. The Watauga river runs through North Carolina and Tennessee, and during the Revolutionary War Continental troops gathered along it prior

to the Battle of King's Mountain. Their commander, John Sevier, later formed the Watauga Association that worked to gain statehood for Tennessee. Underscoring the notion of a new North Carolina and a New South, they chose the name because they would help "build out of chaos a new state."⁸²

Shortly after the founding of the club, the Wataugans focused their efforts on formal higher education. A committee headed by Arthur Winslow concluded that the state needed an industrial school and Walter Hines Page suggested that they memorialize the legislature. In the memorial drafted by Page, Winslow, and Dabney, in the *State Chronicle*, and in later publications, they argued that North Carolina and the South suffered from a colonial economy and that to end that economically subservient relationship North Carolina needed what historian Gavin Wright has called an indigenous technological community. This community of men educated and experienced in industry

⁸² Dabney, *Universal Education in the South*, 183-4; Josephus Daniels, *Tar Heel Editor* (Chapel Hill: UNC Press, 1939), 291, 319; Peele, "History," 3-4, 13; "Memoirs," a typescript included in Charles Dabney Collection, Southern Historical Collection, University of North Carolina, Chapel Hill. Raleigh *State Chronicle* November 10, 1883 and June 28, 1884; Gaston, *New South Creed*, 49-52, 59-63, 105-106; John M. Cooper, *Walter Hines Page: The Southerner as American, 1855-1918* (Chapel Hill: University of North Carolina Press, 1977), 69, 78-79. While the Wataugans were interested in all types of economic improvement, their primary interest was manufacturing and industry. One historian has quoted Walter Hines Page as lamenting that the bill that did eventually create an industrial school would never be passed by "the d—n farmer legislature unless there was some agriculture in it somewhere." Lockmiller, "North Carolina College," 282.

For a general history of the Watauga Club, see Richard Walser, *The Watauga Club* (Raleigh: Wolf's Head Press, 1980). Many scholars credit the Watauga Club with starting educational Progressivism practically in a vacuum without taking into account the Farmer's Association or Kemp Battle and the University of North Carolina, the similar and dissimilar ends of these organizations and institutions. Cremin, *The Metropolitan Experience*, 216-219; Ayers, *Promise of the New South*, 417-423; Woodward, *Origins of the New South*, 396-7, 436-438; Neufeldt and Allison, *Education and the Rise of the New South*, 252-255.

For treatments to Walter Hines Page, see Walter Hines Page, "Autobiography of a Southerner by Nicholas Worth" *Atlantic Monthly* 98 (July, August, September, and October 1906): 1-12, 157-176, 311-325, 474-488; Burton J. Hendrick, ed., *Life and Letters of Walter Hines Page*, 3 vols. (Gordon City: Doubleday, 1922-1925); Charles Grier Sellers, Jr., "Walter Hines Page and the Spirit of the New South" *North Carolina Historical Review* 29 (October 1952): 481-494; John Milton Cooper, Jr., *Walter Hines Page: The Southerner as American, 1855-1918* (Chapel Hill: University of North Carolina Press, 1977); Keith Howard Griffin, "Rhetorical Biography of Walter Hines Page with References to His Ceremonial Speaking on Southern Education, 1891-1913" (Ph.D. diss., Louisiana State University, 1977).

would stimulate the growth of manufacturing and industry in the state.⁸³ This mirrored what Kemp Battle had been trying to do at the University of North Carolina for several decades, but the Wataugans believed Battle and the university were not up to the task. Page castigated Battle as one of the “mummies” of the old order that were slowing progress in order to maintain their political and social status. Page accurately noted the conservative nature of Battle’s reforms at the university in which Battle hoped to create and service new professions for the elite to pursue rather than a democratic and multi-layered educational system. William Peele lamented that the university’s “tendency toward theoretical, literary and ultra-scientific education” kept it from offering immediately practical education that would help the people and the state.⁸⁴ The university was for the “student of profession” not the “student of industry,” and it had already proven that any attempts to infuse practical education into the university would disappear behind its overarching mission of training scientific professionals who would be society’s leaders. The Wataugans wanted state higher education that was both more accessible and more practical. They wanted education where middle class students—not

⁸³ The Wataugans did not want to encourage outside investment in the state as a low wage area but stimulate local, albeit gradual, growth and diversification. Page was enamored with the writings of Thomas Jefferson at the time and envisioned a North Carolina of small farmers and shop owners self-sufficiently and interdependently using scientific techniques as opposed to the large organizations and corporations that were becoming the economic norm. *State Chronicle*, January 26, 1884; February 15, 1886; Cooper, *Walter Hines Page*, xx-xxi, 69-71.

⁸⁴ Sounding identical to Benjamin Hill at the University of Georgia, the Wataugans were eager to “multiply the avenues of legitimate occupations” and help the state overcome the slavery-inspired reluctance to manual labor by having a school to create “fresh competitors . . . for the already overstocked professions of medicine, law, and politics.” While the Wataugans objected to Kemp Battle’s notion of the professions, they were merely trying to recreate for business and industry the kind of brief and direct professional preparation that doctors and lawyers were receiving in the nineteenth century. Even at the University of North Carolina, law students did not have to earn a Bachelor’s degree. In this light the Wataugans were the conservatives in that they wanted to preserve the status quo of professional preparation and Battle was the reformer wanting to redefine professional preparation in terms of scholarship and science. Raleigh *State Chronicle*, February 4, 1886; Daniels, *Tar Heel Editor*, 319, 370. Peele facetiously compared Battle and his allies to the Pharisees of ancient Israel who “wanted to issue a diploma to its Divine Author [Jesus] before He could get authority to heal the sick or raise the dead.” W. J. Peele, “A History of the Agricultural and Mechanical College,” *North Carolina Teacher* VI (September 1888): 23.

quite members of the social and economic elite—did not have to spend years and their parents' money studying Latin and the liberal arts but could immediately focus on practical training and experience.⁸⁵

Like the Georgia Institute of Technology in Atlanta, the Industrial school that the Wataugans proposed to the state legislature embraced the shop culture, calling for the school to be in a city and operate like a large shop, treating students like apprentices in a carefully prepared experience. The memorial even lamented the fact that the Raleigh and Gaston Railroad and the North Carolina Railroad shops were turning away hopeful apprentices for lack of capacity. To Peele, Page, and company this indicated a present demand by students and parents for an apprentice-like experience that would qualify young men to work in machine shops and factories. They also noted with praise the efforts of Nathaniel Harris in Georgia and the work of the Worcester Free Institute. They similarly hoped to train young men in expanding local industries like “wood manufactures,” so the state could stop exporting raw materials only to import the finished products. The curriculum and equipment they proposed for the school indicated that the school would be an apprentice workshop for future woodworkers, metalworkers, carpenters, machinists, and miners. The school would also coordinate fieldtrips to industrial sites and even administer late nineteenth century equivalents of modern co-ops

⁸⁵ Peele, “History,” 15, 23; Arthur Winslow, Walter Hines Page, W. J. Peele, and Charles W. Dabney, *The Need of an Industrial School in North Carolina, Together with an Estimate of the Cost of Establishing and Maintaining It* (Raleigh: Daily Chronicle Office, 1885); W.J. Peele, “A History of the A and M College,” Address delivered at the laying of the cornerstone of Holladay Hall, August 22, 1888. Typed copy in the State College Library, 2. Watauga Club, *An Industrial School* (Raleigh, n.p., 1885); Christopher Allen, “The Land Grant Act of 1862 and Practical Education in North Carolina: The Founding of North Carolina College of Agricultural and Mechanic Arts,” (M.A. thesis, North Carolina State University, 1984), 56-57, 60; Dabney, *Universal Education in the South*, 185-6. For Page’s the mummy letters, see Raleigh *State Chronicle* October 6, November 6 and 26, December 3, 1885, January 28, 1886.

where students spend a portion of their formal education years actually working in the industry for which they are preparing.⁸⁶

While Polk and the Farmer's Association advocated the removal of the Morrill funds from the university and the Watauga Club members tried to create a new state-sponsored school for industrial education in the middle 1880s, Kemp Battle busily defended the university and its curriculum. This was not a new task for Battle. He had successfully defended the university against the criticisms of the Grange in the 1870s and had made allies of the Grange leadership in the person of Columbus Mills.⁸⁷ By the middle 1880s, Battle perceived himself as a champion of state higher education, having reformed the university, secured the Morrill funds, and obtained regular state funding. To his mind the Farmer's Association and the Watauga Club would undermine his achievements—or worse, take them away. Battle defended himself and his institution with several arguments. First of all, he believed that the “public does not realize to what extent this practical training is given.” Practical training, in Battle's mind, included the education of scientists who would create useful knowledge, educators and others who would distribute it, and professionals who would work in industries, like commercial fertilizers, that would improve the economy and help even the farmers. He pointed out that many of the farmer's advocates in the Farmer's Association and the state legislature had attended the university and that the university helped the Experiment station coordinate model farmers across the state who were experimenting with new crops and methods. Regardless of misperceptions and incomplete information, Battle pointed out whenever he could that the university followed the letter and—according to later

⁸⁶ Peele, “History,” 6-8; Winslow, et al., *Need of an Industrial School*, 5-8.

⁸⁷ Battle, *University of North Carolina*, II, footnote on page 381.

testimonials by Justin Morrill—the spirit of the Morrill Act. Both the Morrill Act and the North Carolina law giving the funds to the university stipulated that the university educate its students in the “scientific principles leading to the trades, not the trades themselves.”⁸⁸ Battle also believed that an education—no matter how directly practical—should have some elements of the traditional curriculum or the liberal arts. Despite all of his reforms to infuse the university with scientific and professional education, he still partially adhered to the mental discipline philosophy. Studying Latin, pure sciences, etc. would exercise the mind and prepare it for whatever future work a student might choose. It would also make better citizens and a more cohesive social leadership. This particularly applied to the future professionals and social leaders who would attend the university. By requiring all university graduates to study these courses (even if it was only for two years in truncated programs like the Teacher’s Course), they would all share in a common intellectual experience and culture. This was one of the main reasons Battle did not want to have pure practical and separate education for farmers or industrial businessmen. He believed that if the university created too different educational choices or tracks it would perpetuate social differences. Leaders in farming and agriculture should have the same educational experience and preparation as the leaders of other industries so as to share an equal social status in a presumably more educated world. Turning to practical issues, Battle claimed that taking the Morrill funds away from the university would diffuse the available educational monies in the state and

⁸⁸ Battle, *University of North Carolina*, II, 381.

create several weak institutions or colleges rather than a single strong university that housed several colleges, sharing resources.⁸⁹

Undeterred, the Watauga Club and the Farmer's Association pushed ahead with their critiques of the university and separate efforts to create schools devoted to industrial and agricultural training respectively. In the spring of 1885 the state legislature carried forth the plans of the Watauga Club's memorial and created the Industrial School. The school would be a part of the Department of Agriculture and receive up to \$5,000 per year from the proceeds of the fertilizer station. The school did not have enough support to wrest the Morrill funds from the university. The Club's initial stated goal was not to remove the funds, but it was the interpretation of the Morrill Act that constituted the difference with Battle and the university. As with the creation of the Georgia Institute of Technology, several cities applied to be the home of the new school. After a mass meeting that November and helping to raise \$8,000, the Watauga Club overcame clever political opposition by Battle and ensured that the school would be in Raleigh.⁹⁰ Three months later in January, Leonidas Polk held a mass meeting, officially founding the

⁸⁹ Battle claimed later in his memoirs that farmers sent their sons to college to prepare for non-farming careers anyway so a university that would train them for something else was really what they wanted. Kemp Battle, *Memorial to the North Carolina Legislature, 1881*, cited in Battle, *University of North Carolina*, II, 219-221; Kemp P. Battle, *The Head and the Hand: The Practical Side of College Life—Problems of the Day; Anniversary Oration Before the Students of the South Carolina College* (Goldsboro: Messenger Publishing Co., 1886): 1-6. Several clippings about talks on "The Relations of Agriculture to the University" in Battle scrapbooks, II in North Carolina Collection University of North Carolina Libraries; Report of William Battle Phillips to Kemp Battle, January 1, 1887, University Papers; Daniels, *Tar Heel Editor*, 297; Battle to Polk, February 11, 1886, Polk Papers; Battle, *Memories*, 250-3; Battle, *University of North Carolina*, II, 123, 381; UNC Trustee Minutes, June 4, 1884; Eddy, *Colleges for our Land and Time*, 38-39; Battle Report UNC Trustee Minutes, February 28, 1884.

⁹⁰ *The Progressive Farmer*, April 21, 1886, May 5, 1887; Charles Dabney, "A Mass Meeting in the interests of a State Industrial School," November 7, 1885, reprinted in Dabney, *Universal Education in the South*, 533-534; Public Laws of the State of North Carolina, 1885, Chapter 308; Raleigh *The News and Observer*, January 22 and 23, 1886; Lockmiller, "North Carolina College," 283; Laws of the State of North Carolina passed by the general assembly at the session of 1884-1885 (Raleigh, 1883), 553-4; Josephus Daniels, *Tar Heel Editor*, 295; Peele, "History," 14-18, 22. Battle noted years later that "the colored Members" of the state legislature often supported the university since "university members had supported bills in which they were interested." Battle, *University of North Carolina*, II, 376.

Farmer's Alliance. Confident with the election of numerous farmer supporters to the state legislature the previous fall, the new Association passed a resolution to create a land-grant college in accordance with the Morrill Act by taking the funds away from the university for a new school. The Watauga Club quickly allied with Polk and his newly powerful followers. Charles Dabney and several representatives from the Farmer's Alliance wrote the Act to establish the A and M college of North Carolina which passed in March 7, 1887. There was strong opposition to the bill, but several factors helped push the law through. A 60-acre private donation gave the school land, the Watauga Club's offer to transfer all of the Industrial School's assets and the provision to receive up to \$5,000 per year from the Experiment Station to the new school, and the recent passage of the Hatch Act that awarded \$15,000 for the creation of agricultural experiment stations like the one North Carolina already had provided additional funding. The state's coffers would not, at least for now, have to offer anything, except the virtually free convict labor that would help construct buildings for the new institution. The Watauga Club's Industrial School now became the state's Agricultural and Mechanical College, and the University of North Carolina lost both the Morrill funds and any hope of sharing in the Hatch Act funds through its relationship with the Experiment Station. Polk capped this victory over Battle and the university by forcing the legislature to reorganize the Board of Agriculture that oversaw the Department of Agriculture. The Board had already grown considerably when an 1883 law required it to include a representative from each district. Now the legislature removed the university's president and the president of the State Agricultural Society from its membership. Battle now had no official position within the

Department of Agriculture. Upon leaving a legislative meeting after all this transpired, Leonidas Polk was overheard in the lobby saying “Now we will let Battle alone!”⁹¹

Battle did see that he had to concede once the political reality and power of the farmer movement became apparent. He concluded later that the university could never balance both “the demand for hand work and keep up its reputation for theoretical training.”⁹² Battle, the faculty, and trustees had to look at what they were offering and decide which of the new professorships to eliminate to save costs. The trustees printed a “Special Announcement” in 1888 dealing specifically with the impact that the founding of the new A and M school would have on the university. Only a few practical subjects like mining, metallurgy, and practical horticulture were eliminated. Agricultural and industrial chemistry remained as did surveying and civil engineering. The circular reminded people that the university still had a large faculty and was still offering professional education in numerous areas as well as the two-year teacher program and a new two-year course “for the benefit of students who are unable to complete a full course” and of “especial benefit to farmers, merchants, manufacturers, and other business men.”⁹³ The next year at a centennial alumni banquet, Battle praised the university since it “adapted the instruction to the wants of the new civilization” and the alumni who had gone on to make important contributions to the state’s manufacturing, internal

⁹¹ Daniels, *Tar Heel Editor*, 296-297; Raleigh *Farmer and Mechanic*, February 21, 1883; Raleigh *State Chronicle*, January 20 and March 3, 1887, January 26, 1888; *The Progressive Farmer*, December 1, 8, 22, 1886, January 5, 19, 26, February 2 and 9, 1887; Peele, “History,” 17-20; *The Tarboro Southerner* January 24, 1887; Laws and Resolutions of the State of North Carolina, 1886-7, 410, 715-722 and 1887, Chapter 410; Battle, *University of North Carolina*, II, 376; Dabney, *Universal Education in the South*, 188; Polk and the Watauga Club, as their members and first historians have eagerly pointed out, wanted to simultaneously give the University of North Carolina a new appropriation that would make up for the loss of the Morrill funds, but that ideal solution was unlikely. The real struggle was about interpreting the Morrill Act, individual political gain, and control of limited educational resources.

⁹² Battle, *University of North Carolina*, II, 377.

improvement, education, and law.⁹⁴ Years later, he pointed out that the students and their parents still wanted a somewhat traditional education before specializing in their intended profession. In 1889, he said, more students graduated with the Bachelor of Philosophy than the Bachelor of Arts and the Bachelor of Science. There was a demand for more practical education, but students still chose the degree that required them to take Latin. Battle retired as university president two years later in 1891, content that he had built a new kind of university in North Carolina. The loss of the Morrill funds was only one setback in a struggle for reform that began in the 1850s. When he had attended the university it was really a liberal arts college in which all students took prescribed courses toward the B.A.. The creation of the Bachelor of Science and Master of Arts degrees started a reform process that had been stalled by the Civil War and Reconstruction but which he resumed with considerable success in the 1870s and 1880s, expanding and diversifying the university's offerings.⁹⁵

In some ways Battle's adherence to the school culture and the desire to educate scientific professionals was vindicated. Like the Georgia Institute of Technology in Atlanta, the North Carolina College of Agricultural and Mechanical Arts began as an institution offering apprentice-like shop experience over theoretical education. The school's initial pride was the great number of shops and the machines upon which students learned metalworking and woodworking, and three of the five initial faculty members taught agricultural subjects. The school never required students to take Latin,

⁹³ Battle, *Memories*, 297; University of North Carolina Trustees, "University of North Carolina: Special Announcement" (Raleigh, n.p., 1888).

⁹⁴ Battle, *University of North Carolina*, II, 428.

⁹⁵ UNC Catalogue, 1888-1889; Battle, *University of North Carolina*, II, 439; UNC Trustee Minutes, June 6, 1888; February 27, 1889; Phillips to Battle, February 16, 1888, University Papers.

but theoretical education, the pure sciences, and the more traditional liberal arts eventually became greater parts of the curriculum.⁹⁶

It was only fifteen years from the time Battle assumed the presidency of the University of North Carolina until the time he retired. Still recovering from the effects of war and Reconstruction, the school experienced repeated internal reforms, helped form the state's new Department of Agriculture and its Experiment Station, and unsuccessfully battled to hold on to the Morrill funds. Constantly having to define his notion of a university, Battle completed the transformation of the University of North Carolina from a liberal arts college into a modern university. It may not have had the funding, endowment, physical plant, or enrollment of some of the university's of the Midwest or Northeast, but Battle made sure that a student entering the university could study any number of subjects and prepare for numerous careers through programs ranging from two-year certificate programs to the Ph.D. Measured in the breadth of its offerings, the University of North Carolina was just as much a university as the University of Michigan, Harvard, or Johns Hopkins. Only the lack of funding and equally developed formal and informal systems of secondary instruction kept UNC from being their equal. Neither of those would come, however, until the state and the South emerged from an economy where few students had little incentive to study for several years to obtain a professional degree. Like the University of Georgia, students at the University of North Carolina took courses and worked toward degrees that would be useful in the current economy not in one that Battle and his fellow reformers hoped to create.

⁹⁶ David A. Lockmiller, *History of the North Carolina State College of Agriculture and Engineering on*

CONCLUSION

FORTY YEARS OF REFORM

The decades between 1850 and 1890 were incredibly active years for American as well as Southern higher education. Like their university peers in other regions of the country, the Universities of North Carolina and Georgia began significant reforms in the 1850s, challenging the mental discipline philosophy of education and the liberal arts college structure that it engendered. Offering only one type of training and degree to students who completed lock-step courses of study was no longer a suitable structure for higher education. It had to change in order to train students not as literary and omniscient leaders of society (clerics, lawyers, doctors, and politicians) but as specialized, scientific professionals in many areas of life. The expansion of knowledge and the market economy led presidents, faculty, and trustees to create new degrees, allow unprecedented curricular freedom, begin graduate education, and experiment with new kinds of professional schools. Continually adding new courses to a uniform curriculum had diminished its depth and worth. Universities across the nation and the South experimented with new ways of organizing their schools and curriculums in these years before settling into the patterns of twentieth century higher education.

At the University of Georgia, leading trustee William Mitchell had been a prominent lawyer and businessman in Athens and north Georgia as well as chief engineer of the state's Western and Atlantic Railroad. When years of not too successful agitation

for agricultural education culminated in a private endowment to the university in 1854, Mitchell began a massive restructuring of the school. Drawing from his own experiences, he imagined a university shed of freshman and sophomore students who would take classes in a nearby Collegiate Institute and composed primarily of several professional schools that would embrace the older, traditional professions of law and medicine as well as the newer professions of agricultural, chemical science, and engineering. Such professional schools, he believed, would help stimulate the emergence of local industry and make scientific improvements to agriculture. He convinced the university's trustees to enact fully his plans, but they did not survive the Civil War. He and his ideas continued, however, to drive the university's development into the 1880s.

The faculty and trustees of the University of North Carolina initially undertook less ambitious reform. After participating in the creation of the North Carolina Railroad, university president David Swain and several of the more prominent trustees worked to create the School for the Application of the Sciences to the Arts. Helping them were a number of faculty members who had examined economic development and educational reforms in the Northeast and hoped to bring them to North Carolina. Offering two new degrees, the school would—like the University of Georgia under Mitchell's plans—prepare students to be professional engineers, agricultural chemists, and chemical scientists. The new school remained intact through the Civil War.

After the war, both universities resumed their reform efforts in hopes of educating the professionals who might create a New South with a diverse, industrial, and independent economy. At the University of Georgia, Mitchell, new Chancellor Andrew Lipscomb, and their trustee allies had considerable success. In the six years from 1866 to

1872 they reopened the university's law school, made a pre-existing medical school a part of the university, opened a new professional engineering school, created two business certification programs and two new bachelor degrees, and adopted a partial elective system.

The University of North Carolina did not fare so well. Despite remaining open throughout the Civil War, the school was beset by perpetual turmoil in the years that followed. Dominant trustee Kemp Battle and faculty member Charles Phillips began renewed reforms, drawing upon Battle's business background and both men's experiences traveling and studying in the North, quite similar to the way William Mitchell drew upon his own business experiences at the University of Georgia. Congressional Reconstruction dashed their plans. A new Republican-appointed president, faculty, and board of trustees tried to carry out their own curricular reforms, but these too failed, as the local and state elite refused to patronize the school and it closed in 1871.

The 1870s and 1880s were years of struggled growth for both schools. Using the funds from the Morrill Land Grant Act, the University of Georgia created the State Agricultural College and its first branch college in Dahlonega, offering three new Bachelors degrees and teacher training. After this quick growth and the curricular diversification that the new colleges afforded, the university faced three challenges. A new Chancellor in 1874—Henry Tucker—tried to reverse the university's reforms of the previous decades, but the trustees fired him and resumed their reform efforts under long time faculty member Patrick Mell. The State Agricultural Society advocated taking the Morrill funds away from the university because it did not serve the farmers or a wide

enough segment of the state's populace, but Mitchell, Mell, and the trustees created a series of branch colleges to deflect the criticisms and keep control of the funds. The movement to create the Georgia Institute of Technology further threatened to take the Morrill funds away and undermine the University of Georgia. The eventual founding of the Georgia Institute of Technology did not remove the Morrill funds from the University of Georgia, but it was a major setback, and it was accompanied by the university's loss of educational reform initiative on several fronts. Not until the turn of the century would curricular change and growth begin again.

As the new president of the University of North Carolina in 1876, Kemp Battle lost little time in catching up to the reforms at the University of Georgia. After a trip North, he and faculty member Carruthers Kerr again redesigned the university and oversaw a continual expansion and diversification of the curriculum, including new bachelors degrees, a law school, graduate studies, and increased levels of scientifically practical education. The university was, in their minds, one of three state educational institutions that would help improve the economy, and both men played pivotal roles in their creation. The other two—the North Carolina Department of Agriculture and the North Carolina Agricultural Experiment and Fertilizer Control Station—were educational institutions in that they too were in the business of the production and dissemination of knowledge, each producing and disseminating information useful to the state's economy in its own way. Battle and the university eventually lost influence in the Department and the Station, but all three institutions were born out of the same creative energy and political economic ideas. By the 1880s, the University of North Carolina's curriculum was quite diverse and the state was beginning to give the school regular funding. Just as

at the University of Georgia, however, successes were soon followed by challenges. The Watauga Club, an organization of New South-promoting, economic booster editors, businessmen, and educators, convinced the state legislature to create an Industrial school that might take away the Morrill funds. The creation of the State Farmer's Association turned this challenge into a defeat. Led by Leonidas Polk, the Association ensured that the Morrill funds would go to the new school and that it would become the North Carolina Agricultural and Mechanical College. While this was a blow to Battle and the university, the University of North Carolina continued its own reforms, building upon the changes of the 1870s and 1880s.

The shifting educational policies and practices at the Universities of Georgia and North Carolina between 1850 and 1890 reveal several things about these two schools and Southern higher education. University reform in nineteenth century Southern higher education was not the result of a defeated South finally coming to terms with its dearth of technical expertise, a new generation of Southerners breaking from the past, or well-meaning Northern philanthropists and carpetbaggers spawning a new kind of University in the 1870s and 1880s. Rather, the growth of scientific and utilitarian elements in the curriculum was a longstanding indigenous movement that received impetus from the Confederate defeat in 1865, drew strength in the 1870s and 1880s from one strain of the efforts to diversify and industrialize the South's economy, and both borrowed and independently arrived at educational innovations in other parts of the country and the world.

By the 1850s, a new kind of college or would-be university was emerging in the South that was far from the traditional college with its single class locked in a prescribed,

classical curriculum. The university envisioned by the reformers would educate scientific professionals for an emerging Southern economy based on scientific agriculture and industry. They believed that their graduates would form an indigenous technological community that would build the roads and railroads essential to commerce and communication, improve farming and processing techniques to feed more people or produce more saleable crop per acre and free labor for other pursuits, and build industrial and financial sectors of the economy to fund and create new types of industries and businesses.

What they succeeded in doing was to create universities whose curriculums were as comprehensive as most others in the nation. This is especially true from the perspective of the student. In 1877, the United States Bureau of Education recognized twenty-four college and university degrees. A student entering the University of Georgia at this time or the University of North Carolina shortly thereafter could study for almost as many of these degrees as if he enrolled at Cornell, Columbia, or Harvard. The highest level degrees may have been markedly absent at the Southern schools, but this is not surprising considering the overall education levels in the region. The University of North Carolina, in fact, soon began offering the Ph.D.. The report fails to note the certificates of proficiency or completion for two-year programs and such that students earned at the Universities of Georgia and North Carolina, further diversifying their educational offerings. A more detailed comparison of the findings in the 1879 Bureau of Education Report reveals that students enrolling in public universities in Michigan, Wisconsin,

Ohio, Illinois, Massachusetts, and New York had choices that were remarkably similar to those at the University of Georgia and the University of North Carolina.¹

Reform leaders at these two Southern schools tenaciously fought to enact their ideas amidst considerable challenges and frequent setbacks and were successful in changing the formal offerings at their schools. Their efforts failed, however, to create a new, industrial South much less to alter radically the student behavior at their universities. The South remained wedded to a one-crop economy throughout the period and only a handful of students took the new courses or enrolled in scientific programs. The reformers were struggling not just against their own specific obstacles or the setbacks of the Civil War and Reconstruction. In some ways they were working against the economic structure and political milieu of the postbellum South which were quite different from those confronted by university reformers in the Northeast and Midwest.

The Southern economy depended upon Northern capital investment, technology, and technological skill. Combined with a Southern credit system that favored a one-crop

¹ There is no way to gauge the different levels of education offered by these different schools and their various degree programs. So much depended, as today, on the interests and capabilities of the individual instructors who often comprised whole departments and programs. The Board of Education Reports are excellent sources of comparative information. Henry Barnard was the Commissioner of Education at this time, and he headed an exhaustive look at schooling in the United States and abroad, printing the results in his *Journal of Education*. The figures in the reports for offerings, enrollments, and financial resources are those reported by the schools themselves. Barnard's office sent requests for information out to the universities, compiling and cross-referencing the data from the responses. 1877 Report of the United States Board of Education, *American Journal of Education* IV (1879): 568-569; 1879 Report of the Commissioner of Education printed as *American Journal of Education* 25 (1881), 40, 44, 56, 60, 122, 183, 191, 338, 376-380, 396, 407, 423, 445. For general treatments of American universities in this period, see Laurence R. Veysey, *The Emergence of the American University* (Chicago: University of Chicago Press, 1965), 60ff; John Brubacher and Willis Rudy, *Higher Education in Transition* (New York: Harper and Row, 1976), 100ff; Frederick Rudolph *The American College and University: A History* (Athens: University of Georgia Press, 1990), 264ff. For secondary treatments of a number of universities in other regions, see Morris Bishop, *A History of Cornell* (Ithaca, NY: Cornell University Press, 1962); Brooks Mather Kelley, *Yale: A History* (New Haven: Yale University Press, 1974); Samuel Eliot Morrison, *Three Centuries at Harvard, 1636-1936* (Cambridge: Belknap Press, 1936); Howard H. Peckham, *The Making of the University of Michigan, 1817-1992*, edited and updated by Margaret L. and Nicholas H. Steneck (Ann Arbor: University of Michigan Press, 1994); Merle Curti and Vernon Carstensen, *The University of Wisconsin: A History*

economy, this dependency created powerful disincentives to economic and technological innovation which in turn discouraged indigenous economic diversification and industrialization. The South lacked a capital goods sector and relied on importing machinery and tools from Northern manufacturers. The imported technology made it easier to use unskilled labor in the South's labor surplus economy. It also decreased incentives to train Southern labor or to develop the technological community needed to support indigenous higher-wealth-producing industries or a southern capital goods sector. Unlike in the West where Northern immigrants followed Northern investment capital and technology, few immigrants came to the South. This lack of immigration only deepened the South's dependence on Northern technology and capital. Since the southern economy was intensely capital scarce and the prevailing credit system encouraged single-crop agriculture and rarely backed manufacturing or industry beyond the most basic levels of agricultural processing, Northern investment capital was essential for economic change. Southern capitalists and entrepreneurs, therefore, "were perfectly happy to become, in effect, franchisees of the already developed technological community of the manufacturing belt." These investment choices precluded the need to invest in human capital and indigenous innovation. Similarly, Southern politicians were far more interested in keeping taxes low in their states than they were in funding education for a skilled workforce or the higher education that might be needed to develop a local technological community.²

(Madison: University of Wisconsin Press, 1949); Winston O. Solberg, *The University of Illinois, 1867-1894: An Intellectual and Cultural History* (Urbana: University of Illinois Press, 1968).

² David L. Carlton and Peter A. Colclanis, "The Uninventive South? A Quantitative Look at Region and American Inventiveness" *Technology and Culture* 36 (1995): 303, 311-312, 322-325. Quote on page 325. Gavin Wright, *Old South, New South: Revolutions in the Southern Economy since the Civil War* (Baton Rouge: Louisiana State University Press, 1986), 37-38, 62-63, 78-80. Paul Gaston's *The New South Creed: A Study in Southern Mythmaking* (New York: Knopf, 1970) discusses the various forms of postbellum

The higher education reformers in Georgia and North Carolina believed that a university-trained, indigenous technological community could create a new, less dependent Southern economy, but such a strategy was not suited to the Southern economy or the political necessities of the 1870s and 1880s. They had been very successful at erecting higher education structures that compared favorably with those of the Northeast and Midwest, but such structures and the technological professionals they were supposed to produce could not radically alter the Southern economy by themselves. The South's capital scarcity, labor surplus, one-crop agricultural and extractive intensive economy, and the nature of its economic and innovative dependency on the North prevented educational reform from being an engine of economic development. Education reform alone could not vault the region into a diverse economy by educating technological professionals without the accompaniment of freer flowing capital and steady internal improvements and investments. There is even some doubt that increases in expenditure and the reform of education can be counted as a cause of commercial and economic diversity. The changes (or the enrollment of students to take advantage of the changes) are, instead, an effect of wider commercial opportunities.³ The South is not the only so-called underdeveloped region that has been unable to use higher education as a short cut to economic development. India, for example, has some of the more highly

boosterism, coalescing them into one nebulous New South Creed. The economic boosterism of the 1870s and 1880s took many forms for many local or particular reasons. The structural reforms in higher education at the Universities of Georgia and North Carolina were one manifestation of that boosterism. See also Woodward, *Origins of the New South*, 145ff.

Despite the continued and new obstacles to industrialization and economic diversification after the Civil War in the South, the efforts by some boosters to create a "commercial revolution...fostering an industrial revolution" continued and strengthened, and was increasingly embraced by planters. *Thinking Back: The Perils of Writing History* (Baton Rouge: LSU Press, 1986), 74. See also James C. Cobb's "Beyond Planters and Industrialists: A New Perspective of the New South" *Journal of Southern History* 54 (February 1988), 45-68.

³ Carlton and Colclanis, "The Uninventive South?," 322-333.

educated people in the world who have had the additional benefit of speaking English and being educated in an inherently British system, yet the nation remains one of the poorest and still imports much of its technological innovation. Advanced industries and capital goods sectors cannot be simply shifted from the industrial core or economic centers to the periphery or a dependent region because that region has a small, though proficient, technological community. Such a technological, professional community must emerge alongside a developing economy not create it against the current of the prevailing economic and political structures or that community will exist in economic isolation, having little impact upon its surroundings.

This disconnect between the political and economic realities of the 1870s and 1880s and the economic development strategy of the university reformers partially explains two of the critical shortcomings in the reforms at both the University of Georgia and the University of North Carolina—funding and enrollments. Representatives of state governments were not interested in regularly funding the universities and often felt they had done enough by guaranteeing an interest rate for an often ancient state endowment. Even if the state governments wanted to provide additional funding for their universities, there was only so much in the state coffers. The South was particularly hard hit by the depression of the 1870s and was still recovering from the ravages of the Civil War and Reconstruction. Other projects, like rebuilding state capitals, tended to take precedence. Funding, however, was critical to reform. The first substantial reforms at the University of Georgia occurred after the receipt of a private endowment in 1854. The University of North Carolina relied upon a private donation campaign to reopen in 1876 and enacted its most sweeping reforms after the state began meager support in the early 1880s. Leaders

at both schools worked doggedly in the 1870s and 1880s to hold on to the Morrill funds whose partial use they could justifiably claim for their new programs. Without the money to hire new, qualified faculty and to buy scientific equipment for research and instruction, much reform was limited to the shuffling of resources and the creation of numerous courses, programs, and schools around individual instructors.

The Universities of Georgia and North Carolina, like other Southern universities, did not have the same enrollments as universities in other parts of the country, and most students continued to earn the same degrees that were offered before the Civil War. Many of the new degrees were novel and untested, and there was little present demand for them. There were few economic or social reasons for a young man in Georgia or North Carolina to want or need a degree in engineering or chemical science. Despite the visions of the educational reformers and the handful of advanced industries that did need a local technological community, the Southern economy did not require a pool of highly skilled professionals for new industries. Students had no reason to believe they would need the professional degrees to make good livings or become leaders in their society.

The fact that the new degrees were often scientific degrees, requiring a high level of preparation and study, further diminished their appeal. Able to succeed without an additional one to two years of study, many young men who could have pursued the advanced studies likely chose to leave the university as soon as possible. The poor development of the entire educational system also crippled southern universities in their efforts to expand, elevate, and diversify their curricula. Other levels of education were atrophied in the South, particularly compared to the growth of high schools and the accreditation system in the Northeast and Midwest. Fewer students in North Carolina

and Georgia were even educationally capable of entering the state universities. The reformers at the University of Georgia tried to address this problem with the Collegiate Institute and branch colleges, while at the University of North Carolina they temporarily offered remedial classes, but their efforts attracted few students to the upper classes much less toward graduation.

Despite these failings, the educational experience at the University of Georgia and the University of North Carolina in 1890 was vastly different from what it was in 1850. In 1850, students entered the universities and took the prescribed courses exclusively for their first three years before choosing a foreign language or one of the new technical courses in their senior year. There were no advanced degrees other than the honorary Master of Arts degree that was theirs for the asking three years after graduation. By 1890, an entering student could enroll in a two-year program or set out to earn a Ph.D.. He could take a course of study designed to make him a better scholar, teacher, lawyer, doctor, pharmacist, engineer (civil, mechanical, or chemical), or agricultural scientist.

To their credit, the reformers at both schools had created an entirely new curriculum designed to keep their students' apace with the growth of knowledge and the economic changes taking place in much of the country. They never expected to educate the masses in the new sciences and professions and were quite pleased with the enrollments they did have in the new programs. They anticipated that a small number of university-educated scientific professionals would be the leaders in new industries just as a small number of university-educated men had been leaders in the society for decades. In one way they were correct. The leaders in the professions tended to be those with formal scientific, professional education, and many of those who contributed to the

economic development of the states in leadership roles in subsequent years had been affiliated with the universities as teachers or students. It would take a shift in the political economy of the states and the resulting increases in funding and enrollments for the reformers' dreams to become a reality. Only in the progressive era from the 1890s to the 1910s, did government expenditures for education at all levels increase enough and the Southern economic and business environment begin to diversify enough for the redesigned universities to attract more students and to play a substantial role in the region's economic development, and it has taken even longer for the South's labor and educational markets to integrate into those of the rest of the nation. From 1850 to 1890, however, the reformers did lay the intellectual and curricular foundations that would be needed when the money and students finally arrived.

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