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This paper focuses on the history of women librarians of the land-grant universities in the West and Midwest during the last half of the 19th century and the first two decades of the 20th century. A history of the general situation of the land-grant colleges during this time period and the new curriculum in agriculture and the mechanical arts is provided. This new curriculum required a new type of library that greatly differed from the libraries common to higher education before this time period. These changes occur alongside the emergence of librarianship not only as a new profession, but also a new and socially appropriate vocation for educated women. The hiring practices of the land-grant college libraries, with regards to its librarians, are discussed within this historical milieu.

Headings:

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THE WOMEN LIBRARIANS OF THE LAND-GRANT COLLEGES IN THE WEST
AND MIDWEST, 1862 – 1920: A PRELIMINARY STUDY.

by
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Introduction

A mere 38 years before the passing of the Morrill Land Grant Act in 1862, Thomas Jefferson began his correspondence with the Boston bookseller, William Hilliard. This correspondence had as its subject the procurement of books from Britain and Europe for the library and faculty of the University of Virginia.¹ Despite the breach caused by the American Revolution, the American book scene still depended upon the products of the British and European print industries, as the small industry in the United States could not yet sustain the demand of the new country. As the new colleges created by the Morrill Land-Grant Act opened their doors, they too had to build a collection of books, just as Jefferson had done for his beloved University of Virginia. However, unlike Jefferson, whose demands were founded in a long-standing classical tradition, these new colleges had no codified curriculum. And unlike Jefferson, who could so confidently request certain books to be sent by his bookseller, the new attendants and librarians of the American agricultural college could not have had such confidence. For not only was there no curriculum to guide them, there was no over-arching educational tradition on which to rely. But from these meager beginnings sprang what are now some of the largest libraries and influential research institutions in the world.

The librarians of these new institutions would have had to act like Thomas Jefferson, being not only the advocate for their institutions, but also the person who began to build the collection. And at many of these institutions this person would have

¹ See *Jefferson's Ideas on a University Library*. Elizabeth Cometti, ed. Charlottesville, VA: University of Virginia, 1950.

been a woman. A woman who may or may not have been the wife or close relative of the college president or faculty member, who may or may not have gone to college and who may or may not have had an education in librarianship. But no matter their background, it is these women who laid the foundation for the American research library.

For the past two decades scholars have been studying the history of women in librarianship. Many of these studies have focused upon the impact of female librarians within the world of public librarianship, and rightly so. From its earliest years as a profession in the United States, the job of being a librarian primarily fell within the scope of women. This association of women with public librarianship has spurred much scholarship in a quest to answer the simple questions of why and how librarianship became a feminized profession. Since the 1970s a steady stream of publications that attempted to explain the why and the how – *Apostles of Culture* and the work of Dee Garrison, stand out among the first works in this regard. Suzanne Hildenbrand contributed to the conversation with her questioning of Garrison’s work through her publication *Reclaiming the American Library Past: Writing the Women In.*² It is necessary and good that this conversation began and remains active. However, public librarianship is only one aspect of American library and education history. This is not to say that understanding the role of women in public librarianship is unimportant; public libraries have had a major impact upon American society and culture, and it is not an inconsequential fact that it has been primarily women who dominated the profession. But concurrent to the public library, there was another world emerging from great change -- the world of the academic college library.

² Both of these works will be discussed in further detail throughout this work.

During the last half of the 19th century the American educational scene, both in higher education and primary education, went through a series of important transformations. Within 70 years after its gain of independence the geographical size of the United States more than doubled and the locus of the country began to expand westward, away from its original eastern foundations. As Americans spread across the new geography, they brought with them the needs of culture: societal structure and economic growth. Agricultural production became the locomotive for expansion. An integral aspect of this scenario was education. Just as the first European inhabitants of the North American Colonies founded Harvard College and the College of William and Mary relatively quickly after settlement, the new settlers of the Ohio and Mississippi river valleys sought to establish their own educational institutions.

Many of the new state and territorial governments created provisions for public colleges to be founded. However, a national system of education in agriculture and the mechanical arts would be brought about by the Morrill Land-Grant Act of 1862, a piece of Federal legislation spearheaded by Justin Morrill, a representative from Vermont. By providing the funding, the Federal government was able to bring about plans for colleges that many of the states and territories had intended, but could not fund. While the Government's intentions behind instituting such an educational system are still debated, it is clear that these institutions have had a profound impact upon the society and culture of the United States.³

³ The question of the intent behind the land-grant college system continues to be debated. Two of the more recent articles are Scott Key's "Economics or Education: The Establishment of American Land-Grant Universities" (1996) and Eldon L. Johnson's "Misconceptions About the Early Land-Grant Colleges." The work of both of these authors will be discussed at further length in the section devoted to the history of the land-grant college.

The subject of this endeavor is the foundation of the libraries within these institutions, a new type of library that would be referred to in the 20th century as the research library and their first librarians who, like Thomas Jefferson, had to contend with lack of resources and a pressing need for materials. This study attempts to elucidate and define the relationship between the hiring of women as academic librarians in western land-grant colleges, specifically, and the status of these newly formed colleges⁴. In this relationship lies the confluence of two new societal paradigms: the professional woman and the practical education.

A Feminized Profession

The study of the history of women in academic librarianship is relatively young. Historians and social scientists began to question the perceived lower status of women librarians in academic positions in the 1970s and 1980s and it is not unimportant to note that this body of literature comes only 50 years after that first generation of prominent women academic librarians retired or passed away. These early studies, while focusing on the subject of the contemporaneous status of women academic librarians, provide a context in which to understand how the beginning of this particular class of employed women affected the later status of women within the profession. In the mid-1980s Robert Swisher and Rosemary Ruhig Du Mont questioned the disparity of women in academic library administrative positions, relative to their general rate of employment in academic libraries and compared to the number of men who held administrative positions. Their

⁴ The term “western” will be used in this writing to indicate the geographical area that now constitutes the Mid-West and West, including the states of Illinois, Michigan and Iowa. While the west is now perceived as the states of the Great Plains and the West Coast, this demarcation has changed throughout time, and I will be referring to this geographic area in its historical sense. This will be discussed in a later section of this paper.

study did not conclusively illustrate direct bias in the hiring or advancement of women into administrative positions, but it did conclude that even when educational level was equal (i.e., the attainment of a doctoral degree), men held administrative positions at a higher rate than women.⁵

Additionally, David R. Dowell addresses the disparity in salary between male and female academic librarians in "Sex and Salary in a Female Dominated Profession."

Dowell examined previous studies performed on salary differentiation of academic librarians and continues these studies by using a multiple regression model in which he includes two variables that had not been used in the previous research: peer ratings and institutional data.⁶ He concludes that sex is just "one factor" of pay disparity. According to his results, the variables that had a greater impact on pay disparity were level of position within the institutional hierarchy, additional educational degrees and amount of supervisory experience.⁷ However, Dowell concludes that even when variables are held constant, male librarians, to a degree, still earned more than female librarians. These findings, combined with those of Swisher and Ruhig Du Mont, illustrate the bind of women academic librarians at this time: pay was based on status, but equal status could not be obtained even when other factors were equal.

Nancy A. Van House takes a different approach than her fellow researchers in this area. By using the human capital model, Van House discusses this disparity in terms of the economic gain of an individual's training and education. Viewing the question of pay disparity in this manner is an interesting one, considering the history of the professionalization of librarianship at the turn of the century. A higher degree of

⁵ Swisher and Ruhig Du Mont 151-154.

⁶ Dowell, 93 - 94.

⁷ Ibid., 95 -96.

education became one of the cornerstones of librarianship as a profession; this factor set the new generation of librarians apart from the older, practically-trained one. Using data gathered during a 1980 survey of members of the American Library Association conducted by Kathleen M. Heim and Leigh S. Estabrook⁸, Van House attempts to further clarify the “determinates of librarians’ salaries.” Her results reflect the complicated nature of this question, as she takes into account the historically “feminized” nature of the profession. In general, she found that male academic librarians were paid at a higher rate compared to all other categories of librarians, including that for school libraries. Interestingly, she notes the salary disparity between men who work as school librarians and those who work in academic libraries is greater than for women in the same relationship.⁹ This difference implies that the factor of status continued to carry weight in salary determination.

To state it rather simplistically, what these more current studies demonstrate is that women continued to have a lower status as academic librarians than did men of the same position. However, the relationship between job status and gender was not as clear cut in the 1970s and 1980s as it was in the 1880s and 1890s, when a college president could simply state that “you do not have to pay librarians... whether trained or not, they did the work.”¹⁰ A hundred years later, other variables came into play, such as a requirement for secondary masters and doctoral degrees; as well as the concept of leaving a position to go back to school or have children and then return to the profession. As well, it could be argued that the concept of librarianship as a profession that is equal to

⁸ Their results were published in the book *Career Profiles and Sex Discrimination in the Library Profession* in 1983.

⁹ Van House 142, 164 – 165.

¹⁰ As quoted in Passet, 332.

the status of other academic faculty, a question that has been present since the beginning of the profession, continues to be a factor in status and salary. These variables complicate the relationship between gender and status in the academic librarian profession. As very few of these studies took into account the history of librarianship as a “feminized” profession, the correlation between the current status of women in academic libraries, and the positions that they held as librarianship was emerging as a profession, cannot be made conclusively. It is necessary then to understand the position that women academic librarians held as higher education was evolving from the traditional classical model to the research and liberal arts model that came to predominate.

This is not to imply that researchers during the 1970s and 1980s were not performing research on the question of historical salary and status disparity within academic librarianship. Margaret Ann Corwin does just this in “An Investigation of Female Leadership in Regional, State, and Local Library Associations, 1876 – 1923,” published in 1974. In this work, Corwin hypothesizes that “despite the fact that women held the lower prestige positions nationally in the profession during this early period, they were actively providing leadership in state organizations and local associations.”¹¹ By using data collected from the national associations, U.S. Bureau of Education reports, the American Library Index, state publications and press reports, Corwin does demonstrate that on the local and state level, women librarians held positions of leadership at a greater rate than male librarians. This concurs with the observations of Georgia Higley and

¹¹ Corwin, 134.

Joanne E. Passet that women academic librarians in the West and Mid-West were important in the development of their state and local library associations.

In more current historical research on the history of women librarians in the West, it has been posited that the opportunities for women academic librarians were greater in Western institutions of higher-education, particularly the land-grant institutions. This is particularly true for the work of Joanne E. Passet. She clearly states, “the American West held great promise for turn-of-the-century professional women.” Clarifying this position she continues, “...women who wished to become academic librarians began looking to the West, with its growing numbers of land-grant colleges and normal schools, for employment. Conditions in the East and Midwest....made it difficult for library school graduates to obtain positions there. They...regarded the Rocky Mountain, Southwestern, and Pacific United States as a land of opportunity...”¹² In these statements Passet is making a clear correlation between the state of the West and the opportunities for women looking for professional positions. This correlation has been carried through much of the subsequent scholarship published in this area of library history.

However, Passet begins her exploration of this subject further to the east, in much the same way Western settlers began their journey. In an earlier article, “The Rule Rather Than the Exception,” Passet delineates a relationship between eastern and western colleges. This relationship is defined by two major differences: the predominance of a new curriculum based outside the classical model of higher education and the availability of co-education in the young colleges of the Midwest. This relationship created an opportunity for an increase in the numbers of women academic

¹² Passet, 320 – 321.

librarians in Midwestern colleges at the turn of the century.¹³ Furthermore, she states “[p]riorities were to change in the twentieth century, but until that time, the availability of college-educated women in conjunction with the low status accorded academic librarianship enabled women to enter college and university library work in growing numbers.”¹⁴ Her argument relies upon the assumption that the status of the library was low in these new co-educational, non-classical institutions.

Unfortunately, most of the scholarship on women academic librarians appears to be permanently intertwined with the history of women in public librarianship. For example, in a chapter on the wages earned by librarians, Passet describes the low wages of women librarians, both academic and public, within the same chapter, without describing the differences that may have existed between the status and responsibilities of a public librarian and an academic librarian.¹⁵ It is this lack of differentiation, as well as primary sources in library historiography, that Christine Pawley makes note of in her forward for Garrison’s history *Apostles of Culture: The Public Librarian and American Society, 1876 – 1920*. Pawley’s comments define the critique of library historiography as practiced by authors such as Passet and Garrison. The argument could be made, however, that because many of the pioneering academic librarians were also the driving force behind their state and local public libraries their professional work cannot be arbitrarily divided by job title. But the combining of these two different arenas within library historiography has weakened the conversation and diluted the historical subject. The history of women as academic librarians must first be understood within the context

¹³ Passet Bailey, 674 – 675.

¹⁴ Passet Bailey, 678.

¹⁵ Hildenbrand, ed. *Reclaiming the American Librarian Past*, 212.

of their *being* primarily academic librarians. It is only within this context that their larger role within librarianship can be understood.

Georgia M. Higley has begun that separation in her article “College, Community, and Librarianship: Women Librarians at the Western Land-Grant Colleges,” which is included in the collection *Reclaiming the American Library Past: Writing the Women In* edited by Suzanne Hildenbrand. Higley’s scholarship, like Passet’s, is based upon the idea that the new structure of the American land-grant college provided a particularly well-adapted atmosphere in which the emerging class of educated, professional women could prosper, if in intellect and personal productivity only, as it is undisputed that women in the professions were paid less than men in the same position at this time. This atmosphere was further complicated by the non-codified nature of the agricultural curriculum. For many of the Western institutions, materials for teaching and research were not readily available. This situation made the role of the librarian particularly important since the collecting of appropriate materials for the institution became an imperative task. She notes, “in many western states, land-grant college libraries were the only sources for information on agriculture and mechanical arts; thus, despite the paucity of their collections, they were a major resource for the practical disciplines.”¹⁶ By doing so, Higley unabashedly equates the work of women librarians in land-grant institutions with the foundation of modern academic librarianship. To date her work appears to be the most definitive scholarship published regarding the history of women librarians and land-grant colleges.

¹⁶ Hildenbrand, ed. *Reclaiming the American Librarian Past*, 58.

Frederick Jackson Turner and Defining the West

In 1920, Frederick Jackson Turner published his seminal work *The Frontier in American History*. In this work, Turner posits the idea that the frontier was a force that created a particularly American identity. Turner also uses the concept of the frontier as a transitory demarcation between the settled and unsettled regions of the United States. This demarcation is a primary component of the definition of the West in American history. The “West,” because of its transitory nature, held varying meanings within American society. This study focuses upon what Turner would have referred to as the “middle west,” an area of the country, primarily west of the Mississippi, that was settled in the middle-19th century.¹⁷ Turner includes Ohio and Indiana in his definition of the Middle West. For this study these two states have not been included, as their economic and settlement history do not cohesively correlate with that of the Plains states.¹⁸ Or, as Turner might phrase such difference: “each has its own history of occupation and development.”¹⁹ As well, this study includes the areas west of the Rocky Mountains.

Turner astutely points out the fact that the creation of a frontier had always been a result of economic phenomena and defined by its industry and economic output.²⁰ The Middle West, in particular, was defined by its “underground wealth:” its fertile soil, forests and deposits of coal, copper, oil, gas, zinc and gold.²¹ Understanding the vast economic potential of the western territories is important in understanding the drive to

¹⁷ Turner, 126. Turner has based his definition upon one provided by the US Census. The Census division named the area of the Midwest as the “North Central division.” This includes: Ohio, Indiana, Illinois, Michigan, Wisconsin, Missouri, Iowa, Minnesota, Kansas, Nebraska, North Dakota and South Dakota.

¹⁸ Ibid, 128.

¹⁹ Ibid.

²⁰ Ibid., 14–15.

²¹ Ibid., 128–129.

create a social system that would allow for settlement and exploitation. For the settlers of the Middle West, a system of higher education was a necessary aspect of this social system.²²

Turner's work is particularly pertinent to this study as it provides a working definition of the West that is grounded in contemporary ideation of the region. Perhaps more importantly, Turner understood that the inhabitants of the West attempted to concurrently create social institutions that reflected their own unique situations while maintaining the social structures of the stabilized East.²³ Most pertinent to this study are his thoughts gathered in the essay "Pioneer Ideals and the State University."²⁴ Like many of the historians of the land-grant college, Turner views their inception as heavily influenced by the "democratic ideals" of the Western frontier settler.²⁵ But he also views their inception as part of the Government's attempts to create infrastructures that would provide means to productively use the resources available. Turner states "The government supplies the capital for huge irrigation dams and reservoirs and builds them itself...It analyzes the soils and tells the farmer what and when and how to plant."²⁶ While Turner's history of the state university provides an important contemporary view of the role of these institutions in young American societies, it cannot provide a definitive interpretation of this role.

²² Key, Scott. "Economics or Education," 211-212; Turner, 155, 269-271, 284.

²³ Turner, 274-276.

²⁴ Chapter 10 in *The Frontier in American History*.

²⁵ Turner, 285 - 286. See also Eddy, *Colleges for Our Land and Time*.

²⁶ Turner, 278.

The (White) Land-Grant College²⁷

The legislation that created the Land-Grant College system was passed by Congress in 1862 and signed into law by President Lincoln. The act was sponsored by Justin Morrill, a senator from Vermont. This act was the second version of the bill; the first had been introduced by Morrill in 1857, passed by Congress in 1859, but vetoed by President Buchanan.²⁸ It is generally agreed that the main factor that inhibited the passage of the first bill was the lack of support by Southern representatives. Morrill introduced the bill for a second time in 1861. The changes wrought by the Civil War, including the absence of the Southern states and the concerns of her Congressmen regarding the constitutionality of the legislation, and the inclusion of a requirement for military training as part of the curriculum, engendered favor by the Congress and President Lincoln.²⁹

From this legislation, 24 Western and Mid-Western agricultural colleges were created. (Illustration 1) Five of the states, all of them in the Mid-West, founded colleges prior to the Morrill-Land Grant. The University of Missouri is the oldest of all the agricultural colleges in the West and Midwest, opening in 1841. The Michigan Agricultural College opened its doors in 1857; the University of Minnesota had been created shortly before in 1851 and the University of Wisconsin is the second oldest, being founded in 1848. Iowa State College of Agriculture and Mechanic Arts is the youngest of this group, accepting students in 1859. Four agricultural colleges were founded in the

²⁷ It is important to note that the Land-Grant Act of 1890 established precedent for the education of African-Americans. This legislation allowed the creation of separate colleges for African-American students in order to fulfill this requirement and many land-grant colleges for African-Americans were founded due to this. The confines of this paper do not allow for adequate treatment of the “colored” land-grant colleges, as their history requires the consideration of unique and powerful factors.

²⁸ NASULGC. *The Land-Grant Tradition*, 3 – 4.

²⁹ Madsen, 30; Eddy, 30 – 31, 41; NASULGC, 3 -4.

1860s: the Kansas State Agricultural College in 1863, Oregon Agricultural College in 1865, the University of Illinois in 1868 and the University of California in 1869. In the 1870s five institutions were opened: Colorado Agricultural College in 1879, the University of Nebraska in 1871, the University of Nevada in 1874, the Ohio State University in 1873 and the Agricultural and Mechanical College of Texas in 1876. Only two colleges were opened in the 1880s: South Dakota State College of Agriculture and Mechanic Arts in 1884 and the University of Wyoming in 1887. The century closed with the opening of the New Mexico College of Agriculture and Mechanic Arts and the Agricultural College of Utah in 1890, the Oklahoma Agriculture and Mechanical College and the University of Arizona in 1891, the State University of Washington and the University of Idaho in 1892, and the Montana State College of Agriculture and Mechanic Arts in 1893.

While the name of Justin Morrill has become synonymous with the land-grant college movement, the concepts that are embodied in the legislation had been present within the founding ideas of many of the new western territories and states, as well as being part of the contemporary discussions surrounding the requirements of higher education within the United States.³⁰ Spearheaded by a senator from the East, its origins lie in the ideas of Jonathan Baldwin Turner, an educational theorist who spent his professional life in Illinois. In the mid-1800s Turner proposed the idea of an “industrial institution,” an institution that would meet the needs of the areas’ economic driver – the farmer.³¹ As Turner stated in 1852

³⁰ Johnson, Eldon L. “Misconceptions About the Early Land-Grant Colleges,” 333 – 336. Key, Scott. “Economics or Education,” 197 – 199.

³¹ Madsen, David. “The Land-Grant University: Myth and Reality,” 23 – 24, 27 – 30. Eddy, Edward Danforth. *Colleges for Our Land and Time*, 23 – 25.

...I am satisfied that if the farmers and their friends will now but exert themselves they can speedily secure for this State, and for each State in the Union, an appropriation of public land adequate to create and endow in the most liberal manner, a general system of popular Industrial Education...There is wisdom enough in the State, and in the Union, to plan and conduct it – there are students enough to patronize it – there is useless land and wealth enough to endow it – and there are hearts enough that want it...³²

Turner's call for a "popular education" indicates the increasing need for a system of higher education that would address the particular economic and social needs of the United States, as well as its continued geographic expansion. The classical model that provided the basis for colleges and universities in the East could not accommodate the rapidly, and occasionally radical, changes that were occurring in the new territories and states in the West, as well as the transition of economies in the more settled areas of the Southeast, Northeast and the Ohio River Valley. This novel way of thinking about higher education was also influenced by the discussions surrounding the research model of education occurring in Germany (most evidently found in the creation of Johns Hopkins University in 1876).³³

What is perhaps the most important aspect of the land-grant college system was its ability to address the needs of its parent state or territory. While the land-grant was financially supported by the sale or lease of Federal lands, the creation and control of the college was the responsibility of the state or territorial government. Simple guidelines for the curriculum are provided in Section four of the act

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

³² As quoted in Eddy, 24.

³³ Madsen, David. 24 – 27; Eddy, 46 – 47, 51 – 61.

as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.³⁴

This broadly defined curriculum, along with the provision in Section five that the land-grant could not be used “directly or indirectly, under any pretence whatever, to the purchase, erection, preservation, or repair to any building or buildings,” indicates that the Congress did not intend to maintain control over the system.³⁵ Rather, what the Federal Government did do is to provide seed money to the states. By doing so, the States created institutions that were able to respond to their unique qualities and requirements. Therefore, it is impossible to understand the history of the land-grant college without placing it within the context of its home state.

Current historiography, however, has centered on a debate between the educational and economic goals of the legislation. Eldon Johnson argues in “Misconceptions About the Early Land-Grant Colleges” that while land-grant colleges effectively changed the entire course of American higher education, the understanding of how they did so is not completely understood due to a lack of a comprehensive history.³⁶ Part of this history includes a discussion of the low enrollment rates and the generally poor quality of student who attended land-grant institutions during the first decades of their existence. The source of this criticism lies in the lack of education beyond the basic skills provided by small grade schools that predominated the educational scene of the newly settled frontier areas. In general, this lack of an intermediary educational level, one that would be developed later by the establishment of high schools (perhaps in some

³⁴ Chp. CXXX, “An Act donating Public Lands to the several States and Territories which may provide Colleges for the Benefit of Agriculture and the Mechanic Arts,” 504.

³⁵ *ibid.*

³⁶ Johnson, 334.

part as a response to the need for students at a college level) had a great effect upon the early years of the land-grant institution, primarily in extremely low enrollment rates and the need for remedial education for many decades of operation after their foundation.³⁷ Additionally, Johnson argues that the originality of the land-grant institution does not lay in the fact that these were state-sponsored schools, but rather that the land-grant institutions functioned as a “country-wide system of state-based institutions.”³⁸

Scott Key questions Johnson’s view of the intent of the land-grant college as an educational endeavor in “Economics or Education: The Establishment of American Land-Grant Universities.” Key posits that the Morrill Land-Grant Act of 1862 was “an important piece of federal economic policy.”³⁹ As well, Key connects the issue of Federal land provided for education to the larger history of Federal land policies from the end of the Revolutionary War up until the signing of the Morrill Land-Grant Act in 1862.⁴⁰ In so doing, Key ties the Land-Grant Act to the Homestead Act, which was passed in the same session. In this way Key understands, in much the same way as Turner did that the Land-Grant institution as being part of a larger plan to increase productivity and prosperity and, therefore, the Federal tax base. While questioning the original intent of the land-grant colleges as agriculture and mechanical arts institutions, Key extends the understanding of the land-grant college as an endeavor to make obsolete the classical educational model to the positioning of the college as an economic generator.⁴¹ While Key does not disprove completely the previous history that emphasized the educational goals of the land-grant college, his addition to the discussion

³⁷ Johnson, 336 -337; Eddy, 66 – 67.

³⁸ Johnson, 336.

³⁹ Key, 215.

⁴⁰ Ibid., 201 – 205.

⁴¹ Ibid., 215 – 216.

provides a more complex understanding of the role of land-grant college in the United States.

The philosophical origins for the land-grant college system have been discussed nearly from its inception and continue to the current day. These origins include the concepts discussed above of a “democratic” educational system, both as a means to educate the common man, creating a largely educated and productive populace, as well as the need for a “practical” education in agriculture and the mechanical arts. Within the political sphere, the creation of the land-grant system has been perceived as being part of the movement to create productive economic systems in the Western lands that had recently been brought into the United States.⁴² Militarily, the Land-Grant legislation attempted to address the Union’s woeful lack of an officer class.⁴³ The complexity of these origins, combined with the individualistic nature of the colleges, creates a rich base from which to understand the emergence of the academic library as an integral component of this new educational model.

The Situation of the Land-Grant College in the West and the Midwest and its Library

The state of the library during the earliest years of the land-grant movement is hard to determine. From the land-grant college’s inception the curriculum and needs were much different than that of the classical college. This is particularly true of the colleges in the West, none of which were founded before 1862. The only institutions within the purview of this study that opened their doors prior to the Morrill Land-Grant

⁴² Key., 201 – 205.

⁴³ Eddy, 33, 64-65.

act were in the Midwest (the University of Missouri in 1841, the University of Wisconsin in 1849, and the University of Minnesota in 1857). Additionally, Orvin Lee Shiflett, in his comprehensive study of the history of the American academic library, posits that the 19th century American academic institution was a weak institution overall:

Mental discipline rather than proficiency at any one intellectual activity or mastery of a specified body of information was the goal. Consequently, the purpose of the college was character building. Curricular matters did not unduly excite either the president or the faculty. They had at hand a system of education in which three years of study developed the mind of the student to come to grips with Moral Philosophy in the fourth year. This system produced the final product – a virtuous Christian citizen of the republic.⁴⁴

This emphasis on creating a certain *type* of man was a goal of the classical college; the library was not necessary as the critical *thinking* required by scholarship and research was not encouraged. As well, the hierarchical structure of the college, which mirrored that of the contemporaneous society, inhibited growth. *In loco parentis* was the accepted mode for social relationships within the American college. Within that structure, the president became the patriarch and the faculty followed in line. Within this hierarchy the library held a less than central position and the care-taking fell to the person who could be readily enlisted, whether it was a faculty member, student, or college president. This person may have attempted to grow the library through donation, or through appropriation of funds, but major expansion was never the goal. This person may, or may not, have opened the library for a certain number of hours during the day, or the week. Beyond these duties, the services that are currently associated with a library, such as preservation, classification and access, were not expected.⁴⁵ This model could not support the purpose of the faculty or the students of the land-grant institution, however.

⁴⁴ Shiflett, Orvin Lee. *Origins of American Academic Librarianship*, 9.

⁴⁵ *Ibid.*, 19 – 20.

The classical library model would not have been adequate, even during the earliest years of a land-grant college's operation.

Until the agriculture and mechanical arts scholarship became active by the late 1800s, the library served many purposes during this initial and unformed period. Many histories of American academic libraries do not take into account the differences that would have existed between a library that served a land-grant institution and those libraries that served institutions with a different educational mission. However, until land-grant colleges became secure and their curriculum codified, the ideology of and attitude toward the academic library was impacted by how the library of the classical college was perceived. Therefore, it cannot be denied that the workings of the classical library had an impact upon the early years of the land-grant library. This is particularly true for the three institutions in the Mid-West, all of which were founded during the era of the classical college. However, the transition from a purely classical model to the practical one occurred in a staggered manner and as each institution in the West and Mid-West was founded, the library needed to respond to the institution's unique situation, as well as the changing landscape of scholarship.

The emergence of the agriculture college library has also been situated within the history of agricultural societies in early America.⁴⁶ These agriculture societies, such as the *Philadelphia Society for the Promotion of Agriculture* and the *New York Society for the Promotion of Agriculture and Manufactures*, were created to optimize the availability of publications devoted to the history and practice of agriculture. Their direct correlates within the contemporaneous colleges and universities were the literary societies

⁴⁶ Thurber, Evangeline. *The Library of the Land-Grant College, 1862-1900*, 19 – 21; "American Agricultural College Libraries, 1862 – 1900," 346. Carnie Smith, Jessie. *Patterns in Growth in Certain Land-Grant Universities*, 63 – 65.

comprised of students who took it upon themselves to create libraries that were well suited to their own particular needs and interests.⁴⁷ Generally speaking, these societies were a result of the lack of a substantial American book trade, as well as a lack of active libraries, as members attempted to aggregate sparse holdings. This lack of a book trade also hindered the growth of land-grant libraries during the last half of the 19th century. While the land-grant library may have lacked necessary resources to match the holdings of established agriculture-based literary societies, as well as the private colleges of the East, such as Harvard and Yale Universities, none of the newly formed land-grant institutions opened without a library.

A primary aspect of the land-grant curriculum is the creation of a new academic discipline in agriculture and the mechanical arts. As perceived from the classical institution, the professors of this new discipline were not imbued with equal status as that of classical professors. This lack of status was reflected in the low pay and lack of facilities at many of the land-grant colleges.⁴⁸

The type of student also changed – they were women, as well as men. They were the children of farmers, merchants and mechanics. They were the children of immigrants. And as noted previously, they were most probably children who did not have an education beyond the elementary level.⁴⁹ Within this context enters the library, whose purpose almost overnight changed. The library had to contend with not having the appropriate materials for faculty work, as well as being a part of the remedial teaching of the college's students. This remedial curriculum, just as with the new agricultural one,

⁴⁷ Holley, Edward. *Academic Libraries in 1876*, 26 – 28. Greathouse. "Development of Agriculture Libraries," 492- 494.

⁴⁸ Shiflett, 21-23, 35 – 37.

⁴⁹ Eddy, 84 – 86.

would have been supported by the library. The librarians were required in some institutions to provide instruction in remedial subjects to the “sub” students. This curriculum of the land-grant college is intriguing as it creates a bridge between what had been perceived as a male occupation (the academic professor) and a new female occupation (the public school teacher). This relationship has not been adequately explored in the historiography of the land-grant college and its library.

Many argue that the modern academic library came into existence in 1876.⁵⁰ For the land-grant college libraries, this date does not take into account the preceding 14 years, during which many colleges and their libraries were founded. This period would have required librarians to create collections, without the assistance of “professional” library theory, to be used by faculty and students. Of the land-grant colleges, the University of California, the University of Illinois, Kansas State Agricultural College, the University of Nebraska, the University of Nevada, and the Oregon Agriculture College began to accept students during this span of time.⁵¹ Unfortunately, it is this early period that lacks documentation and is the hardest to understand within its own particular context. While the Land-Grant Act of 1862 required yearly reporting by the colleges to the Department of the Interior, these reports, which may be able to provide valuable statistical information, cannot be located.⁵² Starting with the Land-Grant Act of 1890,

⁵⁰ See Holley *Academic Libraries in 1876* for a discussion of this seminal year. Shiflett, 82 – 68. Shiflett posits the University Movement as being the driver of change in academic libraries at this time. See also Wayne Wiegand in *Libraries and Scholarly Communication in the United States*.

⁵¹ The Colorado Agriculture College was found in 1870, but did not open its doors to students until 1879.

⁵² It is possible that these reports were never completed due to the unsettled nature of many of the land-grant colleges that were founded quickly after the 1862 act. It is also possible that these reports have not been indexed, and are therefore not easily located. This is evidenced by the fact that the research for this paper included the assistance of government documents librarians at the University of Iowa, the University of North Carolina, Chapel Hill and North Carolina State University, all of whom were not able to locate the records mandated by the 1862 Act. As well, an inquiry made to the National Records and Archives Administration in an attempt to locate these reports was not successful.

yearly statistical and organizational reports were made to the Department of Agriculture, under the Bureau of Education. These reports have been indexed and are easily available and will be discussed further in this section. The land-grant colleges of the West and Mid-West present additional problems as they opened their doors at various points along the spectrum of change, both in higher education and librarianship, which occurred during the later years of the 19th century. While many of the land-grant colleges have had institutional histories prepared, either as published monographs or theses work by graduate students, comprehensive histories of their libraries during this time period are lacking. Simply put, an aggregated scholarship does not exist and it is this period that clouds the history of academic libraries and librarians in land-grant institutions. A clear understanding of the beginnings of the library in land-grant institutions might only be obtained through study of the individual institutional histories.

Resources for these histories can be found in a myriad of forms. For instance, in 1903 the Bureau of Education released a Circular of Information, *The History of Higher Education in Colorado*. While this document covers all six colleges and universities that existed in Colorado at that time, it provides valuable information regarding the State Agricultural College, which opened its doors 24 years previously. In 1870 the Territorial government founded the Agricultural College, but gave it no funding. The first appropriation of \$1,000 for buildings was made in 1874 by the Territorial Legislature. This required matching funds to be raised by the college's board of trustees and they were able to raise \$1,123. In 1877 the college was brought under the Board of Agriculture for the state of Colorado and was given an appropriation of \$7000 per year. A second building was built and in 1879 the college was opened to students. At the

opening, the students numbered 20 and one course was offered. By 1881 the students numbered 45 and by 1882 the number increased to 62. In 1884 three students graduated.⁵³ The library began in 1878 with “donations from members of the faculty and interested citizens of Fort Collins, aided by a small purchasing fund derived from one-fifth mill tax.”⁵⁴ This slow and staggered, but steady, growth is reflected in the statistics provided to the Department of Agriculture. (Appendix 1) By 1896, the college had an enrollment of 232 students, a library of 18,000 volumes and a total library value of \$9,689.00. By 1905 the student enrollment had more than doubled to 496 students. However, the 1905 report does not include information on the number of library volumes or library value. The Circular indicates that in 1903 the library had 14,000 volumes and subscriptions to over 100 periodicals.⁵⁵

The Department of Agriculture released organizational lists for all the land-grant colleges and their experiment stations. These lists, as aggregated in Appendix 2, are invaluable when attempting to discover the names of the librarians and library assistants of the land-grant colleges from the late 19th century to the early 20th century. Most of the colleges provided organizational information for the entirety of the college, not just the departments of agriculture or mechanical arts; therefore, these lists are a rich resource for information regarding an institution’s hiring and curriculum as it progressed over time. However, these organizational lists are not comprehensive, as some colleges, such as the University of Wisconsin, did not provide information for all of the departments in the institution. However, it is clear that the historical Federal documents that are indexed and

⁵³ United States. Bureau of Education. *History of Higher Education in Colorado*. 52-56.

⁵⁴ *Ibid*, 57.

⁵⁵ *Ibid*.

available, while not complete, provide integral information regarding the early years of the land-grant colleges.

The most useful, but least available, resources are histories of the college and its library. In the case of Colorado, a history of the Colorado State University Libraries has been written by Douglas J. Ernest. Just as its home institution, the library of Colorado State University began as a very modest thing: a single room in the main (and only) building of the Colorado State University, known as the reading room. The first materials consisted of agricultural materials collected by Harris Stratton, one of the founders of the college. As well, the Colorado State Board of Agriculture began to collect the “annual reports of the various state agricultural colleges, state agriculture boards, horticultural societies, and dairymen’s associations as a nucleus.”⁵⁶ Other materials were acquired through donation and loans from faculty members.⁵⁷ As the college’s curriculum grew, so did the needs of the library. Throughout the 1880s and 1890s, the librarians and faculty of the college would work towards securing funding and adequate space for the collection. By the turn of the century the library’s collection had expanded to 10,056 volumes; the call for a new library building began in the early 1890s, as the collection quickly outgrew its rooms in the Main Building.⁵⁸ It is interesting to note that the library’s monetary worth did not increase along with its number of volumes. For the years 1901 and 1902 the worth remained \$10,377 per the Department of Agriculture’s statistical reports; this is a few hundred dollars less than its worth in 1899, listed as \$10,831.⁵⁹

⁵⁶ Ernest, Douglas J. *Agricultural Frontier to Electronic Frontier*, 6 – 9.

⁵⁷ *Ibid*, 9, 11 - 12.

⁵⁸ *Ibid*, 10.

⁵⁹ See Appendix 1 for statistics.

Providing numbers can only partly describe the institution. Its quality and use can be harder to discern. Library histories that utilize the archival materials of the home institution are essential in providing a complete history of a young library. The Colorado Agriculture College was growing, but Ernest has pointed out that some of the contemporary personages who viewed the library were not impressed by the materials it held, or its organization. This did not seem to hinder the use of the library by students, as indicated by the need for regulations of behavior to be posted in 1888. As well, until the 1930s, the library was the social gathering place for the students.⁶⁰ In the first five decades of the library's existence three major events occurred. In 1892 the Ft. Collins resident Anna Jones left the library \$5000 for the purchase of books, creating the Anna Jones collection. Jones' will stipulated that a "professional" librarian was to be hired to oversee the collection and cataloguing of the materials. This requirement initially brought Charlotte A. Baker to the Colorado Agriculture College. The second event to occur is the loan by Barton O. Aylesworth, the college president, of his private library to the library in 1899 for the use of "advanced students." The third change to the library was the inclusion of the Experiment Station library holdings into the Main library collection.⁶¹ These changes in the number of volumes and requirements in cataloging and creating separate collections, continued to impact the library as it entered the 20th century. The lack of space, as well as changes in the curriculum and the pedagogy of its faculty, continued to provide concurrent challenges.⁶²

In 1928 Henry O. Severence wrote the history of his library at the University of Missouri. The University of Missouri is one of the colleges in this study that was

⁶⁰ Ernest, 8 – 12, 14.

⁶¹ Ibid., 15-16.

⁶² Ibid, 27.

founded prior to the Morrill Land-Grant Act, opening in 1841 at Columbia. Its library also began at this time, when the college president was given the authority, and \$1000, to purchase “books and apparatus for the use of the University.”⁶³ However, no books were purchased, only subscriptions to periodicals, such as *Blackwoods* and the *Edinburgh Review*.⁶⁴ In 1849 a fund of \$1250 was made upon urging of the current college president, President Lathrop.⁶⁵ From 1842 to 1849 the library experienced growth from many channels, including the donation of materials, as well as procurement of government documents with the assistance Lewis Fields Linn, the senator from Missouri. In 1845 a “small collection of books, some rare and valuable” was given to the University by the trustees of a small Baptist institution, Bonne Femme College, located six miles from Columbia. Unfortunately for President Lathrop, \$900 of the \$1250 given to him for book purchases was stolen from the bank of William Nesbot and Company in 1849. Luckily, the full amount was recovered and eventually used for its original intention.⁶⁶ This emphasis on funding the library continued with the advent of Dr. James Shannon to the position of president. From 1851 to 1856 the library maintained its monetary funding.

The funding of the library greatly diminished under the presidency of William Wilson Hudson from 1856 to 1859 who preferred to equip the young college with scientific apparatus, rather than books. What followed was the Civil War, or as Severence called it “the dreary period.” This understatement does little to describe the state of Missouri during the Civil War, during which the college remained open, but

⁶³ Severence, Henry O. *History of the Library: University of Missouri*, 19.

⁶⁴ Severence., 19 – 20.

⁶⁵ *Ibid.*, 20.

⁶⁶ *Ibid.*, 20 – 21.

occasionally occupied by Union troops.⁶⁷ Severence's history of the University and the library during this time period is somewhat confusing, as he states: "Congress passed a bill, approved July 2, 1862 granting 300,000 acres of land to the State of Missouri for an agricultural college. The General Assembly which should meet in January 1863 would consider the acceptance and disposition of the grant." However, when the Morrill Land-Grant was passed in 1862 it clearly stated in the Sixth section that "no state while in a condition of rebellion or insurrection against the government of the United States shall be entitled to the benefit of this act."⁶⁸ It is only in understanding the fact that Missouri had two state governments during the Civil War – one government sided with the Union, the other with the Confederacy, that these conflicting statements make sense.

By 1866 the college had re-opened and was funded by state appropriation, but it was not until 1871 that the library received its first appropriation of \$5000 "in Missouri bonds." The responsibility of buying books for the University returned to its president. However, by 1876 the library's funding had dwindled to the income generated from selling "University views" and a gift of \$25 from Alexander Monroe Dockery, future governor of the state. In 1878, the Atheneae Society and the Union Literary Society, the two student literary societies of the University, deposited their collections, a total of 767 volumes, in the University Library. At this time, the Columbia Public Library also turned over 809 volumes to the Library. However, at some point between 1881 and 1886, the literary societies removed their volumes and regained control of the collection.⁶⁹ This act may have been unintentionally prescient, as the University's library suffered a too

⁶⁷ Ibid., 22, 28.

⁶⁸ United States. *Statutes at Large*, vol. XXII, 505.

⁶⁹ Severence, 24, 28 - 30.

common fate of this time period of being: it was consumed by fire in 1892. The Department of Agriculture statistics from the 1890s become a useful tool for this time period, as it is through them that the progress of the library's rebuilding can be tracked. However, this is complicated as it is during this time period that the University of Missouri opened two other campuses – one in Rolla and a second in Jefferson City. The statistics given in the reports to the Department of Agriculture are not always complete in this respect, as in some years not all of the campuses reported. Due to the fire in 1892 it is not possible to combine the figures for all three campuses in order to gain a complete view of the University of Missouri Libraries, as the Columbia campus, and its collecting endeavors after the fire, are not accurately portrayed by the numbers. For example, in 1900 the Columbia campus reported a volume number of 2,227 with a total library worth of \$27,890. However, in 1899 the total volume number for all three campuses was 65,000. As well, as the institution matured, each campus became defined by an increased specialization of curriculum. Rolla, for instance, became the home of the curriculum on mining. These differences need to be clarified in order understand fully the institution's general ambience and endeavors.

Despite being its nearest neighbor to the north, the history of the library at the Iowa State University is much more sedate than that of the University of Missouri. While there is not an institutional history of the libraries available, the State of Iowa Department of Education biennial reports provide insight to the state of its agriculture college library. As well, the Iowa State University archives hold many materials about the individual librarians. Additionally, a history of the University was published in 1958 by Earle Dudley Ross, a professor of history and the chairman of the College History Committee

at Iowa State. By using these resources in combination, it is possible to achieve a more complete understanding of the library during the last half of the 19th century.

Just as with the University of Missouri, Iowa State University is an example of a higher education institution devoted to an agriculture and mechanic arts curriculum founded before the 1862 Land-Grant Act. For many of the founders of Iowa the soil of this territory would be the foundation for their livelihood, and for the state itself the soil would make its fate as one of the most agriculturally developed and utilized pieces of land in the United States. It is not hard to understand why the Iowa State Agricultural College and Model Farm was founded so soon after settlement of the territory in 1858. However, as in 1862 with the Federal legislation, the state legislation creating the college was only passed after a change in political climate occurred in the Iowa State Legislature. Before 1857 the Democrats had had the majority in the Iowa legislature, but with the elections of that year, the Whig-Free-Soilers gained the majority and with this they were able to pass legislation that corresponded to their more progressive views. Despite the work of the college's proponents, the economic unsteadiness of the period and lack of adequate funding by the legislature, as well as the Civil War, delayed the college's opening until 1869.⁷⁰ The possibility of Federal funding, as the Iowa legislature began to act the same year that Morrill originally introduced his bill, was not an unimportant consideration in the financing for the college.⁷¹ This fact indicates that not only was the state congress considering the needs of their local constituents, but also the place of Iowa within the national sphere. This is further indicated by the fact that Iowa was the first state to accept the Land-Grant, and her shrewdness continued in her legislature's

⁷⁰ Ross, Earle Dudley. *The Land-Grant Idea at Iowa State College*, 24-27.

⁷¹ *Ibid.*, 32 -33.

handling of the grant, which exceeded “\$800,000 in endowment, far in excess of early estimates, and more than any other states who handled their grants less prudently.”⁷²

As the institution progressed, however, the administration would undergo periods of strife and discontent. According to Ross the originators of this strife were the “Grangers and Greenbackers whose major indictment was the highly generalized assertion that the College was ‘drifting away from the original intent.’”⁷³ In 1873 the college president, Adonijah S. Welch, and his staff were called to resign. All but three of the president’s staff were immediately re-elected. In 1874, after it was found that the college treasurer, who also acted as the state treasurer, had misappropriated the college’s funds, the college was put under investigation by the Legislature. This investigation focused on three areas: financial discrepancies, failure to educate the target student group of farmers and mechanics, and the treatment of the students.⁷⁴ Despite the “hearsay, gossip, personal abuse, and irrational tirades” that were admitted into the report of the investigation, the College and its administration were not found to be in arrears.⁷⁵

The college would remain in a state of calm under the direction of President Welch until 1882, at which time he went abroad to study his counterparts in Europe. He was eventually removed from office in 1883. After his departure the College, again, underwent turmoil as a series of temporary presidents were installed and various re-organization schemes were tried, until the hiring of William Chamberlain, a farmer and educator, in 1886. His tenure was only slightly marred by a rough management style; he remained in office until 1890. From 1890 to 1926 only three presidents would serve:

⁷² Ibid, 35.

⁷³ Ibid, 54.

⁷⁴ Ibid, 54-56.

⁷⁵ Ibid., 56.

William Beardsheer from 1891 to 1902, Albert B. Storms from 1903 to 1910 and Raymond A. Pearson from 1912 to 1926. During these three consecutive administrations the College continued its growth and breadth of reach. From the Main Building, the schools only building in 1868, the campus expanded to include a machine shop, a mechanical engineering laboratory, a veterinary medicine quadrangle, a domestic technology building, an agricultural hall, an administration building, a dairy building, an engineering hall, a campanile, residences for the president and some faculty, and various auxiliary buildings and farm structures within 60 years of the College's existence.

Through the growth of buildings can be seen the growth of the curriculum. The 1874 investigation included a general survey of the curriculum at that time and as with the rest of the report the curriculum was not found to be deficient.⁷⁶ However, as with other land-grant institutions the curriculum underwent continuous change during the first few decades. As Ross astutely notes

Unhappily the colleges had little to contribute in verified information on production, distribution, or finance. In the "educational renaissance" from the 1870s to the World War I era the land-grant colleges were to be an inspiring and a generative influence, but for their first quarter century they were seeking to secure and maintain their place in the academic orbit.⁷⁷

By 1890 the college offered degrees in five programs: a bachelor of science in agricultural science, a "B.L." degree in the "course for ladies," a bachelor of mechanical engineering, a bachelor in civil engineering and a doctorate of veterinary medicine. The degree programs would continuously grow in the 1890s to include degrees in electrical engineering and mining engineering and a bachelor of science in the "industries." By 1903, the "ladies course" would transform into a bachelor of science in domestic science.

⁷⁶ Ibid.

⁷⁷ Ibid 52 -53.

In 1905 thirteen courses are listed in the Department of Agriculture's Organization List, the Bachelor of Science degree being subdivided into five courses: agronomy, dairying, animal husbandry, horticulture and science and agriculture. A "one-year graduate course in agricultural engineering" is also offered.⁷⁸

As the century progressed the curriculum at Iowa State College of Agriculture solidified and continually expanded. This was in spite of the continued growing pains that were being experienced by the institution, including contention between the College's administration and the faculty, as well as with the student body.⁷⁹ The foundation of the land-grant and the associated changes in higher education, as exemplified by the research model at Johns Hopkins and the elective model at Yale, and the classical schools, was still too close for there not to be vestiges of the old system within the new. The strife at Iowa State College illustrates the continual questioning of what it meant exactly to offer a practical education in agriculture and the mechanical arts while still providing instruction in languages, literature and philosophy. In the last decade of the 19th century these two areas were brought together peacefully within the curriculum of the college.⁸⁰

Ross neglects the history of the library at Iowa State College during these formative years. This is unfortunate, as the library can be a barometer of its home institution. By not studying the history of the library he missed an opportunity to further elucidate the growing pains of a vital, if slow growing, resource. However, by understanding the history of a college, it becomes easier to imagine the problem of the

⁷⁸ See United States. Department of Agriculture. *Organization Lists of the Agricultural Colleges and Experiment Stations in the United States* for the appropriate year.

⁷⁹ Ross, 90 – 91.

⁸⁰ *Ibid.*, 94 -100.

library in such an atmosphere. As discussed previously, the land-grant college library faced particular challenges, including lack of funding, lack of resources and lack of space. Despite this, all of the land-grant college libraries generally continued to expand both their collections and their services. This is not to deny, however, that many of these libraries also experienced years of stagnation.

Some general observations need to be made about particular land-grant college libraries. For instance, any comparisons of land-grant colleges in the western states to the University of California would be fruitless as the University of California was a major institution by the turn of the 19th century. In 1896 the school had 1,336 students and had graduated 118 students the previous year. It had nearly 67,000 volumes in its library. In 1898 its library had a total value of \$138,200. The University of Missouri and the University of Wisconsin come close in volume number, having 61,174 and 66,500 respectively. The University of Missouri number includes all three of its campuses, while the University of Wisconsin's library value, at \$50,000, is not nearly half of the worth of California. In this same year the University of Minnesota has a student population of 2,647, with a graduate class for the previous year of 108 students. Its library total volume count is 50,000. These three schools, the University of California, the University of Wisconsin and the University of Minnesota continued to lead the western land-grant schools in size of library and number of students. The weakest schools continued to be those that were founded late in the 19th century, including the University of Arizona, Montana State College of Agriculture and Mechanic Arts, New Mexico College of Agriculture and Mechanic Arts, North Dakota Agricultural College, Oklahoma Agricultural and Mechanical College, Agricultural College of Utah, the

University of Wyoming and South Dakota State College of Agriculture and Mechanic Arts.⁸¹

The vigor of the land-grant college library was discussed early on in the literature that surrounds the idea of an agricultural library. Charles H. Greathouse in his essay for the 1899 *Yearbook* opines that the agricultural colleges were a boon for the agricultural library in general, if at first it did not seem so.⁸² He discusses, in particular, the library of the Michigan State College for Agriculture and Applied Science. He describes many of the facets that are now standard practices for college libraries, but were not codified at the time, including having a large budget for periodicals, as well as the separation of materials based upon the specific needs of a department. Greathouse gives a total collection of 19,380 volumes in 1899 for the Michigan College, “of which half were strictly agricultural.”⁸³ This number, however, does not correspond to the numbers provided to the Department of the Interior for statistical purposes. The number of volumes reported there are 23,212 for 1898, 26,000 for 1899 and 23,862 for 1900. It is possible that the library of the college’s Experimental Station is included in the statistics for the Department of Agriculture reports.

The legislative history is also important when considering the growth of the land-grant college library. Three legislative acts benefited the land-grant library: the Hatch Act in 1887, the 1907 Depository Law and the Smith-Lever act of 1914. The Hatch act required the dissemination of research reports in written form. This increased the amount of scholarship on the new agricultural and mechanical subjects that could be collected by

⁸¹ An overview of each institution’s statistics can be seen in Appendix 1. All statistics listed here are gathered from the Department of Agriculture and the Department of Interior yearly statistical reports where available.

⁸² Greathouse, 494, 497.

⁸³ *Ibid.*, 500.

the libraries. The land-grant college libraries became sites for deposit of government documents with the Depository Law. The Smith-Lever Act was particularly important as it created the extension programs that disseminated the work of the land-grant colleges to the people of its home state.⁸⁴ These extension programs are still an integral part of all land-grant college's mission. Because of this legislation, the materials available to the college library at minimal cost increased exponentially. As well, the constant influx of research reports produced by the colleges' faculty, experimental stations and extension workers created a constant dialogue within the subject areas, a dialogue that was mediated by the structures (both literally and figuratively) of the library. For the majority of these colleges, whatever their size may have been, women played a significant part in the development of these structures, even if it was not perceived as such during their employ.

The Female Librarian of the Land-Grant Colleges in the West and Mid-West

The current historiography of women librarians in Western and Mid-Western Land-Grant colleges, as represented by the work of Joanne E. Passet and Georgia M. Higley, have focused upon the work and lives of those who worked in the far west or the Four Corners region (the contiguous states of Colorado, Utah, New Mexico and Arizona), including Charlotte Baker, Ida Kidder, Estelle Luttrell and Belle Sweet. Their histories provide a tantalizing look into the work-life and conditions of early American academic librarians. But as can be seen by Appendix 1, nearly every Land-Grant College hired women librarians, in the East as well as the West. Passet argues that the women who decided to look west for employment were "imbued with a missionary zeal, carried with

⁸⁴ Smith. *Patterns in Growth*, 90.

them dreams of travel, visions of uplift, and the gospel of the Dewey Decimal System.”⁸⁵ This is a rather limited view, however, of why women went to work in the West and Mid-West. Another factor is nepotism, an accepted practice during this time period. Many of the librarians were hired to hold concurrent instructor positions in other departments or as a preceptor for the girls’ school.

To say that the motivation to work in the West was due to a personal mythologizing of the library profession and the idea of the West denies the real complexity that many of these women experienced as they tried to enter into the working world in an emerging professional class. It is, perhaps, more fruitful to view and attempt to understand the position of women in western Land-Grant colleges as being a result of the interplay between their own desires, the changes occurring in academic institutions and the evolution of societal mores. As discussed previously, while land-grant colleges had a common mandate in the Morrill legislation, they had to respond to the particular needs of their state. While the work of Passet and Higley provide invaluable information about the women who worked in the West, it cannot be perceived as a complete history. As can be seen in Appendix 2, there are many other women librarians and careers that need to be studied.

The question of how women academic librarians were perceived in their profession is a difficult one to answer. There were many articles written on the subject, but like current scholarship, the contemporary writing is interwoven with women as public librarians. As the number of women college graduates increased, the number of articles on the subject of employment of them also increased. By the early 1900s,

⁸⁵ Passet (1990), 323.

librarianship was actively being suggested in the literature, both in articles primarily written by librarians as well as publications created by library schools such as the University of Wisconsin. Librarianship, particularly service in public librarians, was seen as a perfect union between teaching and social work.⁸⁶ However, some of the literature by this time had begun to make the distinction between work done by a public librarian and that performed by an academic librarian. By 1910 a status structure is inferred by a few of the authors of this literature. Public librarianship was seen as a profession that was quite acceptable for women who did not desire to be teachers; however, for women who had particular academic skills or management abilities, the sphere of the academic library was seen as a more appropriate choice. As well, by the mid 1910s a distinction began to be made between public service positions in college libraries and more technical positions that required special training, such as cataloguing.⁸⁷ It is around the turn of the 19th century the college library had begun to be organized by work-type, such as cataloging, reference work and library management.⁸⁸

Alas, like early institutional library history, the history of academic librarianship as a vocation in its earliest years is hard to decipher due to a lack of historiography.⁸⁹ This is particularly true for the years before 1876 when the American Library Association was founded and began publication of library-related scholarship. As has already been discussed, the position of librarian was occupied either by the College's president or a

⁸⁶ Hazeltine, Mary E. *Opportunities for College Women in Library Work*, 289; Bascom, Elva L. *Library Work for College Women*, 322; University of Minnesota, *Vocations Open to College Women*, 5 – 6, 18.

⁸⁷ Hazeltine, 290 – 291; Bascom, 328; Barnum, Mabel F. *Opportunities for College Women in the Library Profession*, 1.

⁸⁸ Bascom, 1 – 2; Hazeltine, 290.

⁸⁹ H.G.T Cannons' *Bibliography of Library Economy: A Classified Index to the Professional Periodical Literature in the English Language Relating to Library Economy, Printing Methods of Publishing, Copyright Bibliography, etc., from 1876 – 1920*, is an invaluable source for contemporary writings.

faculty member, until approximately the 1880s. In the case of Iowa State University, the library was staffed by “student librarians” until 1877. J.C. Arthur then became the “part-time” manager of the library in 1878, as well as being a demonstrator in Botany and Zoology. From 1879 to 1883 the Professor of Physics, J.K. Macomber, became librarian. In 1883 Mary McDonald became the librarian, but she was also an instructor in Mathematics and Bookkeeping.

Mary McDonald, however, was not the first woman to work at the library at Iowa State. During the tenure of Professor Macomber, Sarah E. Smith was a “first” assistant in 1882, and there were two “second” assistants, Miss Hattie A. Perrett and Miss Mary McDonald from 1882 to 1883.⁹⁰ It is during this time period that Carrie Chapman Catt, the future president of the National American Women’s Suffrage Association, worked as an assistant librarian, from 1879 to 1883. Catt was an alumnus of Iowa State University, and is, therefore, an example of the hiring of women librarians who had a pre-existing relationship with the college.

The use of current presidents or faculty members is echoed in the hiring practices of the University of Missouri. In his history, Severence places the position of first librarian with that of President Lathrop. After the end of his presidency a faculty member would also serve as librarian until the beginning of the Civil War era and at this point onward the position of librarian would not require a concurrent professorship.⁹¹

In this way, the management philosophy of the classical college library was maintained during the early years of the land-grant college. For the libraries of the institutions in the Midwest, such as the University of Wisconsin, the University of

⁹⁰ See State of Iowa, *Biennial Reports* for the appropriate years. The title “Miss” is being retained and used in this original context.

⁹¹ Severence, 20 – 21, 24 – 28.

Minnesota and Michigan State College, which were founded before the Land-Grant Act, investigation of their archives for organization lists and annual reports will be required in order to discover who acted as librarian during the early years of the library's existence.

For colleges farther West, such as Arizona State University, the University of Idaho, Montana State College, New Mexico State College, North Dakota State College, Oklahoma State College, the Agricultural College of Utah, the State College of Washington and the University of Wyoming, all of which opened their doors in the first years of the 1890s, the history of their library cannot be separated from the history of librarianship, in general, as they all began operation right as librarianship was solidifying as a *feminine* profession. As well, librarianship had been codified by this time with the advent of training in the form of library economy programs, both in the East, as well as at the University of Wisconsin and the University of Illinois.

Throughout the course of their history, three institutions are notable for not hiring women as librarians at the same rate as the other institutions in the West. The most problematic institution, as far as attempting to gather information from the historical record, is the Mechanical and Agriculture College of Texas (currently named Texas A and M University). The Main Building, which housed the library, burned in 1912, depriving the university's archive of contemporary records. Edward Holley, in a speech presented at Texas A and M at the centennial of the school, provides the name of Louis McInness as librarian in 1879.⁹² The Department of Agriculture's *Organization Lists* indicate that in 1890 Reverend Charles Perkins Fountain was librarian. His name appears in the lists until 1892. After his tenure, a W.S. Reed is listed as librarian. Georgia Higley, in her Master's thesis, lists two women who were librarians at the college, Willie

⁹² Holley, Edward. *The Land-Grant Movement and the Development of Academic Libraries*, 6.

Davis and Mrs. Ira W. Cain.⁹³ Willie Davis served from 1907 to 1909, and then again from 1914 to 1919. At this time she is referred to as Mrs. William H. Thomas. Holley mentions Willie Davis in his presentation, as well.⁹⁴ In the Department of Agriculture lists Mrs. Ira Cain is simply referred to as Ira Cain and her dates of service are somewhat unclear. Per the Agriculture lists, she served from 1904 to 1906. In 1909 the librarianship is again occupied by a faculty member, this time a professor of Journalism, James H. Quarles, who served from 1909 to 1914 per the *Organization Lists*.⁹⁵

The other institutions that fall within this category are the University of Missouri and the University of California. In the case of the University of Missouri, Severence's institutional history is invaluable in providing information about the University's hiring practices. The University of Missouri did not hire women as head librarians during the time period of this study, but per Severence's index, the University of Missouri hired a large number of women in supportive roles.⁹⁶ These supportive positions include catalogers, library assistants, assistant heads of the Agriculture Library and the "freshman room," as well as reference librarians. Missouri's library is indicative of unsettled nature of some library work during the turn of the century, particularly as areas of librarianship became specialized.⁹⁷

The University of California also did not hire women as head librarians, but hired them in supportive roles; however, their hiring practice differs from that of the University of Missouri in the low rate of staff turnover. While it is possible that the sources

⁹³ Higley, Georgia. *The Land-Grant College Movement and Western Libraries*, 50.

⁹⁴ Holley. *The Land-Grant Movement*, 10.

⁹⁵ The Texas A and M history is an example of the need to suss information from multiple sources. The college's current archivist was not able to find information due to the fire that occurred in 1912. But, as has been demonstrated, the Federal record can provide information where the local record is lacking.

⁹⁶ Severence, 83 – 87.

⁹⁷ Foot note re: sources on transient library work.

consulted for the University's staff list did not include temporary workers, the information does show that the term of service for the librarians lasted approximately six to nine years, the exception being Miss H.E. Green who worked as a cataloger for one year beginning in 1902. Before concrete observations can be made regarding the hiring practices of the University of California it will be necessary to find the archival record for the library. But it is evident that the leadership of the University of California Libraries was stable throughout its history. From 1869 to 1919 the position of head librarian turned over only five times, with an average term of 10 years. This stability may have been due to the "consistently high standards in terms both of qualifications and performance of its staff members," as indicated by one of its historians Kenneth Peterson⁹⁸ Even though the library did not hire many women, the high standard of work appears to have been expected of all staff, as exemplified by the career of one its head catalogers, Edith M. Coulter. Coulter began work at the library in some capacity in 1911, is listed as being head cataloger in 1915 and occupied that position until 1928. During this time period she was also a faculty member of the University of California School of Librarianship and was appointed secretary-treasurer of the California Library Association in 1915.⁹⁹

While the early staffing of the library at Iowa State College of Agriculture and Mechanic Arts reflects the classical period, its hiring history in the last two decades of the 19th century is an interesting mix of the aspects seen at Missouri and California. While it had a high rate of turnover, it also hired women as head librarians (listed in Appendix 3). The library followed the general trend of the time and had as its first librarians the

⁹⁸ Peterson, Kenneth Gerard. *The History of the University of California Library at Berkeley, 1900 – 1945*, 103.

⁹⁹ *Ibid.*, 138.

president of the college or a male faculty member. From 1873 to 1878 the library was staffed by female students and a part-time manager. Under the tenure of J.K. Macomber from 1879 to 1883 the library saw a succession of women assistants. In 1883 Mary McDonald became the librarian for Iowa State College. This event was the beginning of three major trends in hiring at the library for the next 30 years. The first was the hiring of the college's alumna in the post of librarian. Many of these librarians also had close current connections with the college at the time of their hire, and this forms the second aspect of the college's hiring. The third trend was the hiring of women who were well accomplished in other aspects of their lives. Ms. McDonald, who served as librarian until her marriage to Herman Knapp, her former classmate and the college's treasurer, in 1885, was the sister-in-law of Professor Edgar Stanton, head of the Math Department. She was also a close friend and classmate of Carrie Chapman Catt, who worked as an assistant in the library from 1879 to 1883, as noted previously. While in the position of librarian Mary McDonald also served as instructor of mathematics and bookkeeping, as well. In a narrative prepared by her grandchildren for the on-line exhibit *Plaza of Heroines*, she is described as being "an educated woman in a time when education for women was rare" and that she "believed that it was the duty of the college to educate all Iowans, not just those formally enrolled, to the extent such education was possible."¹⁰⁰ Mary McDonald Knapp and her husband continued to have close ties to the college throughout their lives, Harold Knapp serving as interim president and Mary Knapp working towards the organization of the College's extension service and the creation of WOI radio station.¹⁰¹

¹⁰⁰ See *Plaza of Heroines*, <http://www.las.iastate.edu/kiosk/416.shtml>.

¹⁰¹ Ibid.

Despite this, she is merely listed as “homemaker” in Elizabeth Tiernan’s 1952 publication *Iowa State College Graduates: Biographical Directory*.¹⁰²

Unfortunately, the archival record does not hold a record for Mary McDonald Knapp’s successor, Mrs. Ida M. Riley, who served as librarian from 1886 to 1888. The *Twelfth Biennial Report* submitted by Riley in 1887 calls for the cataloging by subject and author of the library’s collection, which had previously been cataloged by title only. She supports this need with the observation that “[t]he rapid growth of the library and the increasing inclination of the professors to teach by the library method make a subject catalog almost a necessity.” She also indicates that she could do the job, if “relieved of teacher’s duties,” which included instruction in mathematics and elocution.¹⁰³ Her report provides evidence of the concern she had for the library and how it was used by the faculty and students. It appears she had her way at the time as her assistant, Esther Crawford, is listed as an “organizer” in the biennial reports. As well, the student newspaper, *The Aurora*, reported that Mrs. Riley’s successor, Cora Marsland, completed “the work begun by Mrs. Riley. At present the library is not only a fine one, but the books are so arranged that students can easily find them.”¹⁰⁴

Cora Marsland served for only year, between 1889 and 1890. However, the materials regarding her life and work available at the Iowa State College Archives provides information integral to understanding the career of a professional woman at the turn of the century. Cora Marsland attended New York State Normal School, Wellesley College and Emerson College of Oratory where she obtained her Master of Oratory in 1889. It appears that her first position after graduating from Emerson was as librarian

¹⁰² Tiernan, Elizabeth. *Iowa State College Graduate* (1952), 35.

¹⁰³ State of Iowa. *Twelfth Biennial Report*, 93.

¹⁰⁴ Iowa State College. “Miss Morland.” *The Student* (1890).

and Professor of Oratory at Iowa State College. Her tenure there was brief; she went on to teach english and oratory at Kansas State Normal School in Emporia, Kansas. It appears that she did not hold the position of librarian again during her career. She stayed at the Kansas State Normal School for four years, and then took a professorship of elocution and english language at Olivet College in Olivet, Michigan. She left that position in 1898. The record is somewhat unclear, but indicates that she was also employed at the "Academy at East Greenwich, Rhode Island" and may have returned to the Kansas State Normal School sometime at the turn of the century.¹⁰⁵ Despite her short tenure as a library at Iowa State College, the *Aurora* wrote

During the year and a half that she has been here all have learned not only to appreciate her work, but to love her personally. Her influence for good among the students can hardly be overestimated, and the spirit fostered by the silver cross organization, which she was first to introduce here, will rear to her memory a monument of which she may be justly proud.¹⁰⁶

During her tenure Cora Marsland continued the cataloging endeavor began by Ida Riley, taught students how to use the catalog, held a teaching position and founded the organization, the Kings Sons and Kings Daughters.¹⁰⁷ Her productivity continued into the new century with the publication of two books, *Interpretive Reading* in 1902 and *The Angel of the Gila: A Tale of Arizona* in 1911.

It must be noted that the work performed by Esther Crawford to catalogue the Iowa State College library was just the beginning of a long and distinguished career as a cataloger and library instructor. She graduated from Iowa State College in 1887, remained as a library assistant until 1891, then worked in public libraries in Iowa and

¹⁰⁵ Letter from George Hanson, Librarian of Olivet College to Mrs. A.P. Kahlenbeck, curator at Iowa State History Collection, Ames, Iowa as found in Record Group 25, Administrative History: Library at the Iowa State University Archives, Ames, Iowa.

¹⁰⁶ *The Aurora*, 19.6 (September 1890), pagination not given.

¹⁰⁷ "Miss Marsland" in the *Student*, 1890; Iowa State. *Thirteenth Biennial Report*, 71.

Ohio. From 1895 to 1896 she attended the New York State Library School, graduating with honors. She began her work as a library instructor the following year while working as head cataloger at the Public Library in Dayton, Ohio, taking over the work from 1896 to 1897, involving, as she states "pioneer labors in both subject matter and teaching methods – no precedents existing for guidance."¹⁰⁸ From this time forward, Esther Crawford continued to work as head cataloger and library instructor at various institutions until 1915, at which time she returned to Iowa State College. In 1920 she is listed as working for the United States Bureau of Foreign and Domestic Commerce as a senior editorial clerk. From 1905 to 1906 she performed field investigation and editorial work for the American Library Association's third edition of *Subject Headings for Use of Public Libraries of the United States*.¹⁰⁹

Another Wellesley alumna, Fanny Thomas, would take over the position of librarian at Iowa State College upon Cora Marsland's departure in 1890. Given a salary of \$1000 per year, the same as Miss Marsland, she was responsible for teaching in elocution and library instruction, as well.¹¹⁰ In 1891 a lecture series was instituted in library instruction for the students, including topics on "How to use the library," "The Classification," "The Best General Reference Books and Their Use," and "The Best Reference Books in Each Department."¹¹¹ In general, the biennial reports that Fanny Thomas submitted provide invaluable information about the state of the library at the time. During her first year of service, the catalog, using the Dewey Decimal System, began by Esther Crawford was completed, making the collection accessible not only by

¹⁰⁸ "Esther Crawford" curriculum vitae, in Record Group 25 "Administrative History: Library," Iowa State University Archives.

¹⁰⁹ "Esther Crawford"; Tiernan (1939), 51.

¹¹⁰ *The Aurora*, 19.6 (September 1890), no pagination.

¹¹¹ State of Iowa. *Fourteenth Biennial Report*, 69.

title, but also by author and subject and a reading room that housed newspapers from across the state of Iowa, as well as the *Chicago Tribune* and the *New York Tribune* was set up for student use.¹¹² During her two year tenure, Fanny Thomas increased the collection by 2000 volumes and she took particular pride in being able to obtain particular series, including volumes one through 28 of the *Zoological Record*, volumes one through 26 of the *Magazine of American History*, *Walpole's History of England* and *Appleton's Cyclopedia of United States History*.¹¹³ Fanny Thomas resigned at the end of the school year in 1893 and, unfortunately, the record does not give a reason for her resignation.

Flora Wilson was hired to start the spring term of 1894.¹¹⁴ Of all the librarians who served at Iowa State College, she is perhaps the most famous, and in some ways best exemplifies the nepotistic hiring practices at Iowa State College. She was born in Traer, Iowa and was one of the first students to graduate from the Traer High School. She went on to study at Coe College in Cedar Rapids, Iowa for three years. When her father, "Tama" Jim Wilson, moved to Ames to become the Director of the Experimental Station and Professor of Agriculture at Iowa State College she joined him and attended classes there, graduating from the college in 1892 with a BL in the ladies' course. As a member of the state legislature, Jim Wilson had had a long-standing and active relationship with the college. He remained in his position until 1897 at which time President McKinley called on him to become the Secretary of Agriculture. Flora Wilson resigned from the position of librarian when her father accepted the position in Washington. It is interesting to note that the biennial reports corresponding to her years of service provide

¹¹² *Ibid.*, 70 - 71.

¹¹³ State of Iowa. *Fifteenth Biennial Report*, 54.

¹¹⁴ *Ibid.*, 130.

scarce information about the library. This is in spite of the fact that she was nominally the first full-time librarian hired, not having a concurrent appointment as an instructor.¹¹⁵ More extensive archival work needs to be done in order to determine if Flora Wilson was a titular head of the library, or if she performed the duties that were quickly becoming associated with the management of academic libraries at this time. After leaving Ames, Flora Wilson traveled to Europe to pursue a career in operatic singing. She gained some notoriety for her singing, but it was her gift of being a political hostess for her father that made her name. Upon her return to the United States, she continued the role she had performed in Ames as the head of her father's household, who was well into his tenure of becoming the longest serving Secretary of Agriculture in United States history. During this time Flora Wilson positioned herself firmly in the middle of the more feminine side of American political power.¹¹⁶

It is after Flora Wilson's term that the library entered into one of its more stable periods of staffing during this period of its history. Vina Clark was appointed librarian in 1897 and remained in this post until 1916. Unfortunately, the archival record does not provide much information about her life and education, but the institutional archival record indicates some interesting aspects of her position. The most striking fact, at first, is her starting salary of \$600. Fanny Thomas had received a salary of \$1000 per year, as had her predecessor Cora Marsland. Flora Wilson was hired at the wage of \$600 per year, which could be explained by the fact that she was a member of her father's household and as such would not have been responsible for the cost of maintaining a

¹¹⁵ State of Iowa. "Administrative History: Library" (record group 25) historical note.

¹¹⁶ Undated obituary "Flora Wilson, 88, of Wash., D.C. Dies; Body Here;" "Miss Flora Wilson to Tour: Daughter of Secretary of Agriculture to Give Concerts;" "Personal History for Alumni Records" in Iowa State University Archives, Administrative History: Library Record Group 25.

household. The difference could be accounted for by the fact that neither Fanny Wilson, nor Vina Clark was appointed as instructors in addition to being the librarian. However, while very possibly true, it is illogical considering the fact that the position of librarian is not indicated to have been a part-time position.

A closer understanding of the pay structure of the non-faculty members of the college staff is required to fully understand the relationship between position and salary. Vina Clark's salary did increase each year after her the first three years of service, as is indicated in Appendix 3. By the time of her resignation in 1916 her salary had increased to \$1,300 per year.

The issue of money appears to have become a contentious one while she held her position. As listed in the 1903 *Twentieth Biennial Report* the library's budget was \$1800; this amount had remained static since at least 1898. In the 1903 report, Vina Clark is quoted as stating:

The library needs at least \$5,000 annually for a support fund exclusive of salaries. A technical and scientific library cannot be developed on less. Technical and scientific books a few years old are out of date. Hence, technical and scientific departments must have late books and a good list of periodicals, and such books and periodicals are very expensive.¹¹⁷

This tone is carried through the subsequent reports, not only with regards to lack of adequate materials, but also to the state of the building and the lack of room for the students to utilize the collection. At this time the library was still housed in Morrill Hall, where it had been located since 1891. As the years passed, Vina Clark's calls for a new library building would increase in intensity, but were imbued with an undertone of disappointed resignation. As she states in the *Twenty-First Biennial Report* "attention was called in the last biennial report to the altogether inadequate accommodations

¹¹⁷ State of Iowa. *Twentieth Biennial Annual Report*, 19.

furnished for students in our present library building.”¹¹⁸ In the *Twenty-Third Biennial Report* the Library Committee informs the Board of Trustees that the school cannot maintain its endeavor without a strong collection in the library, housed in a safe and secure building.¹¹⁹ By 1912 the beseeching language is replaced by statements of dire warning

The pressing need of the library is a good building. In addition to being too small and most inconvenient, the building in which our library is housed is a fire trap. Several fires have occurred in the building, and it is an unsafe place for a valuable collection of books...The library should also be given an income of at least \$10,000 for books and periodicals. The salaries of the library force should be increased, and at least one new assistant is provided.¹²⁰

Despite the unremitting problem with the lack of facilities, the library under Vina Clark's tenure grew at a steady pace. The library held 16,000 volumes the year before she began and when she resigned the library held 62,200 books and 30,000 pamphlets.¹²¹ While Vina Clark provided the longest term of service to the library during this time period and conscientiously advocated for it and its students, her name does not appear on the college's monument *Plaza of Heroines*, nor is she mentioned in Earle D. Ross' institutional history of Iowa State University. The absence of her presence in the record of the institution exemplifies the lack of historiography in the area of women academic librarians. Vina Clark's tenure deserves a closer investigation, as the library experienced continual growth during her tenure, despite her own low pay and the generally adverse conditions of the library. Additionally, her brother-in-law, Warren Garst, was a state senator and lieutenant governor and governor of the state during the time of her employ.

¹¹⁸ --. *Twenty-First Biennial Report*, 43.

¹¹⁹ --. *Twenty-Third Biennial Report*, 26.

¹²⁰ State of Iowa. *Second Biennial Report* (1912), 319.

¹²¹ United States. Dept of Agriculture *Statistical Reports* for appropriate years.

This familial relationship deserves closer scrutiny, due to the library's continual need for funding and the need for new facilities. Vina Clark resigned in 1916 and for the next four years Vera Dixon acted as head librarian, but had the title of "assistant" librarian. Dixon had been assistant librarian under Vina Clark since 1908.

Many of the women library assistants for the library at Iowa State College not only were alumnus of Iowa State College, but were also connected to the college through familial relationships including Helen Knapp, who worked at the library sometime during 1898 or 1899 before her marriage. Helen Knapp was the daughter of Seaman Knapp, a former president of the Iowa State College; her brother was Herman Knapp. Effie Curtiss, an assistant under Flora Wilson, was the sister of Charles Curtiss, a faculty member of Iowa State College and future Professor of Agriculture. Olive Stevens served as assistant librarian under Vina Clark from 1897 to 1905.¹²² She was the daughter of graduates from the College's first and second classes.¹²³ However, this nepotism cannot be viewed through current ethical standards. Not only was it a commonly accepted means by which to obtain employment at the time for both men and women, it can also be seen as an attempt to solve a new problem – the occupation of educated middle class women during the interim between graduation and marriage. For the most part these women performed their duties in a conscientious manner. Even with the slight amount of historical information that is available it is possible to see that for many their interest in scholarship, education and service continued throughout their lives in the form of activities in publication and organizations such as the Philanthropic Educational

¹²² Tiernan, Elizabeth. *Iowa State College Graduates* (1952), 71.

¹²³ All familial information provide by Jordan, Becky S. Letter to the author. 4 February 2008.

Organization, known as P.E.O., an Iowa institution devoted to providing educational opportunities for women.

As can be seen by the example of Iowa State College, piecing together the history of librarians requires much footwork. Except for the University of Colorado, which opened its doors in 1879, the other colleges in this region are some of the youngest in the land-grant system. The University of Arizona opened its doors in 1891 and the University of New Mexico opened in 1890, as did the University of Utah. By this time the concept of librarianship as a professional endeavor had begun to solidify. Writing of the influence of Katherine Sharp and her library program at the University of Illinois, Laurel Grotzinger argues that there was a “concomitant social interlinking that was impossible to extricate from the professional network.”¹²⁴ This network was not only comprised of the women educators who dominated the new field of library economy, but as the profession matured, it also included the librarians who were educated in the early years of these programs, or who had become professional librarians through a combination of work experience and later professional development. For many of the later employees of Western institutions, this network was an invaluable source in obtaining positions and furthering a career.

This region has been studied at great length by Georgia Higley in her master’s dissertation *The Land- Grant College Movement and Western Libraries*. Through this work the early academic librarians of these colleges are finally brought to the fore, including Ida Kidder, librarian of the Oregon Agricultural College from 1908 to 1920; Charlotte Baker, librarian at the New Mexico College of Agriculture and Mechanic Arts from 1900 to 1906 and at Colorado Agricultural College from 1909 to 1936; Estelle

¹²⁴ Grotzinger, Laurel A. “Invisible, Indestructible Network,” 9.

Luttrell, librarian at the University of Arizona from 1904 to 1932; Sarah Goodwin, librarian at the Agricultural College of Utah from 1896 to 1904 and Lucy Lewis, librarian at New Mexico College from 1906 to 1911. In general, this region of land-grant colleges is notable for primarily hiring women as librarians. This may be due to the fact that women, in general, were paid less than men and these colleges, in particular, were constantly under-funded. However, a more positive understanding of this hiring practice is that librarianship as a profession was a female dominated one by the turn of the century and, as described above, its professional network was strong and active. Lucy Lewis, for example, was recruited for the position at the New Mexico College by the college president, Frederick W. Sanders, after he consulted with Katherine Sharp about the most suitable prospect.¹²⁵

What cannot be questioned is the work that these women did for their libraries and their communities. Higley concludes that the hiring of trained librarians was an essential component for the growth of the library. These librarians cataloged collections and “made [them] accessible through public catalogs, library hours were extended, borrowing privileges were offered to students as well as faculty, classes in library use were begun, and collections began to develop on a systematic basis.”¹²⁶ With these changes the library was able to become a major component in the success of its home institution. For the land-grant colleges in the far west, their growth was essential for the growth of their surrounding communities. In these sparsely populated states, the college may have been the only accessible source for educational opportunities and the influx of

¹²⁵ Higley, Georgia M. *The Land-Grant College Movement*, 105 – 106.

¹²⁶ *Ibid.*, 132.

information that was necessary for people to succeed in personal endeavors.¹²⁷ For Higley, the outreach and sharing of resources with the institution's home state is a definitive aspect of land-grant librarianship and it is this that sets land-grant librarians apart from other academic librarians.¹²⁸ While it may be tempting to differentiate land-grant librarians in this way, it may prove to be a false path, as the work of creating strong local and public library systems and a strong national professional association relied upon the advocacy and work of academic librarians from all types of institutions. What is, perhaps, more important is the inclusion of the history of women librarians within the histories of land-grant institutions. Higley's work does just this by bringing to light the work of the librarians from the Four Corners Region and the Oregon State Agricultural College. For this study it provides a base of historiography by which the other institutions in the West and Midwest can be compared.

Conclusion and Further Research

Each of the land-grant institutions went through a phases of development that are essentially common to all of them. These phases were most prominent during their early years of existence and include creating a curriculum based upon the requirements of the Morrill Act, securing funding beyond that provided by the act, attracting students and providing remedial education for those students until the creation of public education beyond the grade school level. The early land-grant college libraries also went through common phases including the transition from the model common in the classical period to a model that meet the needs of the new curriculum and teaching methods, need for

¹²⁷ Ibid., 133,

¹²⁸ Ibid., 137.

growth without adequate funding, lack of adequate space, and the hiring of librarians during a time when librarianship was an emerging profession. However, these commonalities cannot completely define the histories of land-grant colleges and their libraries as the land-grant institutions as the home state's particular political and socio-economic situation had as much of an impact upon the development of the colleges as did national trends. In order to understand the complex nature of the history of the land-grant college library each institution must be understood within its own particular context.

As institutions were founded, their hiring practices for librarians would have been affected by the state of the profession on a national level. Before the establishment of librarianship as a profession, the land-grant colleges tended to maintain the practices of the classical college. This is most clearly seen in the institutions of the Midwest, which were mainly founded before the 1862 act. In this situation the college president or a male faculty member acted as the college's librarian. However, this did not necessarily determine later hiring practices, as can be seen by the University of Missouri and Iowa State College. While both of these institutions began their libraries in a classical manner, Iowa State College, as it entered the turn of the century as a land-grant college, hired only women as librarians, as well as hiring a majority of women library assistants. This is not true for the University of Missouri, who hired men as head librarians while staffing the supporting positions with women. It can be safely said, however, that the majority of land-grant college libraries in the West hired women as librarians and for library supporting staff, the only other exceptions being the Mechanical and Agricultural College of Texas, The University of Nevada, and the University of California.

Understanding the history of the far west and Four Corners region has had a strong start in the work of Georgia Higley and Joanne E. Passet. This region is particularly interesting as the majority of these libraries were founded at the moment librarianship became a profession and while the profession was active with discussions of the best way to provide access to materials through cataloging and “scientific” management. These changes were reflected in and impacted by the new practical and research curriculum of the land-grant institutions. As well, the hiring practices during this time period cannot be understood without also considering the strong and active network of professional librarians and schools of library economy in the east and at the University of Illinois. The librarians of this region and era, including Charlotte Baker, Ida Kidder, and Lucy Lewis need to be brought into the general history of academic libraries in the United States. These women created libraries that were both active and integral to the workings of their institutions. They proactively attempted to grow the library and care for their collections while engaging the faculty, staff and students. These qualities continue to define success in academic librarianship to this day.

However, the history of librarianship for this region is not adequately accounted for within current historiography. Institutional histories and the history of these libraries are not ubiquitous and even when an institutional history is available the history of the library is left out. This has created a true deficit in the literature concerning the history of colleges and universities in the United States. Even in histories of academic libraries, such as Orvin Shiflett’s *Origins of American Academic Libraries*, the land-grant college and its library is not considered in a separate class. Instead, these institutions are discussed within the general context of American higher-education. Although the land-

grant colleges were affected by the changes in higher education, such as the German model as practiced at Johns Hopkins University and the elective model at Yale University, their particular endeavor, to provide a practical education to the citizens of their home states, was an entirely new and unique endeavor. Because of this difference it is not effective to view their libraries within the context of academic institutions that had different missions and goals. At the same time, it is not possible to understand the current state of academic libraries in the United States without understanding the history of the land-grant college library, as its federally mandated collection policies, active partnership in the dissemination of education and information through the experimental stations and later extension services, created a new role for academic libraries in the United States.

Admittedly, this time period is not one easily comprehended due to the multitude of factors at play, including the emergence of middle class professions, the increased numbers of women attaining college degrees and the changing educational scene, in general, as well as the beginning of the Progressive movement and feminism. This topic, therefore, requires further research as it is important for the history of academic libraries in America to reflect the reality of the situation, rather than repeating the commonly accepted themes of the past.

It is too easy to state that women were hired as librarians in land-grant institutions because they did not have to be paid well. Statistical analysis of the number of women hired could be immensely helpful in establishing relationships between the amount of pay and rates of hire. The rate of hire could be compared to the size of the library and its funding, as well as the age of the institution, the number of faculty and the variety of

courses offered. The relationship between the rates of hire in the library staff and the number of women hired as instructors in other departments needs to be delineated, as well. Defining the place of the institution within its local community is also integral to furthering the understanding of the institution's particular situation. This type of comparative study could elucidate the condition of the state and its relationship to the college, as well. Statistical analysis of the colleges that did not hire women could prove useful. These colleges are particularly intriguing since they are not confined to one geographical area, and their institutional histories differ. However, they all share characteristics of some of the other colleges who did routinely hire women as librarians. These types of analyses are essential when attempting to establish causal factors in hiring.

An important period of time that needs further clarification, particularly with statistical analysis, is the transition in employment during World War I. While not conclusive, the record indicates that it is during this time period that many of the land-grant college libraries began to hire men as head librarians, while maintaining women in supportive roles. This trend remained in place until the later half of the 20th century. Considering the fact that many women had held prominent roles as head librarians at these growing research institutions for the preceding forty years, the change is an intriguing and slightly troubling one that deserves further clarification.

When the early years of academic librarianship in state colleges are perceived as being populated by women, rather than male faculty members and college presidents, the careers of later librarians and library educators such as Katherine Sharp, while notable, are no longer anomalous. The work of Katherine Sharp, particularly through her school of library economy at the University of Illinois, continued and greatly advanced the

assimilation of women into the profession from the Mid-West and the West that had begun decades before. The “invisible, indestructible” network of librarians, which has been centered on Sharp and that had coalesced by the turn of the century, can be viewed, as well, as a continuation, rather than a beginning. By understanding this later period of librarianship as a continuation of an older network, the vibrancy of the profession, despite a depression that may have resulted from the low remuneration and adverse working conditions, can be understood in its full complexity.

At the turn of the century women occupied the majority of positions as academic librarians in western land-grant institutions. The understanding of how women came to occupy this place in the male-dominated academic arena is still incomplete. But for the historiography of American academic librarianship to be comprehensive this part of the story needs to be included. It is a complex one, but so by being, the underpinning of the profession’s more recent history of discrimination is better understood. As well, the history of the land-grant college library as an institution in constant flux informs the current understanding of the modern research library as a place that not only is required to respond to change from outside its walls, but must also initiate change in order to encourage the growth of its home institution. For the majority of the Western land-grant colleges it was a professional woman librarian who did this.

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Illustration 1

THE LAND GRANTS AND THE LAND-GRANT COLLEGES

The land-grant colleges

Year of report of the land-grant fund	Date of opening of the institution to students	Date of institution	Name of the institution	State	Year of institution	Year of report of the land-grant fund
1872	1872	1872	Alabama Agricultural and Mechanical College and Polytechnic Institute	Alabama	1872	1872
1871	1871	1871	University of Arizona	Arizona	1871	1871
1870	1870	1870	University of Arkansas	Arkansas	1870	1870
1869	1869	1869	University of California (University of California)	California	1869	1869
1868	1868	1868	University of Colorado	Colorado	1868	1868
1867	1867	1867	University of Connecticut	Connecticut	1867	1867
1866	1866	1866	University of Florida	Florida	1866	1866
1865	1865	1865	University of Georgia	Georgia	1865	1865
1864	1864	1864	University of Idaho	Idaho	1864	1864
1863	1863	1863	University of Illinois	Illinois	1863	1863
1862	1862	1862	University of Indiana	Indiana	1862	1862
1861	1861	1861	University of Iowa	Iowa	1861	1861
1860	1860	1860	University of Kansas	Kansas	1860	1860
1859	1859	1859	University of Kentucky	Kentucky	1859	1859
1858	1858	1858	University of Louisiana (Louisiana State University and Agricultural and Mechanical College)	Louisiana	1858	1858
1857	1857	1857	University of Maryland	Maryland	1857	1857
1856	1856	1856	University of Massachusetts	Massachusetts	1856	1856
1855	1855	1855	University of Michigan	Michigan	1855	1855
1854	1854	1854	University of Minnesota	Minnesota	1854	1854
1853	1853	1853	University of Missouri	Missouri	1853	1853
1852	1852	1852	University of Nebraska	Nebraska	1852	1852
1851	1851	1851	University of Nevada	Nevada	1851	1851
1850	1850	1850	University of New Hampshire	New Hampshire	1850	1850
1849	1849	1849	University of New Jersey	New Jersey	1849	1849
1848	1848	1848	University of New York	New York	1848	1848
1847	1847	1847	University of North Carolina	North Carolina	1847	1847
1846	1846	1846	University of Ohio	Ohio	1846	1846
1845	1845	1845	University of Oregon	Oregon	1845	1845
1844	1844	1844	University of Pennsylvania	Pennsylvania	1844	1844
1843	1843	1843	University of Rhode Island	Rhode Island	1843	1843
1842	1842	1842	University of South Carolina	South Carolina	1842	1842
1841	1841	1841	University of Tennessee	Tennessee	1841	1841
1840	1840	1840	University of Vermont	Vermont	1840	1840
1839	1839	1839	University of Virginia	Virginia	1839	1839
1838	1838	1838	University of Washington	Washington	1838	1838
1837	1837	1837	University of Wisconsin	Wisconsin	1837	1837
1836	1836	1836	University of Wyoming	Wyoming	1836	1836

United States Department of Education. The Land Grant Act of 1862 and the Land-Grant Colleges. (1918).

Illustration 1, cont.

THE LAND GRANTS AND THE LAND-GRANT COLLEGES. 68

The land-grant colleges (continued).

Name of institution.	Agri- cult- ural colle- ge and uni- ver- sity	State funda- tion	Date of or- ganiza- tion	Date of or- ganiza- tion of the institu- tion.	Date of open- ing of the land-grant fund.
Agricultural and Mechanical College of Texas	X		Apr. 12, 1871	Oct. 1, 1873	Apr. 17, 1871
Agricultural College of Illinois	X		Mar. 8, 1868	Sept. 1, 1870	Mar. 8, 1868
University of Vermont			Nov. 2, 1791	1801	Nov. 9, 1865
Virginia Agricultural and Mechanical College and Polytechnic Institute	X		Mar. 10, 1872	Fall of 1872	Mar. 10, 1872
Illamington Normal and Agricultural Institute (colored)	X		June 4, 1870	Apr. 13, 1868	Mar. 19, 1872
State College of Washington	X		Mar. 25, 1890	Mar. 13, 1892	Mar. 25, 1890
West Virginia University			July 2, 1867	1868	Mar. 7, 1867
University of Wisconsin			July 20, 1848	Fall of 1848	Apr. 12, 1848
University of Wyoming			Mar. 4, 1886	Fall of 1887	—, 1880

APPENDIX I										
Land-Grant Statistics, U S Bureau of Education ¹										
State	Report Year	# Students	# Faculty	# Graduates ³	Lib Volumes ⁷	Lib Value	Lib Add Spending	Expenditures	Microfiche No ²	
Arizona	1896	100	22	40	1,720	\$3,533.00	\$3.00	\$3.80	A1004-35	
	1898	152	14	0	2,600	\$3,553.00	\$0.00	\$0.00	A1003-51	
	1899	133	16	1	4,000	\$633.00	\$1,000.00		A1003-78	
	1900	164	22	4	15,499	\$12,000.00	\$1,649.00		A1003-97	
	1901		22	4	16,000	\$13,000.00	\$1,000.00			
	1902		16	9	16,828	\$12,273.00	\$1,248.00			
	1904	205		5					A1004-61	
	1905	194	26/0	1					A1004-64	
	1915 - 1916				39	22,359	\$35,000.00	\$4,715.00		
	1916 - 1917							\$3,683.00		
1917 - 1918					30000 / 1500	\$54,071.00	\$4,252.00			
California	1896	1,336	51	118	66,978		\$122.49	\$22.49	A1004-35	
	1898	1,498	57	130	64,000	\$138,200.00	\$3,500.00		A1003-51	
	1899	2,538	75	172	158,607	\$145,000.00	\$3,800.00		A1003-78	
	1900	2,661	74	278	99,000	\$150,000.00	\$3,086.00		A1003-97	
	1901		75	440	148,000	\$156,000.00	\$6,412.00			
	1902		85	456	148,000		\$19,692.00			
	1904	3,306		365					A1004-61	
	1905	4,250	65/179	345						
	1915 - 1916				785	328000 / 108367	\$250,000.00	\$34,470.00		
	1916 - 1917							\$32,459.00		
1917 - 1918					440000 / 175000	\$550,005.00	\$23,975.00			
Colorado	1896	232	23	12	18,000	\$9,689.00	\$19.04	\$19.04	A1004-35	
	1898	335	23	11	12,710	\$9,689.00	\$653.18		A1003-51	
	1899	345	22	18	11,000	\$10,831.00	\$79.00		A1003-78	
	1900	363	31	26	10,000	\$10,377.00			A1003-97	
	1901		27	33	10,056	\$10,377.00				
	1902		32	31	23,900	\$18,750.00	\$300.00			
	1904	433		26					A1004-61	
	1905	496	45/0	4						
	1915 - 1916				86	38322 / 55000	\$55,946.00	\$3,006.00		
	1916 - 1917							\$1,400.00		
1917 - 1918					42301 / 25000	\$54,126.00	\$1,900.00			
Idaho	1896	266	16	4	21,915	\$4,000.00	\$4.09	\$4.09	A1004-35	
	1898	254	23	6	15,000	\$5,000.00	\$2,000.00		A1003-51	
	1899	183	17	7	5,500	\$6,000.00	\$500.00		A1003-78	
	1900								A1003-97	
	1901		19	24	6,300	\$12,000.00	\$100.00			
	1902		19	11	6,500	\$10,625.00	\$125.00			
	1904	420		14					A1004-61	
	1905	383	21/4	14						
	1915 - 1916				63	30,000	\$38,472.00	\$3,917.00		
	1916 - 1917							\$5,009.00		
1917 - 1918					42000 / 800	\$51,165.00	\$1,665.00			

APPENDIX 1

Land-Grant Statistics, U.S. Bureau of Education ¹										
State	Report Year	# Students	# Faculty	# Graduates ³	Lib Volumes ⁷	Lib Value	Lib Add Spending	Expenditures	Microfiche No. ²	
Illinois	1896	615	82	81	34,700	\$12,000.00		\$247.60	\$171.92 A1004-35	
	1898	1,075	90	93	36,450	\$400,000.00		\$3,000.00	A1003-51	
	1899	1,813	109	108	65,500	\$60,000.00		\$15,000.00	A1003-78	
	1900	2,234	125	188	47,500	\$65,000.00		\$3,000.00	A1003-97	
	1901		127	404	70,000	\$70,803.00		\$5,803.00		
	1902		72	489	73,000			\$10,000.00		
	1904	3,594		593					A1004-61	
	1905									
	1915 - 1916				967	369258 / 91452	\$594,433.00		\$44,308.00	
	1916 - 1917								\$176,645.00	
1917 - 1918					410573 / 53076	\$733,818.00		\$69,379.00		
Iowa	1896	548	46	57	16,000	\$18,000.00		\$21.23	\$21.23 A1004-35	
	1898	573	55	57	13,000	\$22,003.00		\$4,000.00	A1003-51	
	1899	744	67	81	14,480	\$23,200.00		\$1,200.00	A1003-78	
	1900	935	62	71	12,480	\$23,200.00		\$1,000.00	A1003-97	
	1901		68	72	16,500	\$27,000.00		\$2,000.00		
	1902		69	67	18,500	\$29,000.00		\$2,000.00		
	1904	1,985		120					A1004-61	
	1905	1,980	105	186						
	1915 - 1916				318	62200 / 30000	\$170,110.00		\$8,430.00	
	1916 - 1917								\$9,200.00	
1917 - 1918					661000 / 30000	\$193,075.00		\$13,775.00		
Kansas	1896	644	35	71	22,425	\$36,188.00		\$112.24	\$112.24 A1004-35	
	1898	667	35	55	23,378	\$31,961.00		\$0.00	A1003-51	
	1899	871	45	53	34,025	\$37,336.00		\$556.00	A1003-78	
	1900	1,094	53	58	38,450	\$35,299.00		\$1,300.00	A1003-97	
	1901		59	67	37,456	\$71,744.00		\$1,685.00		
	1901		63	43	26,025	\$45,280.00		\$1,500.00		
	1904	1,605		99					A1004-61	
	1905	1,462	68/10	103						
	1915 - 1916				274	55160 / 2000	\$105,600.00		\$7,277.00	
	1916 - 1917								\$7,941.00	
1917 - 1918					61300 / 22000	\$120,665.00		\$7,475.00		
Michigan	1896	293	31	32	25,749	\$42,964.00		\$131.95	\$131.95 A1004-35	
	1898	425	35	28	23,212	\$44,135.70		\$1,061.00	A1003-51	
	1899	550	43	29	26,000	\$40,360.00		\$0.00	A1003-78	
	1900	342	43	23	23,862				A1003-97	
	1901		54	39	26,000					
	1902		60	59	23,076	\$41,980.00				
	1904	923		55					A1004-61	
	1905	1,009	75	75						
	1915 - 1916				249	42459 / 8863	\$70,000.00		\$3,000.00	
	1916 - 1917								\$2,000.00	
1917 - 1918					42271 / 9133	\$80,000.00		\$1,000.00		

APPENDIX 1									
Land-Grant Statistics, U S Bureau of Education ¹									
State	Report Year	# Students	# Faculty	# Graduates ³	Lib Volumes ²	Lib Value	Lib Add Spending	Expenditures	Microfiche No ²
Minnesota	1896	2,490	53	16	61,000	\$60,000.00	\$48.87	\$48.80	A1004-35
	1898	2,647	50	108	50,000	\$70,000.00	\$10,000.00		A1003-51
	1899	2,925	56	134	55,000	\$70,000.00	\$6,000.00		A1003-78
	1900	3,241	66	288	60,000	\$75,000.00	\$12,607.00		A1003-97
	1901		89	379	75,000	\$80,000.00	\$8,000.00		
	1902		87	437	110,000	\$85,000.00	\$8,500.00		
	1904	3,825		454					A1004-61
	1905	3,790	72/310	491					
	1915 - 1916			159	225000 / 57250	\$750,000.00	\$130,000.00		
	1916 - 1917						\$35,783.00		
1917 - 1918				289110 / 60000	\$820,923.00	\$35,140.00			
Missouri	1896		49	16	55,248		\$276.54	\$276.54	A1004-35
	1898	701	45	19	61,174		\$0.00		A1003-51
	1899	815	42	101	65,000	\$44,000.00			A1003-78
	1900	1,632	67	99	2,227	\$27,890.00	\$5,750.00		A1003-97
	1901		31	159	75,700	8840 ^a			
	1902		84	79	89,200	9000 ^b	800 ^c		
	1904	1,455		116					A1004-61
	1905	1,892	32/116	216					
	1915 - 1916			527	200000 / 52000	\$433,221.00	\$16,100.00		
	1916 - 1917						\$21,181.00		
1917 - 1918				223470 / 71928	\$423,209.00	\$12,823.00			
Montana	1896	68	13	4	2,950	\$5,000.00	\$165.67	\$165.67	A1004-35
	1898	174	16	1	4,700	\$5,000.00	\$1,000.00		A1003-51
	1899	266	19	2	5,500	\$8,000.00	\$1,000.00		A1003-78
	1900	168	19	3	8,750	\$10,000.00	\$250.00		A1003-97
	1901		23	4	10,400	\$15,000.00	\$1,200.00		
	1902		26	8	11,348	\$15,000.00	\$2,000.00		
	1904	357		8					A1004-61
	1905	339		31					
	1915 - 1916			31	14747 / 5000	\$26,500.00	\$14,990.00		
	1916 - 1917						\$1,500.00		
1917 - 1918				17117 / 4000	\$28,450.00	\$1,950.00			
Nebraska	1896	253	46	44	33,856	\$50,000.00	\$173.29	\$173.29	A1004-35
	1898	453	53	38	35,000	\$50,000.00	\$2,500.00		A1003-51
	1899	1,817	42	116	41,000	\$132,000.00	\$6,000.00		A1003-78
	1900	2,347	74	193	54,000	\$115,000.00	\$10,000.00		A1003-97
	1901		78	222	63,400		\$5,006.00		
	1902		78	221	53,080	\$106,160.00	\$8,450.00		
	1904	2,513		156					A1004-61
	1905	2,728	43/156	208					
	1915 - 1916			401	121403 / 6000	\$221,575.00	\$14,990.00		
	1916 - 1917						\$12,900.00		
1917 - 1918				138500 / 7000	\$255,000.00	\$12,500.00			

APPENDIX 1									
Land-Grant Statistics, U.S. Bureau of Education ¹									
State	Report Year	# Students	# Faculty	# Graduates ³	Lib Volumes ⁷	Lib Value	Lib Add Spending	Expenditures	Microfiche No. ²
Nevada	1896	188	18	18	8,007	\$10,000.00		\$31.74	A1004-35
	1898	335	26	14	9,517	\$8,527.00		\$1,061.00	A1003-51
	1899	331	23	30	12,407	\$11,193.00		\$545.00	A1003-78
	1900	324	25	23	13,874	\$11,143.00		\$920.36	A1003-97
	1901		24	23	15,842	\$7,589.00		\$445.00	
	1902		23	19	16,475	\$14,177.00		\$50.00	
	1904	248		18					A1004-61
	1905	257	25/11	32					
	1915 - 1916				35001 / 40000	\$45,419.00		\$2,819.00	
	1916 - 1917							\$55.00	
1917 - 1918				38000 / 45000	\$50,000.00		\$2,046.00		
New Mexico	1896	26	17	5	3,126	\$5,835.00		\$25.60	A1004-35
	1898	181	16	3	3,829	\$5,500.00		\$1,125.00	A1003-51
	1899	212	18	3	4,990	\$6,500.00		\$525.00	A1003-78
	1900	205	23	3	5,649	\$9,400.00		\$500.00	A1003-97
	1901		25	4	12,500	\$11,200.00		\$1,800.00	
	1902		21	5	13,150	\$12,500.00		\$1,500.00	
	1904	224		6					A1004-61
	1905	237	30/0	6					
	1915 - 1916			8	474,382	\$43,302.00		\$1,036.00	
	1916 - 1917							\$265.00	
1917 - 1918				18323 / 38297	\$51,468.00		\$0.00		
North Dakota	1896	61	15	1	3,450	\$7,500.00		\$9.15	A1004-35
	1898	229	17	1	5,025	\$8,500.00		\$1,000.00	A1003-51
	1899	237	23	2	10,500	\$15,000.00		\$200.00	A1003-78
	1900	349	24	2	8,250	\$1,500.00		\$2,900.00	A1003-97
	1901		19	8	8,700	\$15,000.00		\$500.00	
	1902		27	4	9,100	\$16,000.00		\$350.00	
	1904	720		6					A1004-61
	1905	721	33/0	5					
	1915 - 1916			59	160,500	\$33,235.00		\$1,685.00	
	1916 - 1917							\$2,112.00	
1917 - 1918				28995 / 2300			\$0.00		
Oklahoma	1896	155	10	6	4,160	\$6,000.00		\$1,009.50	A1004-35
	1898	131	11	3	3,400	\$7,000.00		\$802.00	A1003-51
	1899	219	16	8	8,098	\$10,100.00		\$2,600.00	A1003-78
	1900	366	18	6	9,607	\$11,864.00		\$750.00	A1003-97
	1901		20	5	15,070	\$13,269.00		\$4,469.00	
	1902		21	18	15,070	\$17,965.00		\$1,420.00	
	1904	417		20					A1004-61
	1905	555	29/0	30					
	1915 - 1916			79	25807 / 135307	\$39,847.00		\$1,632.00	
	1916 - 1917							\$1,160.00	
1917 - 1918				25000 / 100450	\$50,000.00		\$1,311.00		

APPENDIX 1									
Land-Grant Statistics, U. S. Bureau of Education ¹									
State	Report Year	# Students	# Faculty	# Graduates ³	Lib Volumes ⁷	Lib Value	Lib Add Spending	Expenditures	Microfiche No. ²
Oregon	1896	396	21	43	3,500	\$2,500.00		\$10.66	A1004-35
	1898	318	23	16	5,600	\$3,000.00	\$550.00		A1003-51
	1899	338	24	34	4,000	\$4,000.00	\$872.00		A1003-78
	1900	405	28	35	3,000	\$4,500.00	\$1,294.00		A1003-97
	1901		28	34	3,100	\$4,800.00	\$281.00		
	1902		30	32	3,270		\$822.00		
	1904	530		35					A1004-61
	1905	680	33/0	50					
	1915 - 1916			270	37465 / 66800	\$23,088.00	\$6,187.00		
	1916 - 1917						\$5,000.00		
1917 - 1918				42773 / 115225	\$121,011.00	\$5,000.00			
South Dakota	1896	185	19	19	12,903		\$29.66	\$29.66	A1004-35
	1898	321	21	22	5,030		\$3,000.00		A1003-51
	1899	434	20	18	15,900	\$9,000.00	\$300.00		A1003-78
	1900	219	27	24	15,900	\$3,000.00	\$500.00		A1003-97
	1901		29	26	17,036	\$5,000.00			
	1902		26	24	17,626	\$5,360.00	\$300.00		
	1904	519		20					A1004-61
	1905	488	35/0	26					
	1915 - 1916			46	20000 / 6000	\$15,000.00	\$0.00		
	1916 - 1917						\$500.00		
1917 - 1918				23364 / 6000	\$21,600.00	\$856.00			
Texas	1896	353	22	21	7,800	\$5,500.00	\$106.47	\$106.47	A1004-35
	1898	297		26	8,150	\$5,500.00	\$225.00		A1003-51
	1899	356	21	21	8,500	\$5,500.00	\$0.00		A1003-78
	1900	396	24	25	30,100	\$5,500.00	\$250.00		A1003-97
	1901		26	19	9,500	\$5,500.00			
	1902		28	28	9,500	\$5,500.00	\$1,000.00		
	1904	378		36					A1004-61
	1905	414	44/0	39					
	1915 - 1916			117	11434 / 10000	\$38,293.00	\$6,000.00		
	1916 - 1917						\$79,207.00		
1917 - 1918				18609 / 12000	\$18,680.00	\$2,950.00			
Utah	1896	497	21	29	5,224	\$5,700.00	\$126.74	\$126.74	A1004-35
	1898	488	24	14	8,074	\$7,000.00	\$3,000.00		A1003-51
	1899	479	23	10	11,251	\$6,000.00	\$552.00		A1003-78
	1900	188	28	8	12,642	\$5,591.00	\$668.00		A1003-97
	1901		33	5	15,089		\$391.00		
	1902		35	3	21,500	\$6,548.00	\$957.00		
	1904	623		14					A1004-61
	1905	733	58/0	19					
	1915 - 1916			108	29890 / 3738	\$18,000.00	\$2,231.00		
	1916 - 1917						\$2,549.00		
1917 - 1918				31990 / 41894	\$33,513.00	\$3,171.00			

APPENDIX 1									
Land-Grant Statistics, U S Bureau of Education ¹									
State	Report Year	# Students	# Faculty	# Graduates ³	Lib Volumes ⁷	Lib Value	Lib Add Spending	Expenditures	Microfiche No. ²
Washington	1896	217	21	0	5,132			\$146.43	A1004-35
	1898	316	23	22	5,872	\$6,000.00		\$0.00	A1003-51
	1899	300	27	11	5,566	\$5,000.00		\$400.00	A1003-78
	1900	386	30	11	7,024	\$5,419.00		\$419.00	A1003-97
	1901		41	20	7,424	\$10,000.00			
	1902		50	38	9,385	\$20,000.00		\$591.00	
	1904	653		61					A1004-61
	1905	793	55	15					
	1915 - 1916				162	50000 / 19000	\$25,039.00	\$8,420.00	
	1916 - 1917							\$4,364.00	
1917 - 1918					64000 / 55000	\$55,534.00	\$6,809.00		
Wisconsin	1896	1,329	40	276	56,000	\$50,000.00		\$153.81	A1004-35
	1898	1,769	42	153	60,500	\$50,000.00	\$5,000.00		A1003-51
	1899	1,919	43	182	68,000	\$94,507.00		\$652.00	A1003-78
	1900	744	81	288	78,354	\$104,200.00		\$7,149.00	A1003-97
	1901		112	285	80,532	\$11,336.00			
	1902		100	302	86,239	\$130,293.00		\$6,626.00	
	1904	3,326		91					A1004-61
	1905	3,413	58/199	409					
	1915 - 1916				75	240000 / 50000	\$49,983.00	\$28,977.00	
	1916 - 1917							\$38,421.00	
1917 - 1918						\$588,896.00	\$21,801.00		
Wyoming	1896	118	11	0	5,532	\$5,000.00			A1004-35
	1898	160	11	12	7,680	\$5,925.00		\$925.00	A1003-51
	1899	142	13	5	11,740	\$7,755.00		\$1,410.00	A1003-78
	1900	132	13	15	14,800	\$10,000.00		\$3,670.00	A1003-97
	1901		13	16	17,300	\$15,800.00		\$4,870.00	
	1902		13	4	22,000	\$21,800.00		\$6,000.00	
	1904	280		14					A1004-61
	1905	283	14/4	17					
	1915 - 1916				26	39,000	\$7,200.00	\$3,545.00	
	1916 - 1917							\$5,049.00	
1917 - 1918						\$80,000.00	\$4,197.00		
(1) Statistics taken from U S. Dept of Agriculture Statistics of the Land-Grant Colleges and Agricultural Experiment Stations in the United States for years stated. For statistics not provided, column has been left blank.									
(2) Microfiche number refers to CIS Index									
(3) Graduates from previous year									
(4) Columbia campus not included									
(5) Rolla Campus Only									
(6) Rolla Campus Only									
(7) For the years 1915 - 1918, the library volume numbers refer to number of books / number of pamphlets									

APPENDIX 2								
The Land-Grant Colleges and Their Librarians ¹³								
College ¹	Location	Current name	Founded	Opened	Librarians (prior to 1920)	Reference	Education	Notes
Alabama Agricultural & Mechanical College & Polytechnic Institute	Auburn	Auburn University	1872	1872				
					Anne Ogle Shivers, asst (1909 - 1910)	2		
					Lucile Virden, asst (1910 - 1911)	2		
					Mary Martin, asst lib (1912 - 1918)	2		
					Mary Martin (1918 - 1949)	2		
University of Arizona	Tucson	same	1885	1891				
					Howard J. Ball (1896 - 1904)	8	BA, MA	Instructor English
					Estelle Luttrell (1904-1932)	4, 8	BA, MA	Instructor English
University of Arkansas	Fayetteville	same	1871	1872				
					Julia Angelina Garside (1895 - ?)	2		
University of California, Berkeley	Berkeley / Oakland	University of California System	1868	1869				
					Prof. William Swinton (1869 - 1874)	13		
					Prof. Edward Rowland Sill (1874 - 1875)	13		
					Instructor Carlos F. Gompertz (1874 - 1875)	13		
					Joseph Cummings Powell (1875 - 1918)	8, 13, 14	BA	
					J. D. Layman, asst lib (1888 - 1907)	8, 13		
					Miss H. E. Green, cataloger (1892 - 1893)	13		
					Cecil K. Jones, ref. lib (1893 - 1900)	8, 13		
					Miss Fanny Bonto, asst lib (1897 - 1903)	13, 14		
					Pauline Gunthorp, head cataloger (1907 - 1926)	14		
					Harold L. Leupp, associate lib (1910 - 1919)	14		
	Edith M. Coulter, head cataloger (1915 - 1928)	14						
	Harold L. Leupp (1919 - 1945)	14						
Colorado Agricultural College	Fort Collins	Colorado State University	1870	1879				
					Lillian Stroud (1880 - 1887)	4, 6		
					Lerah G. Stratton (1887 - 1892)	4, 6, 8		Sister of Marguerite
					Celia May Southworth (1892 - 1894)	4, 6, 8		
					Marguerite E. Stratton (1894 - 1901)	4, 6, 8	BS	Sister of Lerah
					Joseph Daniels "first professional librarian" (1901 - 1909)	4, 6, 8		1906 - "library"
					Anna Albert, asst (1904 - 1905)	8		
					Charlotte Baker, asst lib (1906 - 1909)	4, 6, 8		
					Charlotte Baker (1909 - 1936)	4, 6, 8		
					Ida Walker, asst lib (1910 -)	4, 6, 8		
	Arlene Dilts, asst in lib (1910 -)	4, 6, 8						
	Clara Gladden, Libr Asst (1912 -)	4, 6						
Connecticut Agricultural College	Storrs	University of Connecticut	1881	1881				
					[stenographer] (1893)	2		
					Jessie S. Bowen (1896)	2		
					Edwina Whitney (1899 - ?)	2		
Delaware College	Newark	University of Delaware	1833	1834				
					[faculty member] (1840s - ?)	2		

APPENDIX 2								
The Land-Grant Colleges and Their Librarians ¹⁵								
College ¹	Location	Current name	Founded	Opened	Librarians (prior to 1920)	Reference	Education	Notes
					Wilbur Owen Sypherd (1906 - 1920)	2		
					Dorothy Lawson Hawkins, asst (? - 1921)	2		
					Dorothy Lawson Hawkins (1921 - ?)	2		
University of Florida	Gainesville	University of Florida	1870	1884				
					Cora Mitmore (1918 - 1920?) (first professional lib)	2		
Georgia State College of Agriculture	Athens	University of Georgia	1866	1872				
					Sarah A. Frierson (1887 - 1905)	2		
					Sarah A. Frierson asst lib (1905 - 1910)	2		
					Duncan Barnett (1905 - ?)	2		
					Ms Stevens, cataloger (1904)	2		
University of Idaho	Moscow	University of Idaho	1889	1892				
					Stella M. Allen, asst lib (1896 -	8	PhD	Instr Domestic Econ
					Margaret B. Callie (1903 - 1905)	8	BS	
					Belle Sweet (1905 -	8	BLibSci	
University of Illinois	Urbana	University of Illinois	1867	1868				
					Katherine Sharp (- 1909)	11		
					Phineas L. Windsor (1909 -	11		
					Frances Simpson, ref libr (1912 -	8	ML	Library Economy
Purdue University	West Lafayette	Purdue University	1869	1874				
					Jesse H. Blair (1876 - 1878)	2		
					Eulora J. Miller (1878 - 1880)	2		
					Moses C. Stevens (1880 - 1883)	2		
					Richard W. Swan (1883 - 1889)	2		
					Elizabeth Day Swan (1889 - 1903)	2		
					Blanche Miller (1903 - 1904)	2		
					William H. Hepburn (1904 - 1944)	2		
Iowa State College of Agriculture and Mechanic Arts	Ames	Iowa State University	1858	1859	*see Appendix 3			
Kansas State Agricultural College	Manhattan	Kansas State University	1863	1863				
					D. E. Lantz (1891-1903)	8	MS	Math
					Jennie C. Tunnell, asst lib (1890 - 1892)	8	BS	
					Julia R. Pierce, asst lib (1892 - 1897)	8	BS	
					Julia R. Pierce (1897-1903)	8	BS	
					Mrs. Henrietta W. Calvin (1903 - 1907)	8	BS	
					Margaret J. Minis, asst lib (1903 - 1907)	8	BS	
					Gertrude Barns, asst lib (1903 - 1909)	8		
					Amanda Kate Tinkey, asst lib (1904 -)	8		
					Gertrude Barns (1908 - 1912)	8		
					Florence Warner, asst libr / cataloger (1908 -	8	AB	
					Jessie Gulick, asst libr (1909 -	8		
					Mary Mudge, asst libr (1909 -	8	BS	

APPENDIX 2							
The Land-Grant Colleges and Their Librarians ¹⁵							
College ¹	Location	Current name	Founded	Opened	Librarians (prior to 1920)	Reference	Education/Notes
					Arthur B. Smith (1911 -	8	MA
					Grace E. Derby, asst lib (1911 -	8	AB
					Agnes B. Cooper, asst libr (1912 -	8	AB
Louisiana State University and Agricultural and mechanical	Baton Rouge	Louisiana State University System	1874	1874		2	
					Inez Mortland, asst (1903)	2	
					Mamie B. Hall, asst (1906)	2	
					Annie M. Beale, asst (1910)	2	
					Inez Mortland (1910 - 1917)	2	
					Lillian Guinn, asst (1912)	2	
					Ruth E. Bates, asst (1912)	2	
					Ruth E. Bates, asst lib (1915)	2	
					Annie M. Beale (1917 - ?)	2	
University of Maine	Orono	University of Maine	1865	1868			
					Prof George Herbert Hamlin (1874 - 1884)	2	
					Prof Allen Ellington Rogers (1884 - 1886)	2	
					Prof George Herbert Hamlin (1886 - 1889)	2	
					Pres Merritt Caldwell Fernald (1889 - 1890)	2	
					Harriet Converse Fernald (1890 - 1897)	2	
					Ralph Kneeland Jones (1897 - ?)	2	
					Georgia Thomas Burrows, asst to lib (1899)	2	
					Thirsa Burr Sands, asst to lib (1900)	2	
					Geneva Ring Hamilton, asst lib (1900 - 1904)	2	
					Clara Estelle Patterson, asst lib (1904 - 1906)	2	
					Jennie Elizabeth Dunmore, cataloger (1906 - 1907)	2	
					Maude Brown Calcord, asst (1906 - 1908)	2	
					Isabel Monro, cataloger (1907 - 1909)	2	
					Bertha Corey Whittemore, asst (1907 - 1909)	2	
					Helen Waugh Stobie, asst (1909 - 1911)	2	
					Bertha Corey Whittemore, cataloger (1909 - 1911)	2	
					Ella May Tall, cataloger (1911 - ?)	2	
					Natalie Frederique Howe, asst (1911 - 1912)	2	
					Clara Fenney, asst (1912 - 1913)	2	
					Geneva Alice Reed, asst (1912 -)	2	
					Anne Elizabeth Harwood, asst (1913 -)	2	

APPENDIX 2								
The Land-Grant Colleges and Their Librarians ^{1b}								
College ¹	Location	Current name	Founded	Opened	Librarians (prior to 1920)	Reference	Education	Notes
Maryland Agricultural College	College Park	University of Maryland at College Park	1856	1859				
Massachusetts Agricultural College	Amherst	University of Massachusetts	1863	1867				
					Henry Hill (1885 - 1899)	2		
					Miss Ella Frances Hall (1899 - 1908)	2		
Massachusetts Institute of Technology	Cambridge	MIT	1861	1865				
Michigan State College of Agriculture and Applied Science	East Lansing	Michigan State University	1855	1857				
					Mrs. Mary J. C. Merrill (1883 -	11		
					Miss J. Sinclair (1890 -	8		
					Mrs. Linda E. Landon (1892 -)	8		
					Caroline Balbach, asst lib (1904 - 1905)	8	BS	
					Cora L. Feldkamp, asst lib (1905 - 1908)	8	BS	
					Agnes E. Crumb, asst lib (1908 -	8		
					Elizabeth Palm, asst lib (1911 -	8	BS	
University of Minnesota	Minneapolis	University of Minnesota	1851	1851				
					Ina Ten Eyck Firkins	4		
					Florence A. Brewster (1892 - 1903)	8		
					Mary S. McIntyre (1903-1908)	8	BS	
					Anna M. Smith (1908-1912)	8		
					Anna M. Hoskins, (1912 -	8		instr lib methods
Mississippi Agricultural and Mechanical College	Mississippi State	Mississippi State University	1878	1880				
					Mary Phares (1882 - 1883)	2		
					Miss L.B. Tillman, asst (1911)	2		
					Miss Grace Barnes, cataloger (1914)	2		
					Miss Laura Hall, cataloger / asst lib (1915)	2		
					Miss Olive Moncrief, desk assistant (1916)	2		
					Miss Laura Hall (1918 - 1921)	2		
					Miss Olive Moncrief, assistant lib (1918 - 1921)	2		

APPENDIX 2						
The Land-Grant Colleges and Their Librarians ¹⁵						
College ¹	Location	Current name	Founded	Opened	Librarians (prior to 1920)	Reference Education Notes
University of Missouri ¹	Columbia	University of Missouri System	1839	1841		
					Robert Stuart Thomas (1849 - 1853)	5 AM
					Bolivar Stark Head (1853 - 1860)	5 AM
					Edward T. Frisoe (1860 - 1862)	5 AM
					Joseph Granville Norwood (1862 - 1877)	5 AM, MD, LL D
					Scott Hayes (1877 - 1880)	5 MS, Mag
					Joseph Hudson Drummond (1881 - 1887)	5 AB, AM
					Ida Hayes, asst lib (1881 - 1883)	5
					Henry Walter Elliott, asst (1883 - 1885)	5
					James Samuel Snoddy, asst lib (1885 - 1887)	5
					John Watson Monser (1887 - 1897)	5
					Walter King Stone (1897 - 1900)	5, 8 AB Law Librarian (1911 - 1915)
					James Thayer Gerould (1900 - 1906)	5, 8 AB
					Philip Sanford Goulding, head cataloger (1900 - 1901)	5
					Edith Allen Phelps, asst cataloger (1900 - 1902)	5
					Duncan Burnet, head cataloger (1901 - 1906)	5
					Jesse M. Allen, asst cataloger (1902 - 1905)	5
					Grace Lefler, cataloger (1904 - 1906)	5 BLS
					Walter King Stone, asst libr (1906 -)	5
					Grace Lefler, head cataloger (1906 - 1910)	5
					Stella Blanche Hedrick, asst head ag college (1909 - 1913)	5
					Henry Ormal Severence, librarian (1907 - 1937)	5 AM
					Bertha Bond, asst cataloger (1907 - 1911)	5 AB, BLS
					Clarence Wesley Sumner, asst in charge night (1908 - 1911)	5 AB
					Florence Whitier, asst lib (1910 - 1915)	5 AB
					Leta Adams, head cataloger (1911 - 1912)	5 AB, BLS
					Sadie P. Wykes, asst cataloger (1912 - 1913)	5
					Emma K. Parsons, charging clerk (1912 - 1915)	5
					Mary Ellen Baker, head cataloger (1912 - 1919)	5 AB, BLS
					Jane A. Hurty, asst in charge of eng lib (1913 - ?)	5
					Harriet Bixby, asst head ag college (1913 - 1914)	5
					Eva Lillian Fitch, asst cataloger (1913 - 1914)	5 AB
					Emma K. Parsons, ref lib (1915 - 1919)	5
					Ella Peeples, asst cataloger (1914 - 1918)	5
					Louise Peters, asst cataloger (1914 - 1915)	5 MA
					Valeria Easton, asst ref lib (1915)	5
					Percy Anderson Hogan, law librarian (1915 - ?)	5
					Edna G. Moore, asst cataloger (1915 - 1916)	5 AB
					Dora Finney, asst in charge of ag lib (1915 - 1917)	5 AB
					Inez Spicer, asst cataloger (1915 - 1918)	5 AB
					Julia Sampson, asst in charge freshman room (1915 - 1919)	5
					Annalee Peeples, periodical clerk (1916 - 1917)	5
					Barbara Boiles, asst catloger (1916 - 1919)	5 AB, BS
					Annalee Peeples, asst in charge of ag lib (1917 - 1918)	5 asst loan desk
					Alice Rogers, asst in charge ag lib (1918 - 1919)	5
					Abbie Hudson, asst cataloger (1918 - 1920)	5 BS
					Ruth McCaughey, asst cataloger (1918 - 1920)	5 AB
					Mary L. Berkowitz, asst head ag college (1919)	5
					Florence Baxter Currie, head cataloger (1919 - ?)	5 BL, BLS
					Samuel Allen Jeffers, acting lib (1919 - 1920)	5 PhD
					Lynn G. Worth, asst cataloger (1919 - 1920)	5
					Marian Kirk, asst cataloger (1919 - 1920)	5
					Emily Bird Smith, asst cataloger (1919 - 1920)	5
					Fannie Dunlap, reference lib (1919 - 1920)	5 BLS, PhB
					Jane Frodsham, head ag lib (1920 - ?)	5
					Stella Blanche Hedrick, asst head ag college (1919 - 1920)	5
					Lorine Lloyd, asst cataloger (1920)	5
					Katherine Webb, asst cataloger (1920)	5
					Samuel Allen Jeffers, asst in charge circ (1920 - 1921)	5

APPENDIX 2								
The Land-Grant Colleges and Their Librarians ¹⁵								
College ¹	Location	Current name	Founded	Opened	Librarians (prior to 1920)	Reference	Education	Notes
Montana State College of Agriculture & Mechanic Arts	Bozeman	Montana State University	1893	1893	Mabel Ruth Owens	4		
					Mrs. Mary K. Winter (1904 -	4, 8		
					Elizabeth Forrest	4		
					Elizabeth T. Stout	4		
University of Nebraska	Lincoln	University of Nebraska System	1869	1871	Mary L. Jones, acting lib (1896 - 1897)	4, 8	BLS	
					John D. Epes, acting lib (1897 - 1904)	8	BA	
					James I. Wyer (1904 - 1905)	8	BLS	biographer
					Walter K. Jewitt (1906 -	8		biographer
					Edna C. Noble, agriculture librarian (1908-1909)	8	BL	
					Edna C. Noble, asst librarian (1909-)	8	BL	
University of Nevada	Reno	University of Nevada	1873	1874	Hannah K. Clapp (1888 - 1901)	2, 8, 10		Preceptress / Prof History and English
					H. H. Dexter (1903 - 1904)	8	BA	
					Irvin W. Ayers (1904 - 1905)	8		
					Alice Eunice Armstrong, acting lib (1905 - 1907)	2, 8		
					Joseph D. Layman (1907-1930?)	8, 10	BL	
					Alice Eunice Armstrong, asst lib (1907-)	8		
New Hampshire College of Agriculture & Mechanic Arts	Durham	University of New Hampshire	1866	1868	(male) (1876 - 1907)	2		
					Edith A. DeMerit, asst lib (1901 - 1903)	2		
					Mabel E. Townsend, asst lib (1903 - 1904)	2		
					Mabel E. Townsend, assoc lib (1904 - 1907)	2		
					Gertrude Whittemore (1907 - 1908)	2		
					Charlotte A. Thompson, asst lib (1907 - 1929)	2		
					Mabel Hodgkins (1908 - 1914)	2		
					Harriet H. Stanley (1914 - 1915)	2		
					Martha F. Emerson (1915 - 1919)	2		
					Helen Cushing, catalog librarian (1919 - 1929)	2		
Rutgers College, New Jersey	New Brunswick	Rutgers, The State University of New Jersey	1766	1771	Isaac E. Hasbrouck (?1880 - ?)	2		
					George A. Osborn (?1881 - 1920?)	2		
					Miss Mary Gillespie, asst lib (1910? - 1916)	2		
					Miss Gertrude Olga Broffe (1916 - ?)	2		
					Miss Hazel H. Moran, asst lib ag (1917 - ?)	2		
New Mexico College of Agriculture & Mechanic Arts	Las Cruces	New Mexico State University	1889	1890	Francis Lester (1891 - 1893)	4		
					Student Assistants (1893-1897)	4		
					Francis Lester (1897-1900)	4		
					Charlotte Baker (1900-1906)	4, 8		Asst in English
					Lucy Mae Lewis (1906-1911)	4, 8	AB, BLS	Asst in English
					Josephine Morton, asst librarian (1908-1911)	8	AB	Asst in Math, English
					Josephine Morton (1911-1914)	4, 8		
					Edna E. Anderson, asst lib (1911 -	8		
					Mrs. Floy French (1914-1924)	4		
Cornell University	Ithaca	Cornell University	1865	1868				
North Carolina college of Agriculture & Mechanic Arts	Raleigh	North Carolina State University	1887	1889				

APPENDIX 2								
The Land-Grant Colleges and Their Librarians ¹⁵								
College ¹	Location	Current name	Founded	Opened	Librarians (prior to 1920)	Reference	Education	Notes
North Dakota Agricultural College	Fargo	North Dakota State University	1890	1891	Lois M Hooper (1890 - 1892)	2		
					Mrs P A Evans (1892 - 1897)	2		
					Mrs C.B Waldron (1891 - 1892)	8		
					Mrs Ethel McVeety, asst lib (1896 -1897)	8		
					Mrs Ethel McVeety (1897 - 1945)	2, 8		
					Elizabeth Schryver, asst lib (1909 - 1919)	2		
					Bertha Barden, asst lib (1914 - 1915)	2		
Harriet Pearson, asst lib (1915 - 1930)	2							
Ohio State University	Columbus	The Ohio State University	1870	1873				
Oklahoma Agricultural and Mechanical College	Stillwater	Oklahoma State University	1890	1891	F.E. Miller (1894 -	8		English
					Jessie Thatcher, asst lib (1894 -	8		
					Cora A. Miltore (1903 -	4, 8	AB, BS	
					Hazel Mellvain, asst libr (1909 -	8		
					Ella Haskell, asst libr (1912 -	8		
					Lois Davidson	4		
					Jane Leslie Stone	4		
Elsie D. Hand	4							
Oregon Agricultural College	Corvallis	Oregon State University	1865	1865	"Student Assistants" (1890-1898)	4		
					"Full-time staff" (1898-1908)	4		
					Richard J. Nichols (1904-1908)	8		
					Ida Kidder (1908-1920)	4, 8	AB, BLS	
					Myrtle E. Knepper, asst libr (1909 -	8	BS	
					Lucy Mae Lewis, cataloger (1911-1920)	4, 8	AB, BLS	
					Bertha Herse, asst in lib (1911 -	8	BS	
Rachael W. Haight, asst in lib (1912 -	8							
Lucy Mae Lewis (1920-1944)								
Pennsylvania State College	University Park	Pennsylvania State College	1855	1859	Elizabeth Torrey (1889)	2		
					Helen Bradley (1894 - 1904)	2		
					Dr. Erwin Runkle (1904)	2		
					Helen Bradley, asst lib (1904 - 1908)	2		
Rhode Island State College	Kingston	University of Rhode Island	1888	1890				
Clemson College, South Carolina	Clemson	Clemson University	1889	1893	C.M. Furman, Jr (1897)	2		
					A Lesesne Lewis (1901 - 1903)	2		
					Susan Hall Sloan (1903 - 1906)	2		
					Katharine B. Trescot (1906 - 1925)	2		

APPENDIX 2								
The Land-Grant Colleges and Their Librarians ¹⁹								
College ¹	Location	Current name	Founded	Opened	Librarians (prior to 1920)	Reference	Education	Notes
S. D. State College of Agriculture and Mechanic Arts	Brookings	South Dakota State University	1881	1884	Nancy Van Doren (1886 - 1889)	2		Preceptor, Composition /Rhetoric, English
					Robert F. Kerr (1890 - 1892)	2		Experimental station
					Fanny Shannon, asst lib (1891)	2		
					John M. Parkinson (1892 - 1895)	2, 8	MA, LL.B	History, Political Sci, Experimental station
					Frank G. Orr (1898 - 1897)	2, 8		Secretary, Commercial Dept
					Alice Edna Barton (asst) (1897)	2		
					Robert Floyd Kerr (1898 - 1904)	2, 8		Principal Prep School, Statistician, Director College
					Mabel Ladieu, asst lib (1898)	2		
					Robert F. Kerr (1903 -	8		Director, Home Reading Course
					William H. Powers (1905 - 1920)	2, 8	MA	Prof English
					Carrie Louise Phillips, asst lib (1906 - 1912)	2, 8	BS, MS	
					Edith J. Hubbard, asst lib (1912 - 1918)	2	BS	
					Alma Thomas, asst lib (1919 - 1920)	2		
					University of Tennessee	Knoxville	University of Tennessee	1794
Edwin Wiley (1892 - 1899)	2							
Sabra Vought (1901 - 1910)	2							
Lucy Fay (1910 - 1918)	2							
Agnes Williams (1918 - 1920)	2							
Agricultural and Mechanical College of Texas	College Station	Texas A&M	1871	1876	Louis McInness (1879 -	12		Professor of
					Rev. Charles Perkins Fountain (1890 - 1892)	8		Chaplain
					W. S. Red (1892 -	8		Chaplain ?
					Mrs. (?) Ira Cain (1904 - 1906)	4, 2, 8		
					Willie Davis (1907-1909)	4, 12		Paid \$50/month
					James H. Quarles (1909-1914)	8, 12		Journalism
					Mrs. William H. Thomas (Willie Davis) (1914-1919)	12		
					Thomas L. Mayo (1919-1944)	12		Professor of English
Agricultural College of Utah	Logan	Utah State University	1888	1890	Clare Kenyon (1890 - 1892)	4, 8		Instr. Elocution
					Lettie Fichman (1892-1895)	4		
					Sara Godwin Goodwin (1896-1904)	4, 8		Instr. Music
					Geneva Egbert, asst lib (1903 -	8		
					Elizabeth C. Smith (1904-1916)	4, 8	BL	
					Costa (1916-1917)	4		
					Hattie Smith, asst lib (1907-1917)	4, 8		
					Hattie Smith (1917-1936)	4		

APPENDIX 2								
The Land-Grant Colleges and Their Librarians ¹⁵								
College ¹	Location	Current name	Founded	Opened	Librarians (prior to 1920)	Reference	Education	Notes
University of Vermont and State Agricultural College	Burlington	University of Vermont	1791	1801	Ella Atwater Everts, asst to lib (1890 - 1892) Ella Atwater Everts, asst lib (1892 - 1894) Edith Emily Clarke (1898 - 1909) Mary Russell Banks, asst lib (1898 - 1899) Mary Russell Banks, cataloger (1899 - 1909) Helen B. Shattuck (1909 - 1920) Ruth Catlin, asst lib (1910 - 1916) Ethel Ward, asst lib (1916 - 1917) Gladys Flint, asst lib (1917 - 1918) May Olive Boynton, lib med lib (1919 - 1920)	2 2 2 2 2 2 2 2 2 2		
Virginia Agricultural and Mechanical College and Polytechnic Institute	Blacksburg	Virginia Tech	1872	1872	Mary G. Lacy (1903 - 1910) Mary A. Ernst, cataloger (1904 - 1907) Ethel A. Lacy, asst lib (1907 - 1910) Ethel A. Lacy (1910 - 1913) Anna Murrill, asst lib (1909, 1911 - 1921) Mary Camper, acting asst (1910 - 1911) Katherine M. Cook, asst lib (1912 - 1921) Eleanor I. Jones (1913 - 1923) Minnie D. Murrill, asst lib (1915 - 1916)	2 2 2 2 2 2 2 2 2		
State College of Washington	Pullman	Washington State University	1890	1892	Nancy Van Doren (1894 - Miran Tannatt Helen Gertrude Saxton (1903 - 1910) Stella A. Wilson, asst lib (1907 - W. L. Arnett (1910-1911) Asa D. Dickinson (1911-1912) A. S. Wilson (1912 - Lora M. Green, asst lib (1911 - Maud Putnam, asst libr (1911 - Florence Waller, cataloger (1912 -	4, 8 4 4, 8 4, 8 8 8 8 8 8 8		Preceptress / English Lang & Lit
West Virginia University	Morgantown	West Virginia University	1867	1868				
University of Wisconsin	Madison	University of Wisconsin System	1848	1849	Clarence S. Hean (1908 -	8	BA	

APPENDIX 2
The Land-Grant Colleges and Their Librarians¹⁹

College	Location	Current name	Founded/Opened Librarians (prior to 1920)	Reference	Education	Notes
University of Wyoming	Laramie		1885 1887	4, 8	AM, PhD	*secretary at Experimental Station (1908 - 1909); Political Economy
References						
(1) Name of college and dates founded and opened from <u>The Land Grant of 1862 and the Land-Grant Colleges</u> Dept. of Education Bulletin No. 19 (1918) This list does not include the 1890 Land-Grant						
(2) Email communication with institution archivist						
(3) <u>Hubert, Evangeline</u> <u>The Library of the Land-Grant College</u>						
(4) <u>Higley, Georgia Metos</u> <u>The Land-Grant College Movement and Western Libraries</u> . (MA Thesis, 1989)						
(5, 7) <u>Severence, Henry O.</u> <u>History of the Library</u> . University of Missouri						
(6) <u>Ernest, Douglas J.</u> <u>Agricultural Frontier to Electronic Frontier: A History of Colorado State University Library, 1870 - 1995</u>						
(8) U.S. Dept of Agriculture <u>Organization Lists of the Agricultural Colleges and Experiment Stations</u>						
(10) <u>Hulse, James W.</u> <u>Quests of Culture</u>						
(11) <u>Shillett, Orvin Lee.</u> <u>Origins of American Academic Librarianship</u>						
(12) <u>Holley, Edward G.</u> <u>The Land-Grant Movement and the Development of Academic Libraries</u>						
(13) <u>Smith, Dora.</u> <u>History of the University of California Library to 1900</u>						
(14) <u>Peterson, Kenneth Gerard.</u> <u>The History of the University of California Library at Berkeley</u>						
(15) In the event that the date of hire, or the date of last employ, could not be verified it has been left blank						

APPENDIX 3

Iowa State University Librarians Information¹

Librarian	Title	Years Employed	Concurrent Position	Wage	Source	Notes
A. S. Welch	"head"	1869 - 1873	President			
Mary A. Palmer	student librarian	1873				
Nancy Wills	student librarian	1875				
Ellen Harlow	student librarian	1876				
Alice Neal	student librarian	1877				
J.C. Arthur	part-time manager	1878	Demonstrator, Botany and Zoology			
J.K. Macomber	librarian	1879-1883	Librarian, Professor of Physics			
Miss Sarah E Smith	"first" assistant	1882 -				
Miss Hattie A. Perrett	"second" assistant	1882 -				
Miss Mary McDonald	"second" assistant	1882-1883				
Carrie Chapman Catt	assistant	?1879-1883				
Miss Fannie Wilson	"first" assistant	1882-1883				
Mary McDonald	librarian	1883-1885	Instructor, Mathematics and Bookkeeping	\$600.00		
Mrs. Ida M. Riley	librarian	1886-1888	Elocution, Mathematics	\$1,000.00		
Esther Crawford	assistant librarian/"organizer"	1888-1891				graduated NY State Library School, Albany 1896
Cora Marsland	Librarian	1889-1890	Instructor, Elocution	\$1,000.00		
Fanny Thomas	librarian	1890-1893	Instructor, Library Work and Elocution	\$1,000.00		graduate Monroe School of Oratory, Boston
Flora Wilson	librarian	1894-1897		\$500(1894) / \$600(1895)		daughter of secretary of agriculture, James Wilson
Effie Curtiss	assistant librarian	1897				
Vina Clark	librarian	1897-1916		\$600 / \$725 / \$850 / \$900 / \$1100 / \$700* / \$1200 / \$1300		
Miss Edith Foster	assistant librarian	1897-1899		\$350.00		
Helen L. Knapp	assistant librarian	1899		\$350.00		
Miss Olive Stevens	Assistant Librarian	1900-1905		\$350 / \$600		
W.W. Otto	assistant in library	1900-1906		\$100.00		also worked in horticulture
"other"	assistants in library	1902-1906		\$225 / \$275		
Carolyn Gabrielsen	assistant librarian	1902- 1907		\$600.00		
Student assistants	library assistants	1902-1906		\$225.00		
Margaret Forgeus	assistant librarian/cataloguer	1905-1912		\$600 / \$800	2	Degree: AB

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Iowa State University Librarians Information¹

Librarian	Title	Years Employed	Concurrent Position	Wage	Source	Notes
Carolyn Gabrielsen	acting librarian	1907-1908			2	
Emma Leonard	assistant librarian	1907-			2	Degree: BS
Caroline Laird	assistant librarian	1907 -			2	
Mrs. Eleanor Halloway	assistant librarian	1907			2	
Carolyn Grimsby	reference librarian	1908 -			2	Degree: BS
Vera Dixon	assistant librarian	1908 -		\$600.00	2	Degree: AB, BS
Mellie M. Smith	assistant cataloguer	1909-1914		\$600.00	2	
Caroline Laird	Engineering Librarian/assistant lib	1909-		\$650* / \$800	2	
Robina Rae	Agriculture Librarian	1910-		\$720 / \$780 / \$900	2	
Student assistants		1910		\$209.40		
Harriet Sessions	"library"/reference librarian	1910-		\$900 / \$1000	2	Degree: BS
Maria C. Brace	gen asst libr	1911 -			2	PhB
Amy Noll	general assistant librarian	1912-1914		\$700.00	2	PhB
Kathreen Holdridge	asst lib cataloguer	1911		\$900.00	2	Degree: BA
Betty H. Pritchett	cataloguer	1914-		\$900.00		
Mary G. Rush	assistant librarian	1914-		\$700.00		
Elizabeth J. Sherwood	Head cataloguer	1914-		2 mos/ \$183.33, 10 mos/ \$120		
Vera Dixon	"Assistant" librarian	1916-1920				
Gladys M. Rush	librarian	1920-1922				
Charles Harvey Broan	librarian	1922-1946				
Robert W. Orr	Director	1946-1947				
Warren B. Kuhn	Director / Dean of Library Service	1967-1971				
(1) Unless otherwise stated, all figures from State of Iowa Bureau of Education Biennial Reports. If start or end date of employ is not known, it has been left blank.						
(2) United States. Department of Agriculture Organization Lists.						
*based on 10 month contract						