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An Historical Analysis of the Fellowships Programs at the Johns Hopkins University, 1876-1889: Daniel Gilman's Unique Contribution

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AN HISTORICAL ANALYSIS OF THE FELLOWSHIPS PROGRAM AT THE
JOHNS HOPKINS UNIVERSITY, 1876-1889: DANIEL GILMAN'S
UNIQUE CONTRIBUTION

by

Arthur Serfass Eichlin

A Dissertation Submitted to the Faculty of the Graduate School
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A special word of thanks is due Ms. Edie Goodall of the research staff of the Hopkins' Eisenhower Library, for her unflagging enthusiasm and for her willingness to always go that "extra mile" in tracking down recalcitrant documents.

Most of all I want to thank my wife Marian for her loving encouragement and support. Finally, I would like to dedicate this work to my son Dan, who was named for a man I have come to so greatly admire, Daniel Coit Gilman.
PREFACE

The opening of the Johns Hopkins University in the fall of 1876 began a new era in American higher education. For the first time an American university sought to offer a comprehensive program of graduate studies, leading to the German-born Ph.D. degree.

Other American schools had attempted to initiate programs of graduate study, but with little success. Yale had cautiously introduced a limited Ph.D. program in 1861, through its affiliated Sheffield Scientific School. However, the major thrust at Yale remained a classically-oriented undergraduate one. The graduate program did not flourish.

Under the able direction of President Daniel Coit Gilman, the Hopkins from its inception focused on the needs of its clientele, rather than on its own needs as was the case at most other American colleges and universities during the period. Gilman saw the need for an institution that would be able to offer a comprehensive program of advanced, research-oriented graduate studies, in a total setting favorable to the highest levels of scholarship and scientific research. The Hopkins was an almost immediate success. For
a period of fourteen years it was the acknowledged leader and standard setter for graduate education in America.

Gilman's efforts were directed primarily at the creation of a climate at the Hopkins that would be conducive to the research objective. He was able to bring together the university trustees and the newly-formed faculty in a common effort to bring about a research-oriented program of the highest level. At the same time Gilman introduced a unique system of Graduate Fellowships, designed to attract a cadre of outstanding graduate students. Educational historians such as Hugh Dodge Hawkins have credited the Fellowships system as the program most responsible for the early success of the Hopkins in scientific research and the training of skilled researchers. It was on the basis of the significance of the Fellowships program to the development of the Hopkins and henceforth to the evolution of graduate education in America that this in-depth study was made.

The early Hopkins and its nationally-known first president have been the subject of several general studies. Hugh D. Hawkins' *Pioneer: A History of the Johns Hopkins University, 1874-1889*, published in 1960, is a scholarly institutional study which focuses on the people and events surrounding the opening of the Hopkins in 1876. It also
presents a general overview of the new University's first fourteen years. An earlier work, John C. French's *A History of the University Founded by Johns Hopkins* traces the University's development from its inception through World War II. It is particularly good in its coverage of the founder and the first board of trustees. It was published in 1946.

A third work, Francesco Cordasco's *Daniel Coit Gilman and the Protean Ph.D.*, (1960), focuses on the development of the Ph.D. program at the Hopkins. It provides an historical perspective not possible in the biography of Gilman done by Fabian Franklin shortly after Gilman's death in 1908. Franklin's *Daniel Coit Gilman* does provide a rich source of material on Gilman himself.

A vast collection of primary source materials from the early days of the university have been preserved in the Milton Eisenhower Library at the Hopkins. Included in the collection are more than thirteen thousand incoming letters to Gilman during the early years of the school. The letters were from a variety of sources including college presidents, politicians, professors, applicants for Hopkins Fellowships, and from Fellowships winners. In addition, letter-press books containing original file copies of Gilman's outgoing correspondence from 1874 to 1890 have been retained.
Also of considerable help to the author during his two research trips to Baltimore in 1973 were the annual reports of the University, which in the first years were written by Gilman himself. The reports provide a chronological record of the goals and objectives of the early Hopkins. Also of use was a collection of newspaper clippings from 1876.

The wealth of available material on the early Hopkins suggests the possibility of other in-depth studies. For example, a study might be done on the relationship of the early Hopkins to the outside community.
VITA

The author, Arthur Serfass Eichlin, is the son of the late Arthur Serfass Eichlin, Sr., and Irma (Thompson) Eichlin. He was born on August 27, 1935, in Chicago, Illinois.

He received his elementary education in the public schools of Chicago, Illinois, and his secondary education at Taft High School, Chicago, Illinois, where he was graduated in 1953.

He attended Northwestern University and the University of California at Berkeley, where, in August of 1958, he received the degree of Bachelor of Arts with a major in journalism. He was awarded a Master of Education degree in Student Personnel Work in Higher Education from Loyola University in June, 1970. He was employed from July 1970 until August 1972 as Assistant Dean of Students and International Student Advisor for Loyola University. From September 1972 until June 1973 he served as Administrative Assistant to the Vice President for Student Personnel Services of Loyola University on a part time basis. Since that time he has been employed as Dean of Students at Saint Xavier College, Chicago, Illinois.
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CHAPTER I

AN OVERVIEW OF AMERICAN HIGHER EDUCATION IN 1876

It is the purpose of this chapter to describe in broad outline the opportunities available in higher education in America in 1876, the year the Johns Hopkins first opened its doors. Emphasis will be given to graduate education and to the financial resources that were available to support it.

The English Tradition

In 1876 America's oldest college celebrated its 240th birthday. Harvard College was founded in 1636, in the classical tradition of Oxford and Cambridge. Harvard's first president had graduated from Cambridge, and it was to his alma mater that he looked for the pattern of the first Harvard course of study. That curriculum, which was based on the trivium and quadrivium of classical antiquity, served as a model for American colleges for well over two hundred years. Taken for granted was the essential continuity of Western learning; the direct link between the American
college and earlier educational institutions such as the Academy of Athens, the Palace School of Charlemagne and the medieval universities.

The curriculum consisted of studies in the classics, with additional courses in ethics, mathematics, theological philosophy and natural philosophy. At most American colleges courses were also offered in Hebrew, Greek and ancient history. Latin was usually the language of the classroom.

It was assumed that there was a fixed body of knowledge that each college student should master. To insure that the student did indeed absorb the appropriate material, the classroom experience centered around the lecture and the recitation. Seemingly endless drill was the order of the day. It was felt that drill held great value in the exercising of the mind. The objective was to offer a balanced presentation of classically-oriented material, coupled with disciplined exercising of the mind-muscle. The hoped for result would be a balanced individual with the ability to reason.

The discipline of the classroom was to serve as an

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example outside as well. Most American colleges in 1876 were still residential, in the pattern of the English universities. They stood in contrast to the schools of Germany and France, where students were free to find their own, unregulated accommodations, often in the area in which the school was located. In America, the moral discipline of the student, as manifested through tight control of on-campus living, was valued in much the same way as the stern mental discipline of the typical college classroom.

Endless regulations were drawn up for the control of residence hall life. Veysey reports that the listing of such regulations at Harvard covered eight pages of fine print. At Princeton, President Patton denied his students the rights that even accused criminals enjoyed:

Do not tell me that a man is innocent until he is found to be guilty, or suppose that the provisions of the criminal suit will apply to college procedure. There are times when a man should be held guilty until he is found innocent, and when it is for him to vindicate himself and not for us to convict him.2

It was often the duty of single members of the faculty to live in the college residence halls, as enforcers of the

many regulations. Thus the American college teacher was likely to be viewed by his students as an autocrat, both in and out of the classroom.

Upon his appointment as Tutor in Mathematics at Harvard, Charles Eliot was assigned to live in a dormitory. He was assigned to a parietal board, which dealt with violations of campus regulations. The conscientious way in which he performed his task earned him the ardent dislike of many resident students. In a letter to a friend, Eliot described one of his residence hall experiences as follows:

By Jove, there is a confounded noise up in Harrod's(? ) room this moment; this Parietal business is a nuisance, disagreeable to shirk and disagreeable to do. Of the two the last evil is the least, though a certain damage to one's influence as a teacher is to be included among the bad consequences of doing this sort of work. Getting worse and worse upstairs, singing now, though it is after eleven p.m. I rather think I had better give my attention to this subject at once, so Good-bye.3

Both the method of teaching and the content of the colleges' curriculum were coming under increasing attack in the decades prior to the 1870's. Harvard Professor Frederic Henry Hedge, speaking to a meeting of Harvard alumni in 1866, described the American college of the time as a place "where

boys are made to recite lessons from text-books, and to write compulsory exercises." Hedge quoted Cardinal Newman's definition of a university as a "Studium Generale," a school of universal learning. According to Hedge, Harvard was far from being such a school:

The College proper is simply a more advanced school for boys, not differing essentially in principle and theory from the public schools in all our towns. In this, as in those, the principle is coercion. Hold your subject fast with one hand, and pour knowledge into him with the other. The professors are task-masters and police-officers, the President the chief of the College police.4

A primary objective of most of America's colleges was the preservation and promotion of a multitude of religious sects. This was true not only of the Colonial colleges, but also of the hundreds of small colleges that came into being in the mid-1800s. In a sense that development was in keeping with the English tradition, in that English universities supported the Church of England. However, where England had but one official faith and a few well-endowed universities, America had a variety of vigorously competing religious sects, and a plethora of underfunded colleges

affiliated with them.

In summary, Harvard and the legion of colleges that followed in its path, sought to follow the English model. There were however, major differences between them. Perhaps the most important one was in the area of financial resources.

Daniel Coit Gilman, the first president of the Johns Hopkins University, wrote in an article on higher education that "the early American college was planted in poverty, and in poverty it has thriven." There is no doubt that American colleges were indeed "planted in poverty." Harvard College was founded with but four hundred pounds, voted by the Massachusetts General Court. Even that tiny amount was not made available in full to the struggling new college. Eight years after its founding, Harvard had received only slightly more than two hundred of the original four hundred pounds. John Harvard, the English minister who gave the new school its name, bequeathed the college about eight hundred pounds. Again, only about half that amount was put to use by the college. The remainder was apparently squandered by Nathaniel Eaton, Harvard's first administrator, who fled the country in 1640 to avoid being imprisoned for mismanaging the school's

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The financial picture for most American colleges did not improve substantially during the next two hundred years. The American Revolution brought an end to financial assistance from England, and a growing suspicion of segments of the American public of institutions that so openly patterned themselves on the English system. The early 1800's saw the development of hundreds of small, denominationally-related colleges across the country. The proliferation of these colleges effectively fragmented financial support for higher education. Even the most prestigious schools, such as Yale and Harvard, were unable to establish the kind of stable financial base that would have enabled them to develop in the manner of Oxford and Cambridge. Harvard was by far the most prosperous of American colleges, and yet as late as 1878 its revenues were less than half those of Oxford. As will be indicated in the following sections, the lack of financial resources had a significant effect in the development of graduate education and in the creation of fellowships.

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needed to support it.

**Opportunities for Graduate Study**

Prior to the opening of the Johns Hopkins in 1876, nearly all college work in America was offered at the undergraduate level. A few of the colleges, such as Harvard and Yale, did make limited provision for graduate instruction. Gilman, who received his B.A. degree from Yale in 1852, described his graduate experiences this way:

Opportunities for advanced, not professional, studies were scanty in this country. In the older colleges certain graduate courses were attended by a small number of followers—but the teachers were for the most part absorbed with undergraduate instruction, and could give but little time to the few who sought their guidance. Gilman was undecided about his future, and so he decided to continue on at Yale for a year after he graduated. The lack of any kind of planned program is obvious from Gilman's remarks:

President Woolsey, whom I consulted, asked me to read Rau's political economy and come tell him its contents; I did not accept the challenge. I asked Professor Hadley if I might read Greek with him; he declined my proposal. Professor Porter did give me some guidance in reading, especially in German. I had many talks of an inspiring nature with Professor Dana—but, on the whole,
I think that the year was wasted.

Later the same year Gilman journeyed to Cambridge, to see if the graduate study opportunities at America's oldest college might be somewhat better. Gilman spoke with President Sparks:

'You can hear Professor Agassiz lecture,' he said, 'if you want to; and I believe Mr. Longfellow is reading Dante with a class.' I did not find at Cambridge any better opportunities than I had found at New Haven--but in both places I learned to admire the great teachers, and to wish that there were better arrangements for enabling a graduate student to ascertain what could be enjoyed and to profit by the opportunities.10

The first "resident graduates," as graduate students were known, were at Yale as early as 1814. It is not surprising that the professors of the time, burdened as they were with heavy undergraduate teaching loads, were not eager to take on graduate students on an independent basis.

Several colleges did offer an advanced degree: the Master of Arts. The American version of the M.A. was a pale copy of the English advanced degrees of the Middle Ages. In medieval times, few of those who attended the university completed the requirements for a Bachelor of Arts degree.

9 Ibid., p. 8.
10 Ibid., p. 9.
Fewer still were able to complete the rigorous additional studies, and the public disputations, that were required for a Master of Arts.

The requirements for an M.A. in England in the 1800's were far less rigorous. In America they were less rigorous still. In this country the M.A. was generally awarded "in course," which meant that the applicant did not have to engage in formal study, though many did. The other requirements were a B.A. degree from the same institution, a waiting period of three years, and the payment of a small fee, usually five dollars.

To a student who seriously wished to pursue graduate study, the awarding of the M.A. degree became a rather sad joke. Yale finally dropped the degree in 1874.

For the first sixty years of the 19th Century, the M.A. was the only advanced degree offered in the United States. Then, in 1861, Yale cautiously introduced the degree of Doctor of Philosophy, the Ph.D.

The Ph.D. had its origins in the research-oriented universities of Germany. The rise to world-wide prominence

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of the German universities in the decades following the American Revolution was tied in large measure to the emerging role of science. This was the period during which the groundwork for most of the scientific disciplines was being laid. European universities, and particularly those of Germany, quickly became centers of scientific study. They were soon to draw science-oriented students from around the world, for advanced study.

American colleges were not, for the most part, eager to become actively involved in the sciences. As was indicated previously, part of the reason was a serious lack of funds. But even if significant additional sources of funds had been available, it is not likely that America's colleges would have quickly embraced the new sciences. Nearly all of the leaders of America's colleges were devoted to the primacy of classical learning experience. In line with their thinking, the knowledge that was to be absorbed by college students was centered in the ancient past, and not in the present and the future. The traditional classical studies did not require work beyond the regular undergraduate level.

That America's colleges were increasingly isolating themselves by adhering primarily to classical training at the undergraduate level was of great concern to a handful of
American educators. Two New Englanders, George Ticknor and Edward Everett, were among the first Americans to go to Germany for advanced studies. Upon return, they assumed Harvard professorships, where, in the 1820's, they sought to reorganize that institution. It was their plan to open up the restricted Harvard curriculum to include the new sciences, and to upgrade the levels of instruction, which they said were on the level of German university preparatory schools, the Gymnasiums. While a budget deficit scuttled their efforts, they did lay the groundwork for the expansion of the Harvard curriculum, which was to reach full fruition under the guidance of President Eliot in the 1870's.

The most ambitious effort to develop a program of advanced or graduate level education in America prior to 1876 was begun at the University of Michigan during the presidency of Henry Philip Tappan. During his eleven years in office, from 1852 to 1863, Tappan sought to create America's first university, patterned primarily on a German model. Tappan proposed that the university be organized into four faculties: philosophy and science, letters and

arts, law, and medicine. The division of philosophy and science would include courses in systematic philosophy, history of philosophy, logic, ethics, higher mathematics, astronomy, physics, chemistry and natural history. The letters and arts division was to include courses in philology, Greek and Latin language and literature, Oriental languages, rhetoric and English literature, modern literature, and the history of fine arts.

Tappan was interested in upgrading, as well as expanding the course of study. To help to achieve that end, he proposed the development of a library for the University of Michigan that would be second to none in resources. He was an advocate of well-equipped chemistry and physics laboratories, in the German tradition.

Tappan proposed the establishment of two grades of degrees. The lower series of degrees were to be awarded on the basis of comprehensive examinations based on three or four years of undergraduate study. The higher degrees were to be awarded for additional studies. They were also to be granted in honor of distinguished scholars.

Ibid., pp. 63-64.
Michigan at that time was apparently not ready for Tappan's advanced ideas, or his arrogant manners. His efforts to implement his program were stymied by the legislature. His open advocacy of a European educational model apparently touched a patriotic nerve in the backwoods Michigan of the 1850's. That there was considerable feeling about importing European educational ideas to America is reflected in an article about Tappan that appeared in the "Lansing (Michigan) Journal" of July 9, 1854:

Of all the imitations of English aristocracy, German mysticism, Prussian imperiousness, and Parisian nonsensities, he is altogether the most un-Americanized—the most completely foreignized specimen of an abnormal Yankee we have ever seen. His thoughts, his oratory, his conversation, his social manners, his walk, and even his very prayers, are senseless mimicries of the follies of a rotten aristocracy over the sea. 14

Tappan was fired as the president of the University of Michigan in 1863. His dreams of establishing a university with programs of advanced study went largely unrealized.

Unlike the abruptly-presented program of advanced study presented by Tappan, the introduction of the Ph.D. degree for advanced study at Sheffield Scientific School in 1861 represented a logical, if somewhat erratic progression

in the development of scientific study in this country. Yale had offered courses in chemistry as early as 1802, when Benjamin Silliman was appointed as Professor of Chemistry and Natural History. Silliman, a graduate of Yale's traditional classical program, had neither seen a chemical experiment performed, much less performed one himself, at the time of his appointment.

Silliman taught at Yale for fifty-one years. He was joined by his son Benjamin, also a chemist, and by his son-in-law, James Dwight Dana, a pioneer mineralogist. Under these three men Yale became, in a limited way, a center for scientific study in America. It is interesting to note that these three scientists were able to survive in the same institution that sponsored and endorsed the classic defense of the traditional liberal arts education, the Yale Report of 1828.

The Yale report found widespread acceptance among college presidents, boards of trustees, religious governing boards and alumni at many of the traditional liberal arts colleges. Those calling for change in the long-established

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college curriculums were generally found outside the formal authority structures of the colleges. One of the most potent weapons used by the outsiders to bring about change was, not surprisingly, money. In 1847 Abbott Lawrence gave Harvard fifty thousand dollars for the creation of a program of science-oriented education. Harvard's leaders were not enthused about the concept but did not want to lose the money. The Lawrence Scientific School was the result.

One year earlier, in 1846, Benjamin Silliman had proposed a similar scientific school for Yale. His objective was to provide for advanced studies, primarily in the sciences. The following year the concept was broadened to include more work of an advanced nature in fields other than the sciences. The result was the new Department of Philosophy and the Arts. In 1854 the department was reorganized as the Yale Scientific School. In 1860 Joseph Sheffield donated one hundred thousand dollars to the new school, after which it was known as the Sheffield Scientific School.

In 1860 Yale's leaders agreed to implement the suggestion of Professor James Dwight Dana to award a new degree, the German-born Ph.D., for specific programs of graduate

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study. One of the major arguments in behalf of the new
degree was that it might encourage scholarly young Americans
to remain at home for graduate work, rather than to go off
to Europe for it. The Ph.D. program at Yale required study
in two separate areas in the Scientific School, over a two-
year period. Though it was possible for a student to enter
the program without an undergraduate degree, he would have
been required to take proficiency examinations in designated
areas, such as in Latin and Greek, first. Candidates for
the Ph.D. were required to take a comprehensive examination,
and to write a thesis.

In 1861 Yale awarded the first three American Ph.D.
degrees. For nine years Yale was the only American institu-
tion to offer the new degree. By 1876, three other schools;
the University of Pennsylvania, Harvard and Columbia had
also made the degree available.

It is not surprising that students showed so little
interest in the Ph.D. or in graduate education in general
during this period. A logical objective for a student who
had completed a program of graduate study would have been
a teaching post in a college. There were, however,

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Ibid., p. 57.
relatively few such positions available. For those that were, graduate work was generally not required, nor was it rewarded. College teachers were poorly paid. They were usually burdened with heavy, monotonous teaching assignments. Also, many students did not have the financial resources to cover the expense of graduate study. As will be indicated in the following section, there were few sources of financial assistance available to them.

**Fellowships Opportunities**

The concept of offering financial assistance to deserving students can be traced back to Merton College, Oxford, in the 13th Century. Merton was founded in 1264 by Walter de Merton, Bishop of Rochester. Merton, who donated both lands and buildings for the support of the new institution, did so in part to provide an opportunity for higher education for several of his less-than-wealthy nephews. In exchange for having their material wants provided for, Merton Scholars were expected to abide by the "Rule of Merton," a carefully prescribed code of conduct. The men of Merton were expected to be sober, and morally above reproach. They were required to speak in Latin, and to attend chapel daily.

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Through the centuries the English universities enjoyed a substantial income from both public and private sources. The ready availability of significant levels of funding was reflected in their ambitious programs of student financial support, in the form of generous fellowships and scholarships. Both terms were used relatively interchangeably, a practice that was continued for a time in this country. At the Hopkins, scholarships referred to awards to undergraduates, and fellowships to graduates. By 1878, Oxford offered about six hundred fellowships and scholarships, with a value of about 125,000 pounds, an amount that represented about half of the university's total revenue that year. In the same year, the total income of Harvard, America's wealthiest college, was less than the amount of the Oxford fellowships and scholarships.

According to Thwing, English fellowships and scholarships were granted for four purposes: to reward high scholarship, to aid students of moderate means to obtain a university education, to pay the recipient for his required teaching duties, and to provide members for the governing boards of the colleges. Applicants for fellowships and scholarships

were given a competitive examination by the officers of the college, who afterwards decided who would receive the awards.

Certain aspects of the English fellowships system came under increasing criticism by the mid-1800's. Many of the grants could be held for life, and often with no requirement that the recipient do any work:

But too often the holder of a life fellowship, at Oxford or Cambridge, is a mere annuitant, and his attainments are of little service either to the university from which he annually receives a thousand dollars or to English scholarship and culture.21

This no doubt became somewhat of an issue of national pride in England as the German universities of the early 19th Century established recognized world leadership as centers of scholarship, particularly in the sciences. Thwing made an indirect reference to German leadership when he suggested that, should Americans establish a bountiful system of fellowships, "American scholarship might in the course of a generation surpass English, and in the course of two generations compete with German, scholarship."

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20 Ibid.
21 Ibid.
22 Ibid., p. 662.
Unlike the English schools, the German universities did not offer an extensive system of scholarships and fellowships. They did, however, offer a limited number of awards, known as "exhibitions," for the benefit of needy students. The awards ranged in value from sixty to three hundred dollars. In addition, poor students could attend the two public lectures that each professor was required to give each week. In some cases it was also possible to obtain a waiver of fees for other lectures as well. There was no provision to cover the costs of a student's living expenses, nor was any assistance available to a student who wished to continue his studies after he had received his first degree. The German universities received most of their funds from their respective states.

American colleges were patterned on the English model, but did not enjoy a comparable level of financial support. Students were usually left to their own resources when it came to paying tuition fees and their room and board expenses in college residence halls.

There were a few financial assistance awards available. The first known award was, in the tradition of early Merton, to be awarded to a deserving (Harvard) student in pursuit of a Master of Arts degree. In the decade following
the founding of Harvard in 1636, a team of fund raisers were sent to England in the hope of interesting wealthy Britishers in supporting the struggling new college in Massachusetts. The members of the "Weld-Peter begging mission," as it was called, convinced the daughter of a former Sheriff of London to donate the sum of one hundred pounds for a scholarship at Harvard. Lady Ann Mowlson was concerned lest her gift be misapplied, so she had a contract drawn up, stating that the income portion of her gift was to be given to a needy student who was seeking a Master of Arts degree, in perpetuity.

One of the provisions of the benefaction was that the first student to receive aid from the grant be John Weld, the son of one of the fund raisers. Before he could be granted the award, however, he was caught burglarizing a house in Cambridge and was expelled from Harvard.

Contrary to the terms of the agreement, the Mowlson gift was incorporated into the general funds of the college. Presumably the income was to have been used for scholarships, but only two such awards are known to have been made. In 1893, Harvard historians rediscovered the matter. To correct

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the ancient wrong, the university then appropriated five thousand dollars for the Lady Mowlson Scholarship. This sum provided for an annual award of two hundred dollars, later increased to five hundred dollars.

During the more than two hundred years between the Mowlson grant and the Civil War, American colleges attracted relatively few funds for student assistance. The funds that were received for such purposes often came at the initiative of the donor, and not through any planned effort on the part of the colleges.

There were, however, several exceptions. Two of the most notable ones occurred at Yale, and both had to do with graduate study. In the early 1700's Bishop George Berkeley of Ireland sought to establish a new college in what is now Rhode Island. His plans went awry, and the college never materialized. Berkeley was vitally interested in higher education, and in 1732 he sold a farm he had purchased to Yale College, for five shillings. His purpose was as follows:

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... the annual rent and profit of the same, after deducting expenses, are to be applied to the maintenance of two resident students between their first and second
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Ibid., p. 311.
degrees; the students are to be elected annually in May by the president and senior Episcopal missionary; the election to be by merit only, after a public examination in Greek and Latin.25

In 1822 a Connecticut farmer named Sheldon Clark, after reviewing Yale's financial needs with President Theodore Dwight, donated five thousand dollars for the endowment of a professor's chair. Later in the same year he made another gift, this one for the establishment of graduate fellowships. The arrangements were that the fund be permitted to grow at compound interest for twenty-four years, at which time four thousand dollars was to be set aside as an endowment for a series of graduate fellowships. The first Clark Fellowships were awarded in 1848, only a short time after the founding of the graduate-oriented Department of Philosophy and the Arts. It is not known whether or not the forthcoming Clark Fellowships had any bearing on the development of the new department. What is certain however is that Yale, through the Berkeley and the Clark awards, had funds available for students engaged in graduate studies. It was in the same year that Daniel Gilman began his undergraduate

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In 1852, a book written by a former Berkeley Scholar received wide popular acclaim. In his book *Five Years in an English University*, Charles Astor Bristed described in detail his recent graduate studies at Cambridge. Bristed advocated the development of a system of fellowships in America, patterned somewhat on the English model. He described the situation for many college students in America as follows:

> Very promising young men are often compelled to quit college in the middle of their course, or be temporarily absent teaching school or raising money in some similar way to the great detriment of their immediate studies.27

Bristed was equally forthright in his evaluation of the opportunities awaiting graduate students:

> As for resident Graduates wishing to pursue some literary or philosophical faculty beyond the college course, there is no provision for them whatever, nor any opening beyond the comparatively small number of Professorships and Tutorships. It is the want of funds, and those funds specifically appropriated to these purposes, that prevents, more than anything else, our Colleges and Universities from having such teachers (both in number and quality), giving such systematic instruction, and diffusing about themselves such a

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classical atmosphere as will in a considerable measure correct the effects of bad previous instruction. 28

Bristed's book received a less-than-favorable review in the prestigious North American Review. However, the reviewer agreed with Bristed that a system of fellowships such as Bristed had suggested would stimulate the development of graduate programs. As Storr correctly points out, it is not possible to accurately assess the impact of Bristed's book. However, its very popularity makes it likely that educational leaders of the day were familiar with it.

Of the 350 American colleges in 1876, graduate fellowships were clustered in but three of them: Princeton, Harvard and Yale. Princeton offered six fellowships, ranging in value from three hundred to six hundred dollars. The Princeton awards were offered on a competitive basis to members of the graduating class. The awards were made tenable for study either at Princeton or at an English or German university, for a period of one year.

Harvard also offered six fellowships. Two of the awards were for four hundred dollars, and four were for at

28 Ibid.
29 Ibid.
least one thousand dollars each. The latter awards were known as "travelling fellowships," and were for three years of study, usually at a German university.

Yale too offered six awards, ranging in value from forty-six dollars to more than six hundred dollars. One of the awards was tenable for five years; the others for not more than three. The awards were made on the basis of high scholarship and of good character. The fellows were expected to pursue their studies in New Haven under the direction of the Yale faculty.

In summary, a student wishing to undertake a program of graduate study in America in 1876 had few opportunities to do so. His chances of obtaining financial assistance to continue his studies were fewer still.

The opening of the Johns Hopkins University under President Daniel Coit Gilman began a new era in graduate education in America. It is the purpose of the following chapter to place Gilman in the context of his time, in order to better understand the man and his achievements.

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CHAPTER II

A BIOGRAPHICAL SKETCH OF DANIEL COIT GILMAN

The Early Years

Daniel Coit Gilman was born in Norwich, Connecticut, on July 6, 1831. He was the fifth in a family of nine children. His mother, Eliza Coit, was the daughter of a retired Norwich businessman. His father, William Charles Gilman, was a descendant of Edward Gilman, who had emigrated to America from Wales nearly two hundred years before. William Gilman had attended Phillips Exeter Academy in Exeter, New Hampshire. He had expressed a desire to attend Harvard, but was dissuaded by members of his family, who wanted him to enter the family iron business instead.

Daniel Gilman attended the Norwich Academy, a well regarded private school in Norwich. The school was directed by Calvin Tracy, a graduate of Dartmouth. Considerable emphasis was given to the development of oratorical skills.

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Wednesday afternoons at the school were devoted to public speaking exercises, while on Saturday mornings time was divided between experiments with chemical equipment and a debating society "in which grave political, moral and literary questions were formally discussed by regularly appointed disputants."

Two of Gilman's friends and fellow classmates at the Norwich Academy went on to distinguished careers in higher education. Andrew Dickson White served as the innovative first president of Cornell. In later life he was appointed as ambassador to Germany. Gilman and White remained close friends for more than fifty years, as their ample correspondence attests. The other was Timothy Dwight, who later was to serve as president of Yale. In a paper written some forty years later, Dwight commented on life at the Norwich Academy:

He [Daniel Gilman] had the good fortune, as I also had, to be surrounded by a bright company of boys gathered from the best families of the place. . . .

The boys, I think, complained in after years that he did not have the best system of instruction; but somehow or other, either by means of what he did, or because of nature's gifts and the subsequent advantages they enjoyed, a goodly number of those boys have had an honorable place

2 Ibid., p. 5.
The man whose happy lot it is to have been born in Norwich, Connecticut, and whose early years were familiar with its beautiful hills, has a recollection of the past, as he passes on in his manhood life, which is full of peace and pleasantness.3

Gilman's father, who suffered financial reverses with the family-owned nail business, moved his family to New York. Young Gilman wished to continue his schooling, and yet not be a burden to his father. Calvin Tracy opened a new school in New York shortly afterwards, and Gilman went to work for him as a "pupil assistant." He was given charge of a room of young boys, while at the same time pursuing his studies through private lessons with Tracy. For this he received remission of tuition, plus a salary of $236 for the 4 year.

In the summer of 1848 he successfully completed the five-hour entrance examination and was admitted to Yale. During his undergraduate days he lived with his uncle, Yale Professor James Kingsley and his family. He helped to finance his education by tutoring younger students. He used his lettering skills to inscribe the names of degree candidates

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3 Ibid.
on diplomas. In a letter to his parents, Gilman described his life at Yale:

... and so they go, day after day, week after week; there is a good deal of variety, a good deal of merriment, a good deal of pleasure, a good deal of trouble, and, more than all, a good deal of hard work at study, which no one can understand but those who are engaged in it.5

Following his graduation from Yale in 1852, Gilman decided to stay on at Yale for additional work. His experiences as a resident graduate at Yale, and later at Harvard, are detailed in Chapter I.

In the winter of 1853 Gilman and Andrew White sailed for Europe as attaches of the United States Legation to Russia, headquartered at Saint Petersburg. Americans in Russia at that time were treated deferentially, no doubt due in large part to Russia's desire to maintain good relations with America in the face of an impending war with England and France. Gilman used this opportunity to acquaint himself with the Russian educational system.

Gilman kept a detailed diary of his visits to military and technical schools, hospitals and libraries in Saint Petersburg. On these visits he would be welcomed by the

5 Franklin, Life of Gilman, p. 9.
director, who in the military schools was usually a general, and the general's staff, all in full dress uniforms. According to Gilman, all of the higher officers spoke French. They would go through the entire establishment, as a group, pointing out everything in great detail. In Gilman's words:

In the kitchen they insist upon my trying the soup or other dishes which may happen to be preparing, in the lodging rooms they insist upon showing the condition of the bedding, and, droll as it may seem, in the school room some boy is summoned to throw off his outer garments and exhibit the excellent order of that part of his apparel which is not ordinarily exposed to a visitor's gaze. . . . The boys are generally arranged in their sleeping rooms, each standing by the side of his bed, and, as the visitors pass through, they fall in at the rear so that by the time the examination of the establishment is concluded, a long procession numbering several hundred is formed, who come down to the door and bow in parting with almost overwhelming politeness. 6

His association with the American Legation made it possible for him to travel about in Europe for the next two years in a more or less official diplomatic capacity. During that time he visited schools in England, France and Germany. He was particularly interested in the recent developments in technical education, as evidenced by his carefully kept notes.

During this time Gilman was searching for a suitable

6 Ibid., pp. 24-25.
future occupation. In a letter to his older sister Maria, he outlined some of his ideas for the future:

For some things I rejoice to find that my notions grow more and more definite. For instance, in the desire to act upon the minds of men, do my part, even though it may be but little, for the elevation and improvement of such society as my lot may be cast in. It seems to me I care less and less for money and for fame, but I do desire to use what influence I can for the establishment of such principles and the development of such ideas as seem to be important and right. Whether this is done by the voice or the pen, or by both, whether in the pulpit, or in the college, at the Cooper Union or in the Mercantile Library, in the editor's chair or in the office of a common school superintendent, cannot, I suppose, for many months, perhaps for many years, be decided. 8

Gilman's career in administration was to begin two years later.

At Yale and at the University of California

Gilman returned to the United States in the fall of 1855. He soon found employment with the Scientific School at Yale. Gilman was associated with Yale in various capacities for seventeen years, from 1855 until 1872. During that time he became the leading spokesman for Sheffield and the "new education," as the science related programs were known.

In 1856 Gilman was appointed assistant librarian for Yale. Two years later he was made librarian, a post he held until 1865. During that time he worked diligently, if not

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8 Franklin, Life of Gilman, pp. 30-31.
successfully, to improve the primitive physical facilities and the holdings of the Yale library.

In 1863 Gilman was appointed professor of physical and political geography at Sheffield. Funds for his appointment and for two other professorial positions at Sheffield were dependent upon revenues available from the Morrill Act of 1862. Gilman, along with Yale Professors Noah Porter and George Brush, went before the Connecticut legislature to urge adoption of the provisions of the Morrill Act, and to direct the funds that would be made available to Sheffield. The result was that Sheffield became the first school in the country to benefit from the provisions of the Morrill Act.

In 1866 Gilman was elected secretary of the governing board of Sheffield. When the state legislature appropriated funds that made the granting of several scholarships possible, Gilman and several other faculty members toured the state to promote the scholarships, and, by so doing, to publicize the Sheffield concept as well. Speaking of the experience some thirty years later, Gilman recalled:

Soon after the reception of this grant, several members of the faculty entered upon an educational

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9 Ibid., pp. 71-72.
campaign which can hardly be brought to mind, in a retrospect of this long interval, without provoking a smile at the enthusiasm of youth and the 'expulsive power of a new affection.' The principal towns of the state were visited, and the chief men of the tribes assembled to hear of the new education. Sometimes in lecture rooms, frequently in private parlors, once in a court house, once in the Governor's Room at Hartford, and once in a fire engine room, the story was told with the earnestness of conviction, if not with the grace of eloquence. The newspapers, always responsive to the claims of the school, echoed those utterances in villages and byways. The school did not reap much money from the farms and mills, but it made hosts of friends whose favor has never departed.10

For Gilman the experience was to prove most helpful a decade later in his country-wide promotion of the graduate fellowships concept at the Johns Hopkins.

Gilman was becoming well known. In 1867 he was offered the presidency of the University of Wisconsin. He chose however to remain at Yale. In 1870 he declined an offer to become the president of the new University of California. Later that same year President Theodore Dwight Woolsey of Yale announced his plans for retirement. Gilman was suggested by a group of recent Yale graduates interested in promoting the new education as a possible successor to Woolsey. Another group, known as "Old Yale," favored a

10 Ibid., pp. 83-84.
continuation of the dominant position of the classical program at traditional Yale. Their candidate was Noah Porter. It soon became apparent that anyone closely connected with the new education would be unacceptable to the conservative Yale Corporation. Porter was made president.

As was indicated in Chapter I, Yale and Harvard and nearly all of the other American colleges suffered from a continuing malady: underfunding. With the exception of a few farsighted men of wealth such as Ezra Cornell, Joseph Sheffield and Abbott Lawrence, Americans of means had not yet begun to give substantial gifts to the colleges. The "Age of Philanthropy" was not yet under way.

Gilman was well aware of the financial difficulties of Yale, and of the even more acute financial situation at Sheffield. The Scientific School was still relatively new and was considered by many to be experimental. In his last two years at Yale, Gilman spearheaded a campaign to raise the then almost unheard of sum of $250,000 for Sheffield.

In his seventh and final report as secretary of Sheffield, Gilman commented on the successful outcome of the fund raising campaign:

No agents have been employed and no commissions paid. A variety of private and public meetings have been held; a number of explanatory pamphlets have been printed; gentlemen at home and from a distance have been induced
to visit the school; in short it has been the constant endeavor of the governing board to interest intelligent men in the character, results, and methods of the work in which we are engaged.\(^{11}\)

In 1872 Gilman was again offered the presidency of the University of California. This time he accepted. The University of California had been chartered by the state legislature in 1868. At that time the Reverend Henry C. Durant gave the assets of the small, liberal arts college he had founded twelve years before to the State of California, with the understanding that it would be incorporated into the new state university.

In 1865 the legislature had acted to create an Agriculture, Mining and Mechanic Arts College, to take advantage of the provisions of the Morrill Act. When Gilman assumed the presidency in 1872, the planned-for agricultural component was still in its infancy.

In his inaugural address, Gilman clearly set forth his plans for the school. It was to be, in his words:

\textit{a university. . . the most comprehensive term which can be employed to indicate a foundation for the promotion}

\(^{11}\) Ibid., pp. 104-105.

and diffusion of knowledge -- a group of agencies organized to advance the arts and sciences of every sort, and to train young men as scholars for all the intellectual callings of life.\textsuperscript{13}

Gilman spent three difficult years as president of the university. A farmers' group known as the Grangers, in partnership with a professor of agriculture at the school, charged that Gilman was not giving enough emphasis to agricultural education.

A San Francisco newspaper editor, Henry George, launched an attack on Gilman's administration and on the board of regents, charging fiscal mismanagement. After a lengthy investigation, a committee of the legislature completely cleared the administration and the board of regents of any wrongdoing.

Throughout the turmoil Gilman was strongly supported by the regents. However, the battle had left its mark on him, and in April of 1874 he submitted his resignation. In it he commented: "for University fighting I have no training; in University work I delight." The regents persuaded


\textsuperscript{14} Franklin, \textit{Life of Gilman}, p. 161.
him to withdraw his resignation. In the fall of the same year he received an offer from the trustees of the new Johns Hopkins University in Baltimore to serve as its first president. After a trip East he accepted.

Daniel Coit Gilman at the Johns Hopkins University

The new university in Baltimore was the creation of an extremely wealthy Baltimore merchant. Johns Hopkins was born in Anne Arundel County, Maryland in 1795, to Quaker parents. At an early age he became a trader. His name became a household word in Maryland and Virginia, as his Conestoga wagons, "each crammed with merchandise sufficient to fill a small warehouse, with their spanking teams and jingling bells, were crossing and recrossing the Alleghenies, to the new states beyond."

In 1867, Johns Hopkins called together twelve prominent citizens of Baltimore to form a corporation, known as "the Johns Hopkins University." The purpose of the corporation, as stated in its charter, was to promote education in Maryland. A similar corporation, known as "the Johns Hopkins Hospital," was formed at the same time. All but two of the

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hospital corporation trustees served as university trustees as well.

Johns Hopkins prepared his will in 1870. In it he donated his holdings of Baltimore and Ohio Railroad stock, and his estate at the edge of Baltimore, for the establishment of the university. He gave a large number of warehouses and industrial lands in Baltimore for the creation of the hospital and medical school that was to be affiliated with the university. After his death in 1873, the amount of his bequest to the university and to the hospital was found to be seven million dollars, to be divided equally between the two. The three and a half million dollars for the university was by far the largest single gift given to an American school to that time.

It was a gift remarkably free of strings. In his will Hopkins decreed that the principal sum not be used for buildings, or for current expenses. He requested that free scholarships be provided for students from Maryland, Virginia and North Carolina. Further, he urged that the railroad stock, which made up the bulk of the gift, not be sold. At

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16 Gilman, University Problems, pp. 3-4.
the time the stock paid a yearly dividend of ten per cent.

Gilman formally assumed the presidency in January of 1875. In the spring of the year he visited a number of colleges, museums and research centers. His purpose was to promote the concept of research oriented graduate education, a distinguishing feature of the new university. He was also looking for qualified faculty members. In the summer of 1875 he toured Europe, making friends for the school among the leading men of science, and continuing his search for faculty talent.

The Hopkins formally opened its doors in the fall of 1876. On hand was Gilman's close friend, President Charles William Eliot of Harvard. Gilman invited Thomas Huxley, the internationally known Darwinist from England, to give the major address. The speech received national attention, due in part to a sensational story written by a church reporter from New York. There had been no opening prayer. A Presbyterian minister in New York, writing to a fellow preacher in Baltimore several weeks later, put it this way:

It was bad enough to invite Huxley. It were better to have asked God to be present. It would have been absurd to ask them both.17

17 Franklin, Life of Gilman, p. 221.
During the winter of 1876-77, Gilman instituted a visiting lecturer plan, a concept that was to become an integral feature of the University. Under Gilman's direction, authorities of national stature were employed to give series of lectures in their specialties over a period of several weeks. The usual number of lectures was twenty. They were given in a hall seating about 150 persons, and generally at five o'clock in the evening. The community was invited to attend, without charge, along with members of the faculty and student body. The visiting lecturers were to allow at least one hour per day for visitors, often graduate students in their specialty, who wished to meet with them.

Between 1877 and 1881 the visiting lecturers included Harvard luminaries Francis Child, (English Literature) and James Russell Lowell, (Romance Literature); William James, (Psychology); Charles S. Pierce, (Logic); Sidney Lanier, (English Literature); and Alexander Graham Bell, whose specialty was listed as "Phonology." Thus Gilman was able to complement his limited number of full time faculty with men of great renown in a variety of fields.

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18 Ryan, Studies in Early Graduate Education, p. 41.
In 1878 Gilman introduced another innovation, the professional journal. In that year he persuaded Mathematics Professor James Joseph Sylvester to begin *The American Journal of Mathematics*. Sylvester commented on the founding of his journal in 1883 at a farewell party, as he prepared to take up an appointment as Savilian Professor of Geometry at Oxford:

> You have spoken about our Mathematical Journal. Who is the founder? Mr. Gilman is continually telling people that I founded it. That is one of my claims to recognition which I strenuously deny. I assert that he is the founder. Almost the first day that I landed in Baltimore, when I dined with him in the presence of Reverdy Johnson and Judge Brown, I think, from the first moment he began to plague me to found a Mathematical Journal on this side of the water . . . . I said it was useless, there was no materials for it. Again and again he returned to the charge, and again and again I threw all the cold water I could on the scheme, and nothing but the most obstinate persistence and perserverance brought his views to prevail. To him, and him alone, therefore, is really due whatever importance attaches to the foundation of *The American Journal of Mathematics*.19

The following year Gilman encouraged Chemistry Professor Ira Remsen to found *The American Chemical Journal*. Remsen was to serve as its editor for the next four decades. In 1880 Professor Basil Gildersleeve began *The American Journal of Philology*. Like Remsen, he was to stay on as

editor for nearly 40 years. These and the other professional journals started at the Hopkins under Gilman's direction created a forum for the research work being done at the Hopkins. It subsequently led to the establishment of the first university press.

The bulk of Johns Hopkins' gift to the university was Baltimore and Ohio Railroad stock. The railroad had experienced difficult times when Hopkins was alive, but soon recovered. In the 1880's however the railroad experienced severe difficulties, and eventually sank into receivership. This caused great hardship for the University, as well as causing a delay in the opening of the hospital until 1890, and the medical school until 1893.

In 1899 Gilman was asked to supervise the construction of the hospital, in addition to his duties as president of the University. For more than six months he divided his time between the University, which was in deep financial difficulty, and the hospital. The superintendent of the hospital recalled Gilman's work as follows:

His [Gilman's] kindness of heart and keen sympathy with the poor and friendless led him to modify many stringent regulations then generally in force in other hospitals as to Sunday visiting. . . . He was interested in employees of every grade and left an impress of kindness, consideration, and courtesy upon all branches of Hospital service. He selected very wisely the first principal of the Training School for Nurses and the first head nurses.
He was ever after very much interested in the Training School and often visited it, and on several occasions made addresses to the pupil nurses.20

In 1896 Gilman was asked to become the superintendent of schools of the City of New York. This was a remarkable offer in view of the fact that Gilman was then in his sixty-fifth year.

The Hopkins was again in financial difficulties, due to the problems of the B & O. When word went out that Gilman might leave, a group of faculty, trustees and alumni met and raised nearly $150,000 in a single gathering to aid the beleaguered school. During the next few days an additional $100,000 was raised. Gilman decided to stay on.

Gilman announced his retirement from the Hopkins in 1902. At the twenty-fifth anniversary celebration of the University that same year, Professor Woodrow Wilson presented Gilman with a volume signed by more than a thousand faculty members and alumni of the University. In his address, Wilson spoke of Gilman's work at the Hopkins:

We believe that the services which you have rendered to education have not been surpassed by those of any other American. If it be true that Thomas Jefferson

20 Ibid., p. 262.
21 Ibid., p. 310.
first laid the broad foundation for American universities in his plans for the University of Virginia, it is no less true that you were the first to create and organize in America a university in which the discovery and dissemination of new truth were conceded a rank superior to mere instruction and in which the efficiency and value of research as an educational instrument were exemplified in the training of many investigators. In this, your greatest achievement, you established in America a new and higher university ideal, whose essential feature was not stately edifices nor yet the mere association of pupils with learned and eminent teachers, but rather the education of trained and vigorous young minds through the search for truth under the guidance and with the cooperation of master investigators. . . .22

The Later Years

Throughout his career Gilman had been active in religious, charitable and educational organizations. In 1882 he had become a trustee of the Slater Fund. In 1893 he succeeded Rutherford B. Hayes as president of that organization, a position he held until the time of his death. Gilman also served a president of the National Civil Service Reform League from 1901 to 1907.

Throughout his life he wrote numerous journal articles. In 1898 he wrote an introduction to De Tocqueville's Democracy in America. He was the author of four books: James Monroe, (1883); University Problems in the United States, (1898);

22 Ibid., pp. 388-89.
In 1891 Gilman was approached by Andrew Carnegie to head up the proposed Carnegie Institution of Washington. Gilman accepted the presidency of the new institution the following year. He found that he was not given the authority to unify the institution that he had had at the Hopkins. He resigned after three years, in 1904.

Gilman was married in 1861 to Mary Ketcham of New York. They had two daughters. Mary Ketcham Gilman died in 1869 after a long illness. In 1877 he married Elizabeth Dwight Woolsey, who survived him.

Two of Gilman's closest friends were also prominent college presidents. Andrew White was president of Cornell, and later the U.S. Ambassador to Germany. Charles William Eliot served as president of Harvard from 1869 to 1909.

In 1885 Gilman and his wife visited the Eliot family at their summer home at Northeast Harbor, Maine. It proved to be such a pleasant experience that the Gilmans spent their summers there for more than twenty years.

Gilman eventually bought a piece of rocky land, which included a cliff. Here at "Over-Edge," as his cliff-clinging house was called, he would spend the long summer months with

The Life of James Dwight Dana, (1899); and The Launching of a University, (1906).
his family and friends. In the words of his biographer, Fabian Franklin:

Here Mr. Gilman could have his study with his books and maps at hand, where, after the morning reading with the family, he would be absorbed not only by the correspondence for the Johns Hopkins and in preparing speeches and annual reports, but also in more substantial pieces of work—in particular his introduction to de Tocqueville and his life of James D. Dana. The afternoons were spent in walking, climbing, driving, rowing or sailing. Mr. Gilman used often to say that a sail-boat was as good a place for conversation as a dinner-table.23

Northeast Harbor became a mecca for college presidents, with often six or eight being in attendance during the course of a summer. Gilman's relations with the permanent residents of Northeast Harbor were also most pleasant. "We always call him 'our President,"' said one of the sea captains, "he treats us as if we were gentlemen." Gilman died on October 13, 1908, in the town of his birth, Norwich, Connecticut.

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23 Ibid., pp. 416-17.
24 Ibid., p. 418.
CHAPTER III

THE VIEWS OF AN EDUCATIONAL ADMINISTRATOR

Educational historians have described the latter part of the 19th Century as a "Golden Age," a time when a small group of enlightened college presidents were able to bring about major changes in their institutions, and by so doing to significantly influence the course of higher education. In compiling a list of the most influential college presidents of the period, one would likely include Charles Eliot of Harvard, Andrew White of Cornell, James Angell of Michigan, and Daniel Gilman of Johns Hopkins.

None of these men were great scholars. Their skills and their interests were in the area of college administration. Each had a concept of what his particular institution should be, and how that objective might be reached. The purpose of this chapter is to explore Gilman's concept of the Hopkins, of which the Fellowships program was a major component.
Gilman's Concept of the University

In a speech given at the dedication of Sibley College of Cornell University in June of 1871, Gilman indicated that higher education in America had already passed through two distinct phases, and was now entering a third. The first phase was that of the traditional liberal arts college, patterned on the English model. Such colleges were primarily residential in nature. There was but one curriculum, in which the study of the classics predominated. Classes were taught at an undergraduate level. The second phase began with the development of programs of specialized training in law, medicine and theology. In some cases these professional programs were added on to traditional liberal arts colleges, while others developed independently.

Gilman stated in his Sibley College speech that American higher education was moving into a third phase, the development of universities. The new universities would be superior to the single curriculum undergraduate colleges. Indeed, these colleges might well become divisions within the larger structure of the universities, which would also be more comprehensive than the conventional, single discipline professional schools. Gilman indicated that there was considerable confusion as to what direction the emerging universities
might take:

We are not agreed as to exactly what we want, and we are more at a loss as to how to get it. But far and near through the country we feel the need of more men of education and of men of more education; both in quantity and quality we are conscious of our deficiencies. Our writers perceive the want and continually discuss it; our public men recognize it, for they favor, especially in the western States, legislation and appropriations which tend to improvement; or men of wealth acknowledge it, for they come forward with munificent contributions to provide better things for the future than we have inherited from the past.

Gilman suggested four possible paths of university development: (1) change the colleges to universities by either omitting the traditional four year program or by transferring it to high schools and academies; (2) retain the traditional college and its classical program, making it the basis for all higher forms of education; (3) develop parallel four year programs within the same institution, with one course devoted to the traditional liberal arts program and the other to the sciences; (4) retain the traditional classical program, but allow widespread freedom in course selection.

Gilman indicated that he favored a system that would give equal opportunity to the study of the sciences and the

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classics. In addition, he recommended the development of differing preparatory courses and programs of advanced study, to reflect the varying needs and abilities of university students.

Eleven years later, in 1872, in his inaugural address as president of the University of California, Gilman developed a similar theme: the equality of both the arts and sciences, offered at advanced levels, within the same institution:

Let us... say with courage and hope that the University of California shall be a place where all the experience of past generations, so far as it is of record, and all that is known of the laws of nature, shall be at command for the benefit of this generation and those who come after us... Let us see to it that here are brought together the books of every nation, and those who can read them; the collections from all the kingdoms of nature, and those who can interpret them; the instruments of research and analysis, and those who can employ them; and let us be sure that the larger the capital we invest, the greater will be the dividend.

In his inaugural address as president of the Hopkins four years later, in 1876, Gilman stressed the importance of the university as a place for advanced study. Students coming to the university, in order to benefit from such study, were to be "prepared for its freedom by the discipline of a

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2 Ibid., pp. 6-7.
3 Gilman, University Problems, pp. 181-182.
lower school." He cited the universities of Europe as an example.

Later in the same address, Gilman made a point of clarifying the difference, as he saw it, between a college and a university:

The college implies, as a general rule, restriction rather than freedom; tutorial rather than professorial guidance; residence within appointed bounds; the chapel, the dining hall, and the daily inspection. The College theoretically is 'in loco parentis;' it does not afford a very wide scope; it gives a liberal and substantial foundation on which the university instruction may be wisely built.5

At the time Gilman made his speech at Sibley College in 1871, he was still on the faculty of the Sheffield Scientific School. The questions he raised about possible directions the new universities might take were not to be found in his Hopkins inaugural address of five years later. He had developed a plan for a university; one that involved the harmonious functioning of the institution's trustees, faculty, students and administration in support of the concept of research-oriented graduate instruction. Gilman's plan also included the enlisting of support of appropriate

5 Ibid., pp. 13-14.
publics external to the institution, as will be indicated in Chapter V.

The Role of the Trustees

In his inaugural address at the University of California, Gilman outlined his concept of the role of the university trustees:

The regents or trustees of a college have the great responsibility of appointing the body of teachers and of providing the funds. They are the power behind the throne, unseen in the daily work of the college, but never for a moment unfelt. Upon their wise choice of instructors, their careful guardianship of moneys, their construction of buildings, their development of new departments and schools, their mode of presenting the university to the public, will depend the confidence and liberality of the community.6

At California, Gilman sought to work closely with the regents of the university. However, a change in the California Political Code during Gilman's presidency put the regents in a category similar to a commission of the legislature, liable, in Gilman's words, to be "sponged out in a single hour of partisan clamor."7

Gilman had weathered the attacks on his administration by the agriculturally-oriented Grangers. However, the

6 Ibid., p. 162.
7 Franklin, Life of Gilman, p. 178.
change in the status of the regents resulting from the revision of the Political Code indicated to Gilman that the regents could no longer guarantee a stable climate under which they might perform their functions as described in Gilman's inaugural address.

Further, Gilman had been advised by a group of five men who had planned to give substantial gifts to the university that, in view of the new dependency of the regents to the whims of the legislature, they would withhold their gifts. That this was a serious blow to Gilman's plans for the development of the institution is reflected in a statement that he made at that time:

As I firmly believe that the advancement of higher education in this country depends chiefly upon the munificence of wealthy men, I regard the present organization of the university, which is liable to change at any session of the legislature, as particularly uncertain.8

A short time later, Gilman was offered the presidency of the new Johns Hopkins. After journeying across the country to meet with the Hopkins trustees, Gilman accepted their offer. Gilman indicated that the authority of the Hopkins' trustees over the institution was an important factor in his decision to accept the Hopkins' presidency:

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Ibid.
The trustees whom he [Johns Hopkins] selected are responsible neither to ecclesiastical nor legislative supervision; but simply to their own convictions of duty and the enlightened judgement of their fellow men. They have not adopted any plan nor authorized, as I believe, any of the statements which have been made as to their probable course, -- but they are disposed to make a careful study of the educational systems of the country, and to act in accordance with the wisest counsels they can secure. Their means are ample; their authority complete; their purposes enlightened. Is not this opportunity without parallel in the history of our country.9

Gilman was apparently correct in his assumption that the Hopkins' trustees had not adopted a plan for the new university. They did have some specific ideas, however. All twelve of the trustees were residents of Baltimore. Like Johns Hopkins, they were all Union men, living in a city that had been torn apart by sectional rivalry a decade before. They wished to insure that the university would not be weakened by sectionalism.

All twelve of the trustees were Protestants. Seven of them were members of the Society of Friends, as was the founder, Johns Hopkins. Four of the others were Episcopalians, and one was a Presbyterian. The religious views of the trustees were of keen interest at the time. Johns Hopkins had once commented that the hospital that was

9 Ibid., p. 179.
to bear his name should be free from sectarian influence, discipline or control. The university trustees and President Gilman carried that concept over to the new school, in a time when nearly all private colleges carried a religious affiliation.

Seven of the trustees were college graduates, and three of the others had attended college. Reverdy Johnson, the trustee who had made the offer of the presidency to Gilman, had studied in Germany. He had earned a law degree from the University of Heidelberg.

In 1874 the members of the executive committee of the board of trustees visited Harvard, Yale, Cornell, Michigan and the University of Virginia to gather ideas for the new university. In addition, they invited the presidents of the leading Eastern schools to come to Baltimore to meet with them. The presidents of Harvard, Cornell and Michigan were quick to respond.

President Angell of Michigan gave the following account of his interview with the Hopkins' trustees in Baltimore:

... at least three college presidents were invited by the Trustees to confer with them when they were maturing

their plans for the organization of the university. I had the honor to be one of them, and my experience, I suppose, was like that of the others. I was shut up in a room with these Trustees and a stenographer, and what few ideas I had in those early days were squeezed out of me remorselessly.

Angell's "few ideas" ran to twenty-six pages. It was during the course of these meetings that the idea of establishing a primarily graduate level institution was raised. In reminiscing about the matter, Angell indicated that he had been in favor of establishing "a great graduate university."

President Eliot had indicated that graduate work should be far in the future for the Hopkins. He advocated the hiring of a small faculty to teach a freshman group of undergraduates the first year, hiring additional faculty for the second class the second year, and so on.

Shortly afterwards the trustees wrote to Angell, Eliot and White, asking them whom they might suggest for the presidency of the new institution. In an address at the twenty-fifth anniversary of the Hopkins, Angell recalled:

They [the trustees] did me the honor to write me a letter, and, as I was afterwards informed, they wrote a

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11 Ibid., p. 23.
similar letter to President Eliot and President White, asking whom we would suggest for the office of President. And now I have this remarkable statement to make to you; that, without the least conference between us three, we all wrote letters, telling them that the one man was Daniel C. Gilman, of California. That is one of the few acts of my life which I have never regretted.13

When Gilman came east from California in December of 1875 to confer with the trustees, before accepting the presidency, the trustees had not yet taken the steps that Gilman had described in his inaugural address at California. They had not yet hired any faculty, nor established any departments. They had not constructed any buildings. They had decided that the new school would be free from sectional bias, and would be non-sectarian. While they had discussed the concept of graduate education, their commitment to it at that point is not known.

The Hopkins' trustees did have ample funds at their command. Unlike the regents at the University of California, they were in a position to provide the stability of situation needed for the harmonious functioning of the new institution under the guidance of President Gilman.

The Role of the Faculty

Prior to the 1870's, the position of a college

teacher in America had little to recommend it, professionally or financially. Faculty members were often selected on the basis of their religious orthodoxy, rather than on their professional competence. At most schools they were burdened with large classes, which usually included many poorly-prepared students. Recitation and endless theme correcting were the order of the day.

The lack of adequate funding was a chronic problem. Rudolph points out that America's college leaders had developed a number of ingenious techniques for underpaying their instructors. At Williams College, professors had been hired with the understanding that their inadequate salaries would be supplemented by the contributions of their friends. From 1835 until 1852, the professor of chemistry at Williams was a man of wealth who used his token salary to buy much-needed equipment.

Harvard was relatively better off financially than most other American colleges, but it was far from wealthy, based on the standards of the last decades of the 19th Century. However, President Eliot seemed to prize poverty as a virtue:

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The poverty of scholars is of inestimable worth in this money-getting nation. It maintains the true standards of virtue and honor. The poor friars, not the bishops, saved the Church. The poor scholars and preachers of duty defend the modern community against its own material prosperity. Luxury and learning are ill bed-fellows.  

James tried to put Eliot's well-known stinginess in the best possible light. Yet even he was forced to admit that Eliot, by living frugally:

... made insufficient allowance for the fact that many men were not so well fitted to grow old serenely on a meager stipend. The best salaries that the University paid were modest and there are more instances than it is pleasant to consider of instructors who were kept waiting for full pay until middle age, or until some other institution began to bid against Harvard for their services and reputations.

Gilman sought to attract several of Harvard's best known professors for the original Hopkins faculty, but without success. One of those he sought, Chaucerian Scholar Francis Child, wrote to Gilman that when Eliot found out about the Hopkins offer, he stated that Harvard would do all it could to encourage him to remain.

Gilman was personally aware of the vagaries of the teaching profession. During his seventeen years as an

15 James, Charles Eliot, pp. 80-81.
16 Ibid.
17 Franklin, Life of Gilman, p. 235.
administrator and teacher at Yale, he was engaged in a continual battle for funds for the Scientific School. While serving as librarian for Yale, he paid his assistant's salary out of his own small stipend. Gilman resigned that position in disgust after learning that he alone of all of the officers of Yale had not received an increase in salary.

In his speech at Sibley College in 1871, Gilman commented that professors should be free enough of classroom and financial burdens to pursue additional study. To Gilman, research-oriented teaching faculty were the heart of the university:

> It is on the faculty more than on any other body that the building of a university depends. They give their lives to the work. It is not the site, nor the apparatus, nor the halls, nor the library, nor the board of regents, which draws the able scholars; it is a body of living teachers, skilled in their specialties, eminent in their calling, loving to teach. . . . The 'genius loci,' the spirit of the place, will be in the spirit of the faculty.19

In an article that appeared in *The Nation* following Gilman's interview with the Hopkins' trustees, the editor, E. L. Godkin, commented that should Gilman become president of the Hopkins, he would select front-rank teachers, and

18 Ibid., pp. 76-77.
would pay them "well enough to leave them at their ease as regards the commoner and coarser cares." In return, he would expect yearly proof of work in their specialties by requiring them to publish the results of their research.

To assure that members of the Hopkins faculty would be able to devote themselves fully to their academic pursuits, Gilman proposed a generous salary schedule. In a letter to an old friend, Professor George Brush, Gilman estimated that the minimum annual income for the new University would be $200,000 per year. Of that amount, he calculated that approximately $155,000 would be available for instructional purposes, with the remaining $45,000 for administrative expenses, including the cost of equipping laboratories and libraries. He projected four top professorial positions, with salaries of $6,000 each. Positions in the next category were to pay $4,500 each.

To say that such salaries were generous for the time is an understatement. The top Harvard faculty salary at that time was $4,000 per year. As it turned out, only one of the

20 Franklin, Life of Gilman, p. 188.
21 Ibid., p. 192.
22 James, Charles Eliot, p. 252.
original Hopkins' professors, James Sylvester, was able to command a salary of $6,000, and he was able to obtain that amount only after lengthy negotiations. The other Hopkins' salaries were considerably higher than those of other institutions.

In the spring of 1875, Gilman visited colleges, museums and research centers across the eastern part of the United States to recruit faculty. Since the Hopkins was to focus its attention primarily on the sciences, Gilman sought advice from the most prominent men in the science field. It was at West Point that Gilman, in seeking advice about the development of scientific departments for the Hopkins, heard of an outstanding young physics instructor at Rensselaer. Henry A. Rowland had just had an article published in The Philosophical Magazine in England. Gilman learned that Rowland had submitted the article previously to The American Journal of Science. It had been rejected by the American publication because the author was "too young" to have possibly done any real scientific work. He was 25 years old.

The British professor who had received the article

was greatly impressed with it. In recommending to the trustees that Rowland be the first faculty member to be hired for the new university, Gilman demonstrated a skill that was to be of considerable benefit to the Hopkins: the ability to predict the potential of outstanding future scholars. Rowland was the first professor hired for the Hopkins, in 1875. It did not take him long to achieve an international reputation in his specialty, which was magnetism. In 1882, six years after joining the Hopkins' staff, Rowland attended meetings of scientific societies in London and Paris. In Gilman's words:

In England, Rowland's success was better appreciated, if that was possible, than in Paris. He read a paper before a very full meeting of the Physical Society. I was delighted to see his success. The English men of science were actually dumbfounded. . . . This young American was like the Yosemite, Niagara, Pullman palace car--far ahead of anything in England.24

Rowland was the only one of the six original Hopkins professors who had not studied abroad. He was so well regarded by Gilman however, that after he was hired, the Hopkins trustees sent him to England to do research. He accompanied Gilman on his recruiting trip to Europe in July of 1875.

24 Gilman, Launching of a University, p. 72.
It should be pointed out that Gilman was not the first American university president to try and recruit faculty abroad. Both White and Eliot had gone to Europe to search for faculty talent. What was unique was Gilman's approach. For the first time an American school was openly seeking to adopt the basic essentials of European scholarship and research.

There was no question about the caliber of the men that Gilman was seeking. He was after the outstanding scholars of the day. To attract them, he could offer excellent salaries. In addition he could provide them with the type of research facilities they desired; facilities better than those of any other American school. The Hopkins faculty would have plenty of laboratory space, and the latest equipment. They would have time, free from teaching, to pursue their own research. Instead of poorly trained undergraduates, they would work primarily with carefully selected, well prepared graduate students. Gilman's approach had a strong appeal in 1875. It still does today.

Gilman visited Ireland, England, France, Switzerland, Germany, Austria and Scotland. He received a particularly warm welcome from members of the British scientific elite. He met with Herbert Spencer and Thomas Huxley in London. The following year Gilman persuaded Huxley, who was perhaps the
best known proponent of Darwin's theories, to give the opening address at the Hopkins, in September of 1876. His visit and speech brought national attention to the new university.

It was through Gilman's new English friends that Professor James Joseph Sylvester was persuaded to join the Hopkins staff. Sylvester had taught mathematics for a number of years at the University of London. He had also taught briefly at the University of Virginia before the War. His views on slavery were not popular at that Southern institution, and he soon returned to England. Sylvester was considered to be one of England's most well known mathematicians. Harvard Professor Benjamin Pierce, recommended Sylvester to Gilman as follows:

As the greatness of a university must depend upon its few able scholars, you cannot have a great university without such men as Sylvester in your corps of teachers. Among your pupils, sooner or later, there must be a genius for geometry. He will be Sylvester's special pupil, the one pupil who will derive from his master knowledge and enthusiasm -- and that one pupil will give more reputation to your institution than the ten thousand who will complain of the obscurity of Sylvester, and for whom you will provide another class of teachers.25

Henry Newell Martin, who was Thomas Huxley's assistant, came to the Hopkins on the understanding that he would be able

to build his own laboratory for his work in the biological sciences. Shortly after his arrival in Baltimore, he was able to announce that his laboratory was "the finest in the country." Ira Remsen, the Hopkins' first professor of chemistry, was previously a member of the Williams College faculty. While at Williams, he made a request that a small room be made available to him for a private laboratory. In turning down his request, he was advised to "keep in mind that this (Williams) is a college and not a technical school." After agreeing to come to the Hopkins, Remsen spent an entire summer touring the United States seeking ideas for his new laboratory.

The two other members of the six original Hopkins professors were Basil Gildersleeve and Charles D'Urban Morris. Gildersleeve's appointment as Professor of Greek was looked upon with considerable favor by the Baltimore community. President Gilman was a New Englander, and the trustees had Northern leanings. Gildersleeve was a Southerner, the only one on the original faculty. He had been permanently lamed while serving in the Confederate cavalry during the War. His

26 Hawkins, Pioneer, p. 49.
27 Ibid., pp. 47-48.
credentials extended well beyond the military, however. Flexner refers to him as "the greatest of American Hellenists." Morris was born in England and trained at Oxford, where he was a fellow of Oriel College. He was hired as a professor of Greek and Latin, primarily to teach undergraduates, so that Professor Gildersleeve would be free to do advanced work. E. L. Godkin declared that Morris was "among the half dozen best Classical Scholars in England or America."

In a country that all too often equates size with greatness, it is difficult to conceive of an institution of significance coming into being with but six professors on its staff. Such however was the case at the Johns Hopkins in 1876.

Gilman had conceived a plan for the Hopkins that involved the close cooperation of the board of trustees, the faculty and the students in a common cause. Before accepting the position of president, Gilman had determined that the trustees were receptive to his concept of a research-oriented, graduate level institution. He then went about recruiting a faculty in this country and abroad who were also in agreement with that objective. The next step was to attract like-minded,

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promising students to the new institution. This Gilman sought to do by establishing a comprehensive program of fellowships that would in substance reward original student research. The uniqueness of that concept will be explored in the following chapter.
CHAPTER IV

THE HOPKINS FELLOWSHIPS SYSTEM

Origins

The practice of awarding scholarships to deserving students at American colleges is nearly as old as Harvard itself. In 1643, seven years after Harvard was founded, Lady Ann Mowlson of London was persuaded to donate the sum of one hundred pounds to the College, the revenue from which was to be used for the yearly maintenance "of some poore scholler."

Scholarships such as the Mowlson grant were the result of the generosity of specific donors. In some cases the gifts were spontaneous, while in others they were sought out by the colleges. In either situation the conditions under which the awards were to be granted were usually initiated by the donor, often times with little consideration for what the college was seeking to accomplish. To put it another way,

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such awards were not used in an organized manner by the col-
leges for their own purposes, such as attracting students of
a certain caliber, or to develop a student clientele for a
specific program of study.

At several institutions supported in all or in part
by public funds, scholarships had been awarded by districts
within the state. In the Plan of Organization for Cornell
University, submitted to the New York legislature in 1865,
provision was made to "receive annually one student from
each Assembly district... free of any tuition fee." There
were 128 districts in New York. Tuition at Cornell at the
time was twenty dollars per year. Plans such as this were
aimed primarily at attracting the support of legislators.
The benefits to the institution, if any, were a secondary
factor.

Johns Hopkins laid down amazingly few requirements
for the university that was to bear his name. He had made
his fortune in the hardware business in Maryland and in the
nearby Southern states. He was aware of the economic diffi-
culties that many Southerners continued to experience in the

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Morris Bishop, A History of Cornell (Ithaca: Cornell
early 1870's. That concern was reflected in one of the few provisions in his will related to the new University: the creation of scholarships for "candidates of good character and intellectual promise" who lived in Maryland, Virginia and North Carolina.

Hopkins died in December, 1873. Following the probating of his will the following year, the trustees of the new institution interviewed Presidents Eliot and Angell in Baltimore, and corresponded with President White. Eliot told the trustees that, contrary to the English practice, Harvard awarded its scholarships and postgraduate fellowships on the basis of good scholarship and need, and not just on scholarship alone. Eliot felt that fellowships that covered both a student's academic and living expenses were not desirable unless they were carefully supervised.

White disagreed with Eliot. He felt that the new University should provide ten or twenty fellowships, large enough to enable a graduate of another college to live comfortably while pursuing studies of an advanced nature, under the direction of the faculty. Eliot did not believe that the

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3 French, A History... of Johns Hopkins, p. 464.
4 Hawkins, Pioneer, p. 11.
Hopkins should emphasize advanced studies, at least in the opening years. His attitude is understandable, in view of his reluctance to introduce advanced programs at Harvard.

Gilman met with the Hopkins trustees in December, 1874 to discuss the possibility of his accepting the presidency. No mention of either scholarships or fellowships was made by either Gilman or the trustees in the summary article on that meeting that appeared in the January 28, 1875 issue of The Nation. Gilman did say, according to The Nation article, that the new university should specialize in instruction to advanced students.

The emphasis on providing advanced instruction aroused considerable protest in the Baltimore press. This was no doubt due in part to the efforts of a disgruntled group of California Grangers, who mailed clippings derogatory to Gilman that had appeared in the California press to the Hopkins trustees, and to the Baltimore papers. There was more to it than that, however. Some Baltimoreans felt that a school featuring advanced instruction would be of little benefit to the young people of that city. In an article entitled "Our University," an editorial writer for the Baltimore American put it this way:

The charter provides for free scholarships for a certain number of students from Maryland, Virginia and North
Carolina, but these deserving young men, for whose welfare Mr. Hopkins was solicitous, have nothing to do with fixing the character of the school. It may be adapted to the wants, the capacity and the circumstances of the aspiring young men of these states, or they may be practically debarred from entering its lecture rooms because the 'philosophy' taught is beyond their comprehension.\(^5\)

In the same article, the writer expressed the concern that if a school featuring instruction at the graduate level was necessary, why had not Harvard and Yale attended to it:

If the intellectual activity that has obtained in New England for fifty years had not laid the foundations of a 'school of philosophy,' how can we expect to create such an institution in Baltimore, and fill it with students, in a single year?\(^6\)

It was a reasonable question indeed.

**The Hopkins Scholarships**

Gilman was completing his affairs in California when the above-mentioned issues were being discussed in the Baltimore press. According to Hawkins, Gilman was contacted by Trustee Reverdy Johnson and encouraged to consider carefully the needs of the local community in formulating his plans for the new institution. It is not possible to

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6. Ibid.
ascertain what influence, if any, Johnson's request had on Gilman. Hopkins had not indicated how many scholarships should be made available. In his announcement of the scholarships and fellowships to be made available in the first year, Gilman allocated the rather generous number of twenty scholarships to fulfill the wishes of the founder. These awards were to be known as "Hopkins Scholarships."

These awards were for men only, since women were not admitted to the Hopkins in its early years. This was not a requirement established by Johns Hopkins, nor was it apparently favored by Gilman, who had encouraged women to attend the University of California during his presidency there. It seems likely that this decision was made by the trustees.

The Hopkins Scholarships were to cover the cost of tuition, which in the first years of the university was eighty dollars per annum. They did not cover special charges such as laboratory fees. The scholarships were renewable for a period of up to four years. They could be forfeited for "deficiency in scholarship, or unworthy conduct." Neither of these somber possibilities were described further.

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8 Johns Hopkins University, First Annual Report (Baltimore: William K. Boyle & Son, 1876), p. 31. Copies of the Gilman-prepared Annual Reports and of the Official Circulars of the University in its early years are included in the Daniel Coit Gilman Papers, located in the Lanier Room of the Johns Hopkins University Library.
The eligibility requirements for these awards were couched in the ambiguous phraseology of Hopkins' will. The scholarships were to be distributed among such candidates "as may be deserving of choice, because of their character and intellectual promise." While the specific requirements for a Hopkins Scholarship were vague; the process of application was clear. Gilman had decided to send university representatives into the three states mentioned in Hopkins' will to interview candidates, and to report their recommendations to the trustees, who would make the final selection. The representatives were to visit:

... on the morning of each day named, in Staunton, June 30, at the Virginia Hotel; Richmond, July 3, at the Exchange Hotel; Raleigh, July 5, at the Yarborough Hotel; Baltimore, July 10, at the University Buildings, Howard Street.9

The school representatives, like the faculty members of the Sheffield Scientific School that Gilman had sent out to promote Sheffield scholarships ten years before, would help to spread the word about the many opportunities available at the new university in Baltimore.

Gilman found other ways to publicize the scholarships. He was in contact with the president of the Maryland Board of

9 Johns Hopkins University, Official Circulars, No. 2, p. 15.
Education to work out procedures that would insure that the scholarships be used to further the education of deserving Maryland students when they had completed their studies at other Maryland institutions.

The Hopkins Scholarships were unique among the various scholarship and fellowship awards at the Hopkins in that the names of the participants were kept secret. Apparently the introduction of a need factor was the reason for the secrecy. This is all the more intriguing in view of the fact that Harvard, which had far fewer scholarships and did not promote them to the degree the Hopkins did, did indeed announce the winners of its scholarships. And, as Eliot had stated, need was a factor in the awarding of Harvard scholarships.

Another series of scholarships, known as University Scholarships, were also instituted in the Hopkins' opening year. Unlike the Hopkins Scholarships, the five University Scholarships were open to applicants from anywhere in the United States. They covered the cost of tuition, but not of additional fees. They were renewable for up to four years, "provided that the holders continue to give evidence which is

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10 Baltimore Sun, 18 December 1875.
satisfactory to the Faculty of their high scholarship and honorable character."

The basis for selection of University Scholarships winners was by competitive examination in the subjects required for admission to the Hopkins. There was no standardized examination for admission to the University, as is indicated from the following excerpt from Official Circular No. 2, issued in June, 1876:

IN RESPECT TO THE ADMISSION OF SCHOLARS

1. The Instructions of the Johns Hopkins University will commence Tuesday, October 3, 1876, in the temporary rooms on Howard Street, next to the City College.

3. Three classes of students will be received: -
   A. Matriculants, or candidates for a degree.
   B. Non-matriculants, not candidates for a degree, and devoted to a specialty, like Chemistry, Biology, Engineering, &c.
   C. Attendants upon separate courses of lectures, whose names will not be enrolled among the students of the University.

4. Students in any of these groups must satisfy the authorities that they are mature enough in age, character, and acquisitions, to pursue with advantage the special advanced instructions here provided.

5. To persons at a distance, blank forms of application for admission will be forwarded, upon the return of
which they will be advised as to the probability of their admission.

6. If the authorities are satisfied in respect to the maturity of the candidate, he will be required to pass a special examination in the branches of literature and science which he has hitherto studied, and his place in the University courses will be determined by the result of this examination. A candidate may be admitted who is far advanced in one subject and less prepared in another.12

The winners of these awards were to have received the highest scores in the examinations in the areas in which they wished to study at the Hopkins. The winners were to be publicly announced.

A special scholarship was made available by a friend of the Baltimore City College for the 1876 City College graduate who would score the highest in the appropriate examinations to enter the Hopkins. The amount of the award was one hundred dollars per year. The scholarship was renewable for a second year, "provided that his intellectual progress and conduct continue to be honorable." Gilman said that he hoped that this scholarship would lead to many others, to "be established by private liberality, or by collective

There were apparently no applicants to the Hopkins from the 1876 graduating class of the City College, and the awarding of the City College Scholarship was postponed indefinitely.

The Hopkins Scholarships had a somewhat better reception in the opening year of the new university. Gilman reported that while the number of candidates seen by the university representatives during their visits to Virginia, North Carolina and Maryland was relatively small, a number of applications were received at the university at a later date. The full twenty scholarships were awarded by the trustees in the summer of 1876. Fourteen of the recipients were from Maryland, which must have pleased the editorial writers of the Baltimore press. Three of the recipients were from Virginia, and one was from North Carolina. Two of the twenty did not take up their awards. Their places were taken by two young men from Kentucky.

In the first year there were only four applicants

for the five available University Scholarships. Two awards were actually granted. The following year only one University Scholarship was awarded. In 1878, the third year of the program, two were awarded. Thus, of the fifteen available University Scholarships in the first three years of the program, only five were awarded.

What were the reasons for this apparent lack of interest in scholarships at the Hopkins? Perhaps the most important was that the Hopkins was conceived primarily as a graduate institution, and was operated in that manner. The strength and the almost magical appeal of the Hopkins in its early years was in its graduate programs.

Gilman reflected the interest in graduate, rather than undergraduate study. While he made twenty Hopkins Scholarships available from the first, his correspondence with scholarships' applicants reflects little of the interest and enthusiasm shown to applicants for Fellowships during the same period. As was indicated previously, no publicity was given to the recipients of Hopkins Scholarships. Beginning with the Second Annual Report, Gilman gave less and less space to the scholarships programs as he focused his attention on the concept of Graduate Fellowships and the growing list of achievements of the first Hopkins Fellows.
The Hopkins Fellowships

The concept of providing Fellowships for graduate study was not a new one for Gilman when he came to the Hopkins. In the summer of 1874, the regents of the University of California appointed several recent graduates as assistant instructors. Their salaries were a meager six hundred dollars a year. In Gilman's words:

... it was not supposed that their duties would be responsible or onerous. But it was thought that they would be led to prosecute advanced studies under the direction of the Faculty, and would thus become better fitted for the duties of life. This plan, which is nearly equivalent to the establishment of graduate scholarships, has worked well.15

Hawkins credits the English system of fellowships with providing the inspiration for the Fellowships program at the Hopkins. He indicated that Gilman was aware of that ancestry since Gilman had collected and preserved a series of quotations on scholarships by Mark Pattison and John Henry Newman. Hawkins' footnote reference was to a "Collection of unbound quotations labeled by Gilman 'Value of Fellowships --

15 Daniel Gilman, Statement of the Progress and Condition of the University of California, Berkeley, 1875, as quoted in Cordasco, Daniel Gilman, pp. 50-51.
The first public announcement of the Hopkins Fellowships program was made in January of 1876, only nine months before classes were to begin. The following is from The First Annual Report:

Ten fellowships, each yielding $500, are offered to college graduates from any part of the country, who exhibit special acquisitions in some branch of science or literature, give promise of great intellectual merit and desire to prosecute higher studies in connection with this University.17

It was apparent that the Fellowships were an integral part of the plan to develop the Hopkins as the first research-oriented graduate level institution in the country. A good indication of the emphasis on graduate research was the relatively large proportion of available funds allocated to the Fellowships venture. Hopkins had indicated in his will that the new university was to operate on the dividends on the Baltimore and Ohio Railroad stock that made up the bulk of his gift. As was indicated previously, Gilman had

16 Hawkins, *Pioneer*, p. 79. It was indicated that these quotations were to be found among *The Johns Hopkins University Papers* in the Lanier Room of the Hopkins' Library. Regretfully, the collection could not be located, despite a careful search. Hawkins was contacted, but he was unable to provide additional information about the collection.

17 *Johns Hopkins, First Annual Report*, p. 32.
predicted that the new university could expect a minimum of $200,000 in annual revenues. Of that amount, $45,000 would be used for administration, including the costs of the library and the purchase of equipment. The remainder, $155,000 would be available for instructional expenses.

The trustees were aware however of the problems the railroad had experienced on two separate occasions in previous years. Therefore they decided to set aside a considerable portion of the dividend revenues. The reason given for the withholding of these funds in the First Annual Report was to prepare for a future building program. In any event, the amount available for instructional purposes in the first year was only $60,000, less than half what Gilman had originally expected.

It was indicated in the original announcement that a total of ten Fellowships would be awarded. In view of the great response, the trustees decided to increase the number of Fellowships awards to twenty. At $500 each, the total cash amount to be allocated that first year was $10,000. This represented an amount equivalent to one-sixth of the instructional budget; a considerable outlay indeed.

18
Franklin, Life of Gilman, pp. 191-192.
The value of the twenty Hopkins Scholarships and the five University Scholarships combined was only $2,000, or one-thirtieth of the total instructional budget. Further, these awards involved only a waiver of tuition fees; no budgeted funds were involved. The Hopkins Fellowships on the other hand involved an actual cash outlay from budgeted funds.

Gilman's belief that faculty members should be paid enough to enable them to devote themselves fully to their specialties carried over to the Fellowships program. The sum of $500 was ample for a student to live for a year in relative comfort in Baltimore in the 1870's. According to one of the first Hopkins Fellows, the cost of living in Baltimore compared most favorably with living costs in Germany:

It cost me $1,000 a year in Germany, and I didn't fare very well at that, although I tried all sorts of domestic economy, from the family of a pastor's widow to that of a Prussian baron. In Baltimore a student can live on the fat of the land for $500 a year. My actual living expenses, board, room, washing, etc., are $25 per month, and I board in a first-class place.\(^{19}\)

Gilman did not believe in residence halls and the restrictive discipline that such facilities required. Many of the Hopkins students and single members of the faculty

lived in boarding houses in the area of the university, which was located in downtown Baltimore.

Fellowships recipients were not allowed to teach off-campus, or to hold other jobs. The reason for that regulation, Gilman told one Fellowships applicant, was to keep "the holders of Fellowships from spending their strength in making, rather than in study." The Fellows' responsibility, like that of the Hopkins faculty, was a full-time commitment to their specialties.

Another indication of the relationship of the Fellowships program to the research-oriented objectives of the Hopkins was the requirement that each candidate submit proof of his achievements in a specific research area. A successful applicant in mathematics cited his second-place finish in a nation-wide Intercollegiate Mathematical Contest as evidence of his accomplishments in his chosen field.

20 Gilman to D. McGregor Means, 20 March 1876. This letter was one of several hundred outgoing Gilman letters written in 1876, copies of which have been preserved in several letter-press books. These books, along with more than thirteen thousand incoming Gilman letters, are part of the Daniel Coit Gilman Papers, located in the Lanier Room of the Hopkins Library. Unless otherwise indicated, all the Gilman letters to which reference is made are part of this collection.

21 George B. Halsted to Gilman, 10 April 1876.
Each Fellow was to perform some service to the University each year. The nature of the work to be performed was not clearly defined:

They [the Fellows] will be expected to render some service to the University as Examiners, or as assistants to the Professors, under circumstances to be determined in individual cases.²²

In addition, each Fellow was to give evidence during the course of the year that he was making progress in his special field. The method to be used in providing the evidence of progress was to be worked out directly with Gilman. Gilman suggested several ways that this might be done. The Fellow might prepare a thesis, submit a piece of completed research, or give a lecture in his specialty. Eliot had often spoken of the abuses in the English fellowships system, where such awards were often given for long periods, and sometimes even for life, without any requirements of scholarly productivity. This requirement provided Gilman with a method of evaluating the scholarly progress of the Fellows. It also helped to insure the production of research papers, an integral aspect of the University's plan to achieve national recognition.

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²² Johns Hopkins, First Annual Report, p. 32.
The plans for the Fellowships program, and for that matter for the new University itself were developed over a relatively short period of time. Gilman accepted the presidency in January of 1875. He began his full-time association with the University in May of that year. He spent most of the summer and fall on a faculty recruiting and equipment-buying trip to Europe. The initial announcement about the Fellowships program was issued in January of 1876. There is a vagueness in some of the provisions of the original document, which may be due to the developing nature of the program. For example, the academic fields that Fellowships applicants were to select were originally described merely as "some branch of science or literature." Announcements issued late the same year identified the following ten fields as suitable for study: philology; literature; history; ethics and metaphysics; political science; mathematics; engineering; physics; chemistry; and natural history.

Also, there was no indication in the original announcement of the method of selection of the Fellowships winners. As late as April 1, 1876, Gilman had to admit to a Fellowships applicant that the method of deciding who would receive a Fellowship remained to be worked out.  

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23 Gilman to Ward Bliss, 1 April 1876.
By April it had become apparent that the number of Fellowships applicants had far exceeded expectations. On the basis of that response, the trustees increased the number of Fellowships from ten to twenty.

By the deadline date of June 1, a total of one hundred and fifty-two Fellowships applications had been received. Of that number, one hundred and seven candidates, from forty-six different schools, were found to be eligible. Applications were received from graduates of a broad spectrum of American schools, and from the Universities of Dublin, Göttingen and Heidelberg.

The applications were referred to specialists in each of the appropriate ten study areas. They were judged on the basis of materials submitted, and upon the recommendations of faculty members at their undergraduate schools. The recommendations of the specialists were forwarded to the trustees, who made the final decision.

That there was considerable interest in the outcome at some of the prestigious older colleges is evidenced by the correspondence between Eliot and Gilman prior to the announcement of the awards. Gilman reported that eleven Harvard men were among those eligible.  

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24 Gilman to Eliot, 3 June 1876.
Why did the Hopkins Fellowships generate such an enthusiastic and widespread response, while the various scholarships programs did not? Part of the answer may be found in the statement by Gilman that appeared in the Second Annual Report:

The object of this foundation is to give scholars of promise the opportunity to prosecute further studies, under favorable circumstances, and likewise to open a career for those who propose to follow the pursuit of literature or science. The University expects to be benefitted by their presence and influence, and by their occasional services; from among the number it hopes to secure some of its permanent teachers.25

The benefits to the Fellowships applicants were many. Those who would be selected were likely to be recognized as a select group. They would have an opportunity to work with noted scholars in a setting conducive to advanced study. The latest in laboratory and library facilities were to be at their disposal. They would be given funds sufficient to enable them to pursue their studies free of economic concerns. After completing their work, there was the hope that they might have the opportunity to seek a career in their specialty at the Hopkins.

Gilman had developed an imaginative concept in the

Graduate Fellowships program. As will be shown in the following chapter, he was equally imaginative in his efforts to promote the concept both with prospective students and with the public.
CHAPTER V

RECRUITING THE FIRST FELLOWS

Gilman was the first president of a brand new institution. When he assumed office in January of 1875, the Hopkins had neither faculty, staff nor students. It did not even have a campus. The concept of providing graduate level instruction on a significant scale had been attempted at other institutions, but with little real success. The purpose of this chapter is to explore Gilman's efforts to create a favorable climate for the new institution, and by so doing to attract a group of outstanding graduate students to the emerging university.

Spreading the Word

In a letter to Gilman, Eliot outlined the process that the emerging Hopkins, and indeed the venerable Harvard should follow in order to survive:

Dignified silence, of mere lists of lectures, are not for you just yet. Indeed the methods of Oxford and Berlin are not for any of us in this generation. We are compelled by the rawness of the country to proclaim in set terms the advantages which we offer.1

1 Eliot to Gilman, 6 April 1880.
This was advice that meshed with Gilman's administrative style. Gilman had had considerable experience in making the general public aware of, and receptive to, the concepts embodied in the Sheffield Scientific School. At the Hopkins he faced his greatest challenge: the creation of a climate of public understanding and acceptance for research-oriented graduate study and for the Fellowships program which would support it.

As was indicated in the previous chapter, the first public announcement of the Fellowships program was made in January of 1876, less than nine months before the University's doors were first to open, and only five months before the first Fellowships winners were to be announced.

Gilman's first objective was to gain as wide an audience as he could for the new institution and its Fellowships plan. He was probably quite pleased, but not surprised as he indicated he was, with the article on the Hopkins that appeared in the January 28, 1876 issue of The Nation. The editor spoke approvingly of Gilman's plans for a graduate-level institution. He made reference in the article to a concern of a number of well-educated, patriotic Americans about the necessity of having to send bright young Americans abroad for graduate study:
American graduates who would like to pursue certain lines of culture to their latest limits are compelled every year to go abroad or content themselves with the necessarily imperfect aid which they can get in the post-graduate courses from over-worked and half-paid professors who are doing the duty of schoolmasters.  

Gilman indicated that the article was based on a lengthy interview he had had with the Hopkins trustees. He said that while there was no official memorandum of his remarks, "the summary of what I said was communicated to my friend, Mr. Godkin, editor of The Nation."  

The article gave the Hopkins nation-wide coverage, for The Nation was a respected and widely read national journal of opinion. Not surprisingly, the article drew immediate response from newspaper editorial writers, particularly from those in the Baltimore area.  

The new University had been a topic of discussion in Baltimore and in the Maryland region since Johns Hopkins had announced his plans for it in 1867. Hopkins had been Baltimore's wealthiest citizen. What he did made news. He was well known, despite his shunning of publicity. He had said virtually nothing about the new University during his  

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2 Franklin, Life of Gilman, p. 188.
3 Ibid.
lifetime, and the Hopkins trustees, prior to Gilman's coming, had done likewise.

Gilman was of a different stamp. He was aware of the benefits that favorable news coverage would have on the new institution and its Fellowships program, based on his previous experience at Sheffield and at the University of California. Further, Gilman was skilled in presenting educational ideas in a straightforward, easy-to-understand way that attracted support. He was comfortable in working with people of widely varying backgrounds, including members of the news media of his day. Evidence of his skills were reflected in a review of his First Annual Report, which appeared in a Baltimore newspaper:

President Gilman has brought to the work of our great seat of learning a large experience, enriched by recent travels and examination of the leading universities in this country and of Europe, and it shows a sound judgement and breadth of view and a freedom from mere bookishness that are very encouraging.4

Later in the same article the editorial writer touched on a key concept that Gilman had mentioned in the First Annual Report: the necessity of reporting regularly to the public on the programs and the progress of the University. That a

4 Baltimore Gazette, 17 January 1876.
statement advocating the public sharing of information about the Hopkins would appeal to a newspaperman is not surprising. What is surprising is that a university president would take his case to the public. This was far from being the general practice in American higher education at the time.

Elitism was no doubt a factor. Educational historians have often stated that the first six decades of the 19th Century saw a growing separation of America's colleges from the main stream of American life. The inference has been that the leaders of the colleges; the presidents, boards of trustees and religious boards, as well as influential alumni, were unable to return the colleges to the main stream of American life. It is the author's premise that many of those educational leaders did indeed know what had to be done to popularize their institutions, but simply refused to do so. They had before them the example of the flourishing academies, many of which had made provision for practical, as well as for classical courses of study.

The spirit of elitism that pervaded many American colleges was reflected in Noah Porter's inaugural address at Yale in 1871. Stung by the criticisms of classically-oriented Yale, Porter responded disdainfully that never before had so many involved themselves in discussing the faults of higher
education. He said that institutions of higher education, such as Yale, were "not merely agitated by reforms; they are rather convulsed by revolution." He added that one reason for the high level of agitation was the "unsettled... minds of many who control public opinion."

Gilman had no such contempt for those who influenced public opinion. As was indicated in Chapter II, Gilman had led a group of Sheffield professors into the countryside to promote Sheffield and its scholarships program. In recalling the expedition, Gilman had commented that the local newspapers had been faithful in reporting the purpose of their journey.

Ernest Sihler, one of the first group of Hopkins Fellows, commented in his memoirs that in the beginning Gilman had availed himself of every possible avenue of publicity, not only in America, but in Europe as well:

... Gilman knew Europe well, both political and academic Europe, from Thames and Seine to Spree, Elster, Danube and Neva.6

Gilman had spent most of the summer and fall of 1875

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5 Noah Porter, "Inaugural Address," p. 27, as quoted in Veysey, Emergence of the American University, p. 1.

in Europe, where he had been warmly received by members of the scientific elite. He had met with Herbert Spencer and Thomas Huxley while in London. He had persuaded Huxley, a world-renowned Darwinist, to give the opening address at the Hopkins.

Gilman apparently had made a strong case for the Hopkins' Fellowships plan while in England. Lyon Playfair, the Member of Parliament for the University of Edinburgh district, during a debate on the Fellowships system at Oxford, commented most favorably on the Hopkins Fellowships program. A review of the discussion in parliament, together with general information about the Hopkins Fellowships, appeared in the London Times.

Word about the Fellowships had also reached some of the more remote regions of this country. Sihler, a graduate of Lutheran Seminary in St. Louis who had done graduate work in classical studies at Berlin and Leipzig, had been unable to find a college teaching position following his return from Europe. He had reluctantly accepted a job teaching German, Latin and Greek in Kendallville, Indiana for six hundred dollars a year when he was awarded a Hopkins Fellowship.

London Times, 12 April 1876.
Sihler recalled that the local newspaper "made prompt record of the academic distinction coming to the Hoosier town from the new and much discussed foundation in Baltimore."  

Thomas Craig, another member of the first group of Hopkins Fellows, learned of the Hopkins Fellowships through an article in the New York Tribune. He wrote to Gilman about the possibilities of obtaining a Fellowship, and within a week had come to Baltimore for an interview.

Gilman saw to it that magazine writers were well supplied with information about the Hopkins Fellowships. Charles Thwing, in an article on fellowships and scholarships that appeared in Scribners Monthly, mentioned that the Hopkins "offered the most generous encouragement for the pursuit of the higher learning in America." He went on to say, however, that the Hopkins Fellowships program, like the University itself, was only two years old, and for that reason the results of the Hopkins effort were still uncertain. Gilman no doubt would not have wanted to leave it at that. Fortunately for the image of the Hopkins, Thwing then quoted him as follows:

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8 Sihler, From Maumee to Thames and Tiber, p. 91.
9 Craig to Gilman, 23 March 1876.
But President Gilman writes, 'The scheme is working admirably, and if I could tell you just what each of the holders of fellowships is doing, it would I think, establish the wisdom of our foundations.'

Gilman was the only college president quoted in the article.

Gilman enlisted the aid of other college presidents in publicizing the Fellowships. Andrew White, his friend from boyhood, had shown particular interest in the development of the Fellowships program. In April of 1876 he wrote to Gilman to express his concern that undergraduates who would receive their degrees in May of that year would apparently not be eligible for the first series of Hopkins Fellowships, which were to be awarded in June.

Gilman reassured White that students expected to graduate in May of 1876 would indeed be eligible to receive Fellowships. Gilman commented that "a diploma is not essential: a liberal education is."

The following month White again wrote to Gilman, urging him to double the number of Fellowships, from ten to twenty. He said that if he were in Gilman's place, he would

11 White to Gilman, 8 April 1876.
12 Gilman to White, 10 April 1876.
prefer fifty advanced students to five hundred undergraduates. He commented that he had not realized how strong an appeal the Fellowships would have to ambitious graduate students. Unknown to White, the Hopkins trustees had already increased the number of awards from ten to twenty.

Charles Eliot wrote to Gilman to advise him that he had written a number of recommendations for Harvard men who were thinking of applying for Hopkins Fellowships. He invited Gilman to contact him for specific information on Harvard graduates who were being seriously considered for awards.

However, when it came down to actually identifying outstanding candidates, both White and Eliot were somewhat less cooperative than they had been. White did say that he would send Gilman the names of candidates "as we think will do credit to you and to ourselves." He added however that several of the top Cornell men were to be kept at home:

We have two or three 'Genuises' among our students, one of them a source of perpetual astonishment to every Professor and student in the Institution, who if rightly managed will, I think, astonish the country at large by as much as he now astonishes us. But we cannot give him to you this year.

13 White to Gilman, 16 May 1876.
14 Eliot to Gilman, 24 May 1876.
15 White to Gilman, 26 April 1876.
There was no indication of who the student was. One wonders to what degree he did eventually "astonish the country."

Eliot asked Gilman not to take more than one Harvard man, "considering the geographical position of the Johns Hopkins University." And then he went one step further:

... and I particularly request that you do not take any, unless you are satisfied from your point of view that it is best for you to do so. There is a request with regard to your fellowships after all, isn't there.16

Eliot had begun his letter to Gilman with the statement that he had no requests to make about the awarding of Hopkins Fellowships.

Gilman enlisted the aid of the first members of the new Hopkins faculty in publicizing the Fellowships and in seeking qualified applicants. One of the first professors to be hired was a widely known Greek scholar, Basil Gildersleeve. According to Walter Hines Page, one of the first Hopkins Fellows, Gildersleeve's reputation as a classicist "extended far beyond the borders of his own country." He was the author of a widely-used Latin grammar text, that Page commented facetiously had made Gildersleeve's name "a curse to millions of American boys and girls." Gildersleeve, or

16 Eliot to Gilman, 5 June 1876.
"Saint Basil of Baltimore" as he was nicknamed by his students, wrote to Gilman shortly after his appointment to the Hopkins faculty in December 1875 to endorse Gilman's plan to seek out the most qualified students from the first:

I do not see why we might not make a respectable beginning even though we might have to work with rather unpromising material. . . . By far the best plan would be the one you suggested. Pick out the best material that offers and organize that for university work. The rest must be ground through the college mill.\footnote{Franklin, Life of Gilman, p. 216.}

Gildersleeve did not intend to work with "unpromising material." He began a search for exceptional Classics students to come to the Hopkins as Fellows in his department. Professor Price, the man Gildersleeve had recommended as his replacement as chairman of the Department of Classics at the University of Virginia, suggested a former student of his, Walter Hines Page. Page was skilled in translating Greek poems into English, and in translating Tennyson into Greek. It was the beauty of these translations which enabled Page\footnote{Burton J. Hendrick, The Training of An American: The Earlier Life and Letters of Walter Hines Page (Cambridge: Houghton Mifflin Company, 1928), p. 78.} to receive a Fellowship.

In summary, Gilman sought to enlist the support of the various media resources of his day, along with a number
of prominent educators in this country and abroad, in spreading the word about the Hopkins and its Fellowships program. As will be shown in the following section, Gilman also played a key role in the attraction and selection of the first Hopkins Fellows.

Gilman and the First Hopkins Fellows

The early Hopkins was a small institution. The University opened in the fall of 1876 with six professors on the staff. During the first year, eighty-nine students attended the Hopkins, of whom twenty were Fellows. For a time the administrative staff consisted of one person: Gilman himself. Fortunately for the Hopkins, Gilman was an able administrator, and a prolific correspondent. Copies of several hundred of his letters, written by hand during the opening year of the University, have been preserved. They help to reveal the depth of Gilman's involvement in the shaping of the University in general, and of the Fellowships program in particular.

Early in June of 1876 Gilman wrote to Eliot that the applications of eligible Fellowships candidates had been reviewed by specialists in the ten study areas, and that their reports had gone to the Executive Committee of the Board of Trustees. He went on to say that the recommendations
would be forwarded to the full Board the following week, presumably for a final decision.

There is evidence that Gilman played a direct role in the selection of the Fellows. On March 20, 1876 he wrote to Fellowships Applicant D. McGregor Means, in Andover, Massachusetts, as follows:

Dear Sir:

Your favor of the 18th instant has reached me this morning. I should be very glad to talk to you on the whole matter of Fellowships, but we are so far apart that I am afraid that it will not be possible. I should like very much to have you on one of these foundations, because I think it would be a good stepping stone to something else; but I cannot advise you in respect to abandoning other chances of preferment. . . .

While Gilman did not actually offer Means a Fellowship, there is no doubt how he felt about the matter. Gilman's letter was written several months before the trustees reviewed the recommendations of the specialists, and indeed even before the bulk of the Fellowships applications had been received. Means did receive a Fellowship.

Gilman's role in the selection process is even more apparent in his letter of April 11, 1876 to George Halsted

19 Gilman to Eliot, 3 June 1876.
20 Gilman to D. McGregor Means, 20 March 1876.
of New York:

... I cannot be going too far when I say that you are one of the young men whom we desire to call here. The technical rules will not allow me to say that you have a Fellowship until after June 1; but I feel warranted in encouraging you to expect some such post.²¹

Gilman was responding to an enthusiastic letter from Halsted, written the previous day in New York:

I have read today for the first time, with intense interest and excitement, your two circulars and Inaugural Address. I can scarce credit my senses or believe the glad tidings for America. I feel such an overmastering anxiety to be a partaker in your rich feast of learning that I cannot wait a single day, but would this very instant lay before you my humble petition.²²

Gilman was by nature a very reserved man. Evidence of his reserve, which his biographer said sometimes appeared to others as a lack of feeling, was apparent in much of his correspondence. There were two notable exceptions: his letters to his sisters and daughters, and his correspondence with the Fellowships applicants.

Gilman's enthusiasm about Halsted was understandable. Halsted had attended a private school in Newark, New Jersey, where he "very early fell in love with Algebra." He went on to the Newark (Public) High School, which he entered at the

²¹ Gilman to Halsted, 11 April 1876.
²² Halsted to Gilman, 10 April 1876.
sophomore level. He went on to Princeton, to continue his studies in mathematics. In his letter of April 10 to Gilman, Halsted offered an interesting commentary on American textbooks in mathematics:

I next entered Princeton College and found my love for mathematics had so grown and developed that I devoured with great eagerness everything on the subject which fell my way. This naturally brought me very soon to the end of all the American textbooks... Halsted commented that he then turned to the mathematics texts developed at Cambridge and Dublin.

Students at Princeton were required to take three examinations in mathematics in each of their four years. In addition there was an examination that covered all of the mathematics taken in the first two years, and a final examination that covered all four years. In a class ranging in size from seventy-five to one hundred men, Halsted placed first in all fourteen examinations. In addition he also placed first in all his examinations in logic, metaphysics, physiology, civil government, psychology, crystalography, oratory and physics. He was elected editor of the college magazine. He also won three gold medals (for what he did not say). Halsted was awarded the Princeton Mathematics

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23 Ibid.
Fellowship, worth $600, and a $200 prize in an Intercollegiate Mathematics Contest. Not surprisingly, Halsted was awarded a Hopkins Fellowship.

That Gilman was instrumental in the selection of the first group of Hopkins Fellows was apparent. What was also soon apparent was the exceptional caliber of Gilman's Fellows. Their achievements have been well documented. A total of twenty-four Fellowships were granted the first year. Two of the original twenty awardees, William Keith Brooks and Harmon N. Morse, were promoted to the rank of teaching associates at the Hopkins before they took up their awards. Brooks received an A.B. degree from Williams in 1870 and a Ph.D. from Harvard in 1874. His field of study was natural history. He spent his life at the Hopkins. He served as Director of the Hopkins Biological Laboratory. He became well known for his research on the value, both scientific and economic, of the oyster. Morse received an A.B. degree from Amherst in 1873, and a Ph.D. in chemistry from the University of Göttingen in 1875. He too spent his entire professional career at the Hopkins, as Professor of Inorganic and Analytical Chemistry.

A third Fellow, P. Porter Poinier, a graduate of

French, A History of Hopkins, p. 42.
Stevens Institute of Technology, died before he could take up his award. A fourth, D. McGregor Means, resigned his award in February of 1877. He had received his B.A. degree from Yale in 1868. His field of study was political science. Means served as Professor of Economics at Middlebury College from 1877 until 1890. He then took up the study of law. He was the author of books on taxation and politics. Means' Fellowship was given to Lyman Beecher Hall.

The twenty-one Fellows who took up their awards that first year at the Hopkins were, in Hawkins' words, "a more remarkable group of college graduates than had ever before been gathered for study anywhere in America." For this a great deal of the credit must go to Gilman.

The first Fellows were:

1. **Henry C. Adams.** Adams, who received his A.B. degree from Iowa College in 1874, received a Ph.D. from the Hopkins in political science. He was appointed a Professor of Political Economy and Finance at the University of Michigan.

2. **Herbert Baxter Adams.** Adams was awarded an A.B.

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25 Ibid., p. 42.
degree from Amherst in 1872, and a Ph.D. in history from the University of Heidelberg in 1876. He spent the rest of his life at the Hopkins, as a Professor of History. He was instrumental in the creation of the American Historical Association.

(3) Samuel F. Clark. Clark, who had not earned an undergraduate degree, went on to earn a Ph.D. from the Hopkins in biology. He became a Professor of Natural History at Williams College.

(4) Thomas Craig. Craig received a C.E. degree from Lafayette, and a Ph.D. in mathematics from the Hopkins. He spent his professional career at the Hopkins as a Professor of Mathematics. He served as editor of the American Journal of Mathematics after its founder, James Sylvester, left the Hopkins to teach at Oxford.

(5) Joshua Gore. Gore received a C.E. degree from the University of Virginia in 1875. His major field of study was mathematics. He served as Professor of Natural Philosophy at the University of North Carolina from 1882 until 1908.

(6) Lyman Beecher Hall. Hall received his A.B. degree from Amherst in 1872, and a Ph.D. in chemistry from Göttingen in 1875. As was indicated previously, he replaced
D. McGregor Means, who resigned his Fellowship award in February of 1877. Hall served as Professor of Chemistry and Physics at Haverford College.

(7) George B. Halsted. As was indicated previously, Halsted received an A.B. degree from Princeton. He was awarded a Ph.D. degree from the Hopkins in mathematics. He served as Professor of Mathematics at the University of Texas from 1884 until 1903.

(8) Edward Hart. Hart received an S.B. degree from Lafayette College in 1874, and a Ph.D. in chemistry from the Hopkins in 1878. He served as Professor of Chemistry at Lafayette from 1882 until 1924. The author’s father studied under Professor Hart at Lafayette in the years just prior to World War I.

(9) Daniel Webster Hering. Hering received a Ph.B. degree from Sheffield Scientific School at Yale in 1872. His major field of study at the Hopkins was engineering. He served as Professor of Physics at New York University from 1885 until 1916.

(10) Malvern W. Iles. Iles received a Ph.B. degree from Columbia in 1875, and a Ph.D. degree from the Hopkins in chemistry in 1878. He worked as a chemist and assayist for several mining companies.
(11) William W. Jacques. Jacques received an S.B. degree from the Massachusetts Institute of Technology in 1876, and a Ph.D. in physics from the Hopkins in 1878. He later served as a Lecturer in Physics at M.I.T.

(12) Charles R. Lanman. Lanman received an A.B. degree from Yale in 1871, and a Ph.D. in philology from the University of Leipzig in 1875. Lanman left the Hopkins after three years to begin a long and distinguished career as a Professor of Sanskrit at Harvard.

(13) D. McGregor Means. Means received his A.B. from Yale in 1868. As was indicated previously, he gave up his award in February of 1877, and was replaced by Lyman Beecher Hall.

(14) Walter Hines Page. Page received his undergraduate degree from Randolph-Macon College in 1875. His major field of study was philology (Greek). Page left the Hopkins before completing his studies. He later served as an editor for Forum, Atlantic Monthly, and World's Work. He was the American Ambassador to Great Britain from 1913 to 1918.

(15) Erasmus Darwin Preston. Preston received a B.C.E. degree from Cornell in 1876. His major field of study was engineering. His career was spent with U.S. Coast and Geodetic Survey, for which he was Editor of Publications.
until his death in 1906.

(16) **Henry J. Rice.** Rice received his S.B. degree from Cornell in 1876. His major field of study was natural history (biology). He later worked for the Maryland Fish Commission and the U.S. Fish Commission.

(17) **Josiah Royce.** Royce received his A.B. degree from the University of California in 1875, and his Ph.D. in philosophy from the Hopkins in 1878. Royce joined the Harvard faculty in 1882 and served as Professor of History and Philosophy from 1892 until his death in 1916. He was considered to be a leader of philosophic thought in America.

(18) **A. Duncan Savage.** Savage received his B.A. degree in literature from the University of Virginia in 1870. His Fellowship was for study in philology (Greek). He became an expert in the study of ancient languages, and was employed by the Metropolitan Museum of Art.

(19) **Ernest Sihler.** As was indicated previously, Sihler received his undergraduate training at Concordia Lutheran Seminary in St. Louis. His Fellowship was awarded in philology (Greek). He received a Ph.D. from the Hopkins and served as a Professor of Latin at New York University from 1892 to 1923.

(20) **Frederick B. Van Vorst.** Van Vorst received his
A.B. degree from Princeton in 1875. His Fellowship at the Hopkins was awarded in ethics and metaphysics. He went on to practice law in New York.

(21) John H. Wheeler. Wheeler received his A.B. degree from Harvard in 1874. His Hopkins Fellowship was awarded for study in philology (Greek). He received his Ph.D. from the Hopkins, and went on to the University of Virginia, where he served as Professor of Greek until his death in 1887.

The degree to which the Hopkins Fellowships had become known in less than a half-year is reflected in the geographical distribution of the first group of Fellows. Five came from Massachusetts; three each from New York and Pennsylvania; two from Iowa; and one each from California, Connecticut, Illinois, Indiana, Maryland, Mississippi, North Carolina, and Virginia.

It should be noted that only three of the first twenty-one Fellowships awarded went to candidates from Maryland, Virginia, and North Carolina, the states favored by Johns Hopkins. It seems likely that the availability of the Hopkins Scholarships to candidates from those three

26 French, A History of ... Johns Hopkins, pp. 43-44.
states made it possible to award Hopkins Fellowships on a national, rather than on a more restricted, regional basis.

The first twenty-one Fellowships recipients came from thirteen colleges: three from Yale; two each from Amherst, Cornell, Lafayette, Princeton, and the University of Virginia; and one each from the University of California, Columbia, Concordia Seminary, Harvard, Iowa College, M.I.T., and Randolph-Macon. In addition, one of the first Fellows, Samuel Clark, did not have an undergraduate degree.

The Hopkins trustees had established ten study areas for the Fellowships winners. The first twenty-one awards were granted as follows: five in philology; three each in chemistry and mathematics; two each in engineering, natural history, and political science; and one each in ethics, history, physics, and literature.

There were no members of the original Hopkins faculty in engineering, philosophy, or political science. Hawkins surmised that Fellowships were awarded in these areas in the unrealized hope that the faculty would quickly be expanded, in faith in the Fellows' ability to study independently, and perhaps most important of all, through the use of visiting lecturers. A description of the innovative visiting lecturers. A description of the innovative visiting

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27 Hawkins, Pioneer, p. 82.
lecturers plan, which brought a number of prominent educators to the Hopkins, is described in Chapter II.

The high caliber of the first Fellows is reflected in their achievements. In summary, fourteen of the original twenty-one remained in higher education, in professorial posts in a variety of institutions. Three others spent their careers in government service. Two were lawyers, and another was an assayist for mining companies. One became a nationally-known editorial writer and later served as Ambassador to Great Britain.

It was remarkable that Gilman was able to attract a group of men of such potential to a new and untried school. While it is true that no other American institution was competing for graduate students in the way the Hopkins was, it is also true that the Hopkins was a school with no previous reputation, and a faculty that was only then being recruited and hired. The Hopkins "campus" consisted of two modest, made-over buildings located in the downtown area of a city known more for its skills in commerce that for its educational and cultural opportunities.

What then made the new institution so attractive to this talented group of ambitious young scholars? Part of the answer can be found in the stimulating climate that Gilman
was able to create and then promote at the new University in Baltimore.

Good examples of Gilman's climate-creating abilities can be found in his correspondence with the first Fellowships applicants. In a letter written in April of 1876, Gilman sought to reassure an obviously nervous Fellowships applicant:

You should not feel at all 'hopeless' about our Fellowships. From all you say of yourself, I should judge that you are one of the men we are in search of. Certainly none has shown interest in the Physics Fellowship with anything like your promise.

Gilman went on to suggest that the applicant, Peter Poinier, direct his attention to the Physics Fellowship rather than toward one in mathematics, "As we have an extraordinary candidate for the Mathematical Fellowship." In closing, Gilman said that he hoped to hear from the young man again soon. Poinier was subsequently awarded a Fellowship in physics. He died before he could take up his award.

In his letter to Poinier, Gilman also sought to emphasize the strength of the Hopkins faculty-to-be. He indicated to Poinier that while there was only one physics professor at that time, there was a possibility that additional staff might be hired shortly. He went on to say that the

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Gilman to Peter Poinier, 8 April 1876.
physics professor, Henry Rowland, was currently in Europe, buying the latest equipment for the Hopkins' physics laboratory. Rowland, though still a young man, had achieved considerable success in his own field. Gilman wanted to make sure that Poinier knew about it:

You can see his scientific character, by reference to late numbers of the American Journal of Science...; or may enquire of Professor W. Gibbs, or Professor J. Trowbridge, or Professor Pickering.29

Gilman used a similar approach in his correspondence with George Halsted. In Halsted's first letter to Gilman, he had mentioned that it had been his wish to study in Europe under Arthur Cayley and J. J. Sylvester. In his response, Gilman told Halsted that Sylvester would be coming to the Hopkins to teach. Halsted's response speaks for itself:

I cannot adequately express the enthusiastic joy with which I read your letter to me. It seems to place within my reach the very object of my long-cherished desires. There are two men alive with either of whom I would rather study than with all the world beside. These two men are Arthur Cayley and J. J. Sylvester. Now when by your letter I see my constant hope realized—my constant aim attained, you can guess how grateful I must be to Johns Hopkins and to yourself.30

Sylvester was clearly the best-known member of the

29 Ibid.
30 Halsted to Gilman, 1 May 1876.
original Hopkins faculty. In a letter to Thomas Craig, written three months before the first Fellowships were awarded, Gilman sought to insure that the promising young mathematician would not decide to go elsewhere:

Have you heard that our Professor of Mathematics is to be Professor J. J. Sylvester, of London, one of the most famous mathematicians of his times. We expect him at the beginning of our work, and with your proclivities, I should think you would be fortunate to come under his guidance.31

As the applications began to pour in during the spring of 1876, Gilman sought to redirect talented applicants to fields of study where there was less competition. In May of 1876 Gilman wrote to Joshua Gore to say that while Sylvester had found his work to be very good, it did not measure up to the exceptional performance of another candidate in the field of mathematics. It is apparent that Gilman did not want to lose someone of Gore's ability:

We have been very much interested in you from what we have seen and heard, and would be glad to extend to you any advantages in our power. If we could secure for you a Scholarship and $100 in addition would that enable you to come here to prosecute your studies? Baltimore is a large city and there might be many opportunities for making money in your line of work.32

31 Gilman to Thomas Craig, 24 March 1876.
32 Gilman to Joshua Gore, 20 May 1876.
Gore wrote back to inquire about the possibility of seeking a Fellowship in engineering. Gilman responded that while there were strong candidates in engineering, he would try and do something for Gore. Gilman urged him not to become discouraged. He was awarded a Fellowship the following month.

At its inception the Hopkins did not have a library. This became a priority matter for Gilman, who had fought diligently, if not successfully, to improve the physical arrangements and the collections of the Yale library during his stint as librarian there. One of his ideas was to involve the new Fellows in the process. In his letter announcing their awards, Gilman asked the Fellows to provide him with detailed information about their proposed studies, in order that appropriate books might be ordered for them.

Gilman followed up on this idea in his letter acknowledging McGregor Means acceptance of his Fellowship:

I am very glad you are to be with us next year, and so far as it is possible for us to make our library available for your purposes, we shall be glad to do so. We are buying now the nucleus of a reference library, and any titles of books which you may mention as important for your studies, will likely receive immediate consideration, and is more than likely they will be purchased.

33 Gilman to Joshua Gore, 7 June 1876.
34 Gilman to the Hopkins Fellows, 5 June 1876.
35 Gilman to McGregor Means, 21 June 1876.
From their first official contact as Fellows the new awardees were made aware of their importance to the University. While seeking the Fellows' suggestions on stocking the library was most certainly an expedient measure, it was more than that. Gilman was in the process of creating a climate for the new institution that was to involve the Fellows in unique and satisfying ways. It is that aspect of Gilman's work that will be explored in the following chapter.
CHAPTER VI

THE ROLE OF THE FELLOWS AT GILMAN'S HOPKINS

As was indicated in the previous chapter, Gilman played a key role in attracting the first group of Fellows to the Hopkins. He was also instrumental in developing a role for the Fellows within the Hopkins that was unique to higher education. It is the purpose of this chapter to examine that role and Gilman's relationship to it.

New Dimensions

At the time of the opening of the Hopkins in 1876, the pathway to a career in higher education in America was an uncertain one. Students who wished to pursue an advanced degree, and who had sufficient financial resources to do so, often went to Germany. Students interested in the newly-emerging sciences found the German universities particularly suited to their needs, with well qualified instructors and the latest in laboratory facilities and research libraries. American students were hopeful that an advanced degree from one of the increasingly prestigious German universities would help to prepare the way for an attractive teaching
position when they returned home.

However, study abroad was no guarantee of employment upon one's return to America. That Gilman was aware of the uncertainties of the employment situation is reflected in a letter that he wrote to his sister Maria during his stay in Europe following his graduation from Yale in 1852:

'Now,' they say, 'master French and German to speak and write both,' (in itself a ten years' work!) 'attend several courses in the University,' 'visit and study every country in Europe,' 'make friends in every city with whom you can hereafter correspond,' 'see in person all educational establishments, prisons, asylums and the like,' 'live abroad five years, come home with a Degree of Doctor of Philosophy unchanged in American sympathies and New England habits, and some gap will open for you to fill!' 1

As it turned out, Gilman had no difficulty in obtaining a position at Yale upon his return from Europe. Others were not so fortunate. Ernest Sihler went to Europe after completing his studies at a Lutheran Seminary. He studied philology at the Universities of Berlin and Leipzig, until his borrowed funds ran out. Following his return, Sihler was unable to find a college teaching post. Reluctantly he accepted a school teacher's position in Kendallville, Indiana. His salary for the nine-month school year was six hundred

1 Franklin, Life of Gilman, pp. 30-31.
dollars, only one hundred dollars more than a Hopkins Fellowship. The promising classical scholar found himself responsible to the towns' chief banker, who was also the president of the school board. According to Sihler, his task was to teach unwilling secondary school students German, Latin and Greek. In his biography Sihler summed up his feelings about his job in Kendallville rather tersely: "Did the reader ever observe a horse on a treadmill, or a squirrel in a revolving cage?"

Charles Lanman was worried about a treadmill of a slightly different sort. After completing two years of graduate work in classical studies at Yale in 1873, for which he received one of the first American Ph.D. degrees, he went on to Germany for three years of additional graduate study. His options in 1876, after five years of graduate work, were to teach elementary level courses at Yale, or to accept a Hopkins Fellowship. He explained his dilemma this way:

... the alternative for the present lies between taking a place at a good salary and putting my nose to the grind-stone and having to teach so many hours a week elementary branches, that I shall have no time nor strength for original scientific investigation, -- this on the one hand, -- and, on the other hand, having a very meagre salary with an opportunity of teaching my

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2 Sihler, From Maumee to Thames and Tiber, p. 90.
own science, and of making my own studies. If I accept the first, it is almost equivalent to throwing away all the advantages that I have won in Europe for the last year or two; for I should probably lose all the headway I have gained and get 'behind the times' very soon. On the other hand, -- what does this 'fellowship' mean? Plainly $500. is a little too much to die upon, and not enough to live upon.3

It is not surprising that Lanman, after completing five years of graduate work, would look upon a Hopkins Fellowship as a poorly paid professional position, rather than as a liberal support for graduate study.

The irony of the situation was that the opportunities for academic hiring and promotion should have been getting decidedly better at that time. A number of America's best known college professors were approaching retirement age, and their replacements had not yet been found. President Eliot outlined the problem in a letter to Theodore Lyman in 1873:

...To illustrate the failure of the system of the last 40 years to breed scholars, let us take the most unpleasant fact which I know for those who have the future of this University to care for -- Asa Gray, Benjamin Pierce, Jeffries Wyman and Louis Agassiz are all going off the stage and their places cannot be filled with Harvard men, or any other Americans I am acquainted with. This generation cannot match them. These men have not trained successors.4

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3 Lanman to Abby Lanman, 21 May 1876, as quoted in the typescript version of Hawkins, Pioneer, p. 350. The typescript copy, which is considerably longer than the published edition, is on file in the Lanier Room of the Hopkins Library.

As James correctly points out, Gilman did not find a zoologist like Agassiz, a botanist like Gray, nor a comparative anatomy specialist like Wyman. He did however find outstanding young scholars in Henry Rowland (physics), Henry Martin (biology), and in Ira Remsen (chemistry). The reality of the matter was that the few well known scholars of the time had achieved distinction in spite of their respective institutions, rather than because of them. Their institutions did not reward them financially for their exceptional scholarship, nor were their teaching loads reduced in order that they might have additional time to pursue advanced work in their specialties. It was said that the elder Benjamin Silliman had a most dynamic temperament. No doubt he needed it in order to survive for more than half a century as a chemist at classically oriented Yale.

Gilman did not believe the situation to be as bleak as did Eliot. That is not to say that he had no difficulty in attracting a distinguished faculty to his new and untried institution. He made repeated overtures to well known professors at both Yale and Harvard, but to no avail. One of those he sought, William Watson Goodwin of Harvard, commented in a letter to Gilman that he and his family "have not the courage to pull up all our roots here and transport ourselves to a new soil."\(^5\)

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\(^5\) Hawkins, Pioneer, p. 50.
In his inaugural address at the Hopkins, Gilman credited a physicist friend with the answer to the problem:

'Your difficulty,' he says, 'applies only to old men who are great; these you can rarely move; but the young men of genius, talent and promise, you can draw' ... there is our strength, and a noble company they are! We shall not ask from what college, or what State, or what Church they come; but what do they know, and what can they do, and what do they want to find out ... 6

Gilman then touched on what was to be a basic premise of the Hopkins, the training of the skilled young scholars who would eventually become the academic luminaries that Eliot sought in vain:

We shall hope to secure a strong staff of young men, appointing them because they have twenty years before them; selecting them on evidence of their ability; increasing constantly their emoluments, and promoting them because of their merit to successive posts, as scholars, fellows, assistants, adjuncts, professors and university professors. 7

The Hopkins then was to devote itself to a new function in American higher education: the development of research-oriented college instructors. For men of talent and promise the Hopkins would provide opportunities for advanced training, whether they were already teachers, or promising students. In the process they would have a chance to showcase their talents,

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6 Gilman, University Problems, p. 28.
7 Ibid.
and so have a better chance to find satisfying career opportunities in higher education. And from this talented group the Hopkins would of course have first opportunity to select its permanent teaching staff.

As was indicated in Chapter V, Gilman made clear to promising Fellowships applicants the opportunities that awaited them at the new Hopkins. He reiterated this theme at a gathering of the new students and the faculty at the time of the University's opening:

Young gentlemen, we give you a hearty welcome here. The President and the Trustees of the Johns Hopkins University are establishing here a temple of learning and upon its altar we shall light the sacred flame. We conceive it to be our duty, as it is our pleasure, to assist you with all facilities, counsel and friendly aid. We conceive it to be the duty of each Fellow to light his own torch at the altar flame and to maintain it burning as brightly as possible as long as he shall live.8

As Gilman rather melodramatically suggested, the Hopkins was indeed ready to assist the new Fellows in a variety of ways. The situation was a far different one than Gilman himself had faced as an unwanted resident graduate at Yale and Harvard less than twenty-five years before.

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In Partnership

In an article that appeared in Henry Barnard's *Journal of Education* in 1856, Gilman described the operation of a typical European School of Science. Chemistry students at the School of Arts and Manufacturers in Paris were given the opportunity to perform chemical experiments in a well equipped laboratory under the direction of two professors. Unlike their American counterparts, students at the Paris school were not limited to listening in the lecture hall. Instead, they had the opportunity to perform experiments with their professors in the laboratory.

In this country students at Lawrence and Sheffield had the opportunity to participate in a similar type of science-oriented laboratory study, working in close cooperation with their instructors. The actual work done at both of the American scientific schools was of an undergraduate level, and was often of an elementary nature. This was necessary because of the varying levels of preparation of students entering the program.

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The establishment of the Hopkins Fellowships program added a new dimension to the laboratory learning process involving both teacher and student. The Hopkins Fellows were selected on the basis of demonstrated proficiency in their area of specialization. The Fellows were to be advanced students with intellectual promise. Since American colleges generally did not require proof of advanced scholarship in order to teach, it seems likely that the Hopkins Fellows were probably better prepared academically than many of their contemporaries who were already teaching in the colleges. That being the case, it is not surprising that the Hopkins Fellows enjoyed stature well above that of undergraduate students. In a real sense, the Hopkins Fellows were in partnership with their professors. In Gilman's words:

Here are masters and pupils, not two bodies, but one body, a union for the purpose of acquiring and advancing knowledge. In this society there are different grades or ranks, each has its rights and each has its duties, but there are no diversities of interest, no divergent efforts.10

One of the first Fellows, William White Jacques, referred to his "triple duties of student, fellow and instructor." He said that he had been "studying German, 

reading up for a research and guiding students in the
elements of phys [ical] manip [ulation]." Hawkins points out
that Jacques and another Fellow, Thomas Craig, did so much
additional work during their first year that the trustees
11 gave each of them an extra $250.

It may be recalled that one of the conditions of a
Hopkins Fellowship was that the recipient perform some type
of service to the institution. Several of the Fellows
assisted their major professors in the laboratories, while
others, like Jacques and Craig, taught undergraduates.

Sihler commented that the stated obligation to the
university was rather freely interpreted:

... we were indeed to be 'learners,' but as independ­
ently as possible; we were as soon as possible to deter­
mine and pursue our own tasks; we were even to be given
opportunity to 'lecture' or to find pupils of our own.

Sihler gave three lecture on "Attic Life and Society." In
addition he offered a course in Greek to two undergraduate
12 students from Kentucky.

12 Sihler, From Maumee to Thames and Tiber, pp. 99, 103.
It is likely that the two students from Kentucky were awarded
the last two Hopkins Scholarships, which had not been claimed.
Those awards were intended for students from Maryland, Virginia
and North Carolina.
The Hopkins Fellows and their professors pioneered the use in this country of the German seminar. The basic idea of the seminar was to train able students in the technique of research, under the guidance of a skilled researcher. The primary objective was the training of skilled investigators. An outcome was the creation of new knowledge.

The process of training investigators successfully depended upon several factors. It was necessary that the students have a fundamental knowledge of the subject, in order to proceed on to advanced levels of work. It was also necessary that the students have the capacity to profit from such work. The rigorous procedures used to select the Fellows helped to assure that both qualifications were met at the Hopkins. A third factor centered on the qualifications of the instructor. If advanced students were to learn from their instructor, his competence was of great importance.

Sihler and another of the first Fellows, Walter Hines Page, have included in their biographies their recollections of their first seminar experiences at the Hopkins. The instructor was Basil Lanneau Gildersleeve, who according to Burton Hendrick, Page's biographer, had a reputation as a classicist "that extended far beyond the borders of his country." Page pictured Gildersleeve's seminar as follows:
As he sat at the head of a pine table, with his five disciples ranged along the sides, he certainly looked the part. A brilliancy and sparkle in his eye, and an almost constant smile in the corner of his lips, reflecting at times quiet mockery, at others sympathy and good humor, portrayed a zest for life, and an appreciation of its many-sided qualities, that came from Hellas itself. . . . His large and bulky figure, his great head, with its lofty front, its heavy shock of dark hair, its craggy eyebrows, its fine-spun beard, might have tempted Phidias to use him for a model for Zeus -- and indeed his students, with the unerring undergraduate instinct for nicknames, had long since selected the god of the sky for Gildersleeve. . . . Like all good teachers . . . his technical instruction furnished merely an excuse for the exploitation of his own soul. 'There is no such thing as a dead language to a man who is alive,' he would say, and Greek syntax, Greek history, and Greek literature became, in the nearly two years Page spent under his benign sway, very vital things indeed.13

In keeping with the objectives of a seminar, each student was given an assignment upon which he was to research and report. Sihler had been given what he considered a special honor; Gildersleeve had appointed him secretary of the group. Sihler described his feeling for the seminar as follows:

We each of us felt a stimulus to put into every task, especially the self-chosen ones, the utmost devotion of which we were capable. I know this was certainly my experience, the more so as I had been appointed Secretary of the Seminar.14

14 Sihler, From Maumee to Thames and Tiber, p. 102.
Sihler's excitement and enthusiasm for the Hopkins was shared by a number of others. Josiah Royce, in an article written for *Scribner's Magazine* in 1891, recalled:

The beginning of the Johns Hopkins University was a dawn wherein 'twas bliss to be alive.' Freedom and wise counsel one enjoyed together. The air was full of noteworthy work done by the older men of the place, and of hopes that one might find a way to get a little working-power oneself... One longed to be a doer of the word, and not a hearer only, a creator of his own infinitesimal fraction of a product, bound in God's name to produce it when the time came.\(^{15}\)

Page was equally enthusiastic about the opportunities the Hopkins offered him. He commented that the new University "gives me absolutely everything that money can buy and learning can suggest." In return, all that was expected of him was 16 that he "work well."

In a real sense, the feeling of partnership that Fellows and faculty enjoyed in the early days of the Hopkins carried over to other segments of the University community as well. It included members of the trustees, who were regular participants in College affairs. And, most significantly, the feeling of partnership that had developed throughout the University was embodied in the president. Gilman was the


\(^{16}\) Hendrick, *The Training of an American*, p. 76.
central figure, the cohesive force for the entire institution. An excerpt from a letter he wrote to his family during this period gives some insight into the nature of his role:

One by one, the professors, associates and fellows have been assembling and I have heard their confidential stories of hope, and regret, and desires and aims, -- till I seem to myself to be a great repository of secrets, -- or rather of confidences.\(^\text{17}\)

Gilman seemed to be everywhere. On the day he wrote to his family, he was scheduled to meet separately with two of the Fellows, and three of the professors:

\[\ldots\] Charlie Lanman sits here now as I write, just after dinner, and interposes all sorts of comments on matters new and old. This evening, our young California friend Royce is to take tea with me. Professor Remsen went to Mr. Jones' with me this morning. After church I went to see Dr. Martin, who is laid up with a chill, and at breakfast Professor Sylvester opened his budget and unfolded it till nearly ten o'clock.\(^\text{18}\)

**The "Noble Young Men"**

From the first there was almost a mystique about the Fellows in the community beyond the University. To be sure, the Hopkins and its innovative objectives had been a topic of widespread interest in the Baltimore area from the time the city's wealthiest citizen had announced his plans for the

\(^{17}\) Franklin, *Life of Gilman*, pp. 412-413.  
\(^{18}\) Ibid., p. 413.
Gilman had been skillful in creating a favorable climate for the new institution in the Baltimore community. That factor, coupled with the favorable attention the institution had received nationally, did much to build a feeling of local pride in the new University. That pride soon became evident to the new Fellows:

Baltimore itself regarded this body [the Hopkins] with veneration; faculty and students became, in the city's eyes, almost a monastic colony, vowed to the single-minded search for truth.19

Legends soon grew up about the dedication of the new Fellows. Josiah Royce, the brilliant young scholar from California, who went on to a distinguished career as a professor of philosophy at Harvard, was the subject of a number of the stories. He was a rather ungainly individual, with ill-fitting clothes. It was rumored that he would give his first year's meditation to Time and his second year's to Space. Another of the Fellows was supposed to have kept an all-night vigil in his laboratory "like Don Quixote watching his armor." 20

There were numerous teas, receptions, dinners and dances given during the first year in honor of the new Fellows.

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19 Hendrick, The Training of an American, p. 73.
20 Ibid.
University. According to Page, the Fellows eagerly took part. To reciprocate, the University held a number of social gatherings in the assembly rooms of the school, to which the citizens of Baltimore came in great number. For the Fellows, many of whom came from small towns, it was an exciting time. According to Fellow Edward Hart:

We were noble young men dedicated to learning and poverty and were the fashion. We were invited everywhere. Most of us had not dress suits -- what to do? I said: 'I can't afford to buy one and I won't hire one; I think they want us, I want to go and I am going as I am! Many of us did so and were petted everywhere. I had the time of my life. . . .'

Hart found however that after several months of such festivities he had little time for study, and so cut back sharply on his social activities.

Page and Jacques decided that they would room together. They chose rooms in an old-fashioned mansion near the University that was run by a widow from Virginia. The widow, according to Jacques, seemed pleased to host the two "Fellers from the University." At dinner the first evening Page and Jacques were introduced to the widow's five attractive daughters. That evening the daughters gave a recital in the parlor. The next

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21 Edward Hart to Professor Reid, 21 May 1927. Included in the Johns Hopkins University Papers in the Lanier Room of the Hopkins Library.
day, after careful deliberation, the two decided that such a pleasant living climate would do little to advance their studies. In Jacques' words:

So we started out on another voyage of discovery, Page vowing that he would not settle in any house where there was a woman under three score and ten. This we presently found; and the two ancient maidens who occupied the house had the further merits, one of a most wrinkled and bilious visage and the other a nose and chin that nearly met. But they were as good as gold, and throughout the year we spent with them they made us and the many friends we soon gathered about us, more than comfortable.

Page and Jacques bought two old-fashioned Windsor arm chairs, to which they had a carpenter add rockers. The two sought to create a comfortable atmosphere in which to study:

"With our large study table placed in front of the cheerful fire and our new study chairs drawn up on either side, we were prepared for work."

The two Fellows' rooms became a gathering place for the first Hopkins Fellows. The discussions would last far into the night. The visitors would take all the available chairs, with the latecomers sitting on the floor:

There was always a pile of corncob pipes and a bundle of figwood stems on the mantel -- and we all used them. Sometimes Lanman would come and tell us about the researches he was making into the origin and history of some

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23 Ibid., p. 86.
obscure Sanskrit root. This was a bit dry, but Page would skilfully [sic] turn the discussion to the customs and manners of ancient peoples as revealed by their usages of this same word and the conversation instantly became alive. Sometimes Royce would bring and read to us a pile of manuscript written for his then proposed treatise on 'The Good and The Not Good.' This interested all of us and we mostly all had something to say.24

On Saturday night the twenty Fellows would usually meet, oftentimes in a second floor room of a small hotel near the university. There, over a pint of beer and a supply of cheese, crackers and tobacco, they would continue their endless discussions.

The professors gave lectures regularly in their special fields, which any of the other faculty members and Fellows could attend. Many welcomed the opportunity to do so. Hawkins has described the course offerings during that first year as a "crazy quilt curriculum." Courses began and ended at various times, at the discretion of the instructor. Courses were taught by the Hopkins' professors, visiting professors, and in some cases by the Fellows themselves. The instructor in one course might well be a student in the next. Classes often consisted of three, four or five members. Lanman for example recruited five students, including three Fellows, for

24 Ibid., p. 88.
25 Sihler, From Maumee to Thames and Tiber, p. 100.
a beginning course in Sanskrit. Attendance soon fell off, but he was usually able to count on two or three. Undaunted, he began a second effort with but two students.

Under an administrator less able than Gilman, the situation might have degenerated into chaos. As it was, according to the various accounts that have been kept of the period, it was a time of exhilarating intellectual sharing, a time when it "was bliss to be alive."

The Road to 1889

In 1876, the Hopkins Fellowships program was unique in American higher education. Yale had initiated a Ph.D. program in 1861. However, neither Yale nor Harvard nor any other American institution of higher education emphasized graduate studies as did the Hopkins. None offered nearly as many Fellowships to assist graduate students. The twenty Hopkins Fellowships first made available in 1876 had a cash value of $11,600, a large investment for a small, new university with but six professors. The twenty Fellowships represented more than a considerable cash outlay; they reflected a degree of

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26 The Lanman Diary, as quoted in Hawkins, Pioneer, p. 88.

27 Actually, twenty-one Fellows took up awards during the first year. D. McGregor Means resigned his award in February of 1877. His Fellowship was then given to Lyman Beecher Hall.
commitment to the concept of graduate education previously unknown in America.

Gilman acknowledged at the time the applications for the first Fellowships began to come in that the response to the program was far better than had been anticipated. In light of that response, and in view of the excellent qualifications of so many of the applicants, the trustees increased the number of Fellowships awards from ten to twenty. The value of those awards was $10,000, in cash, plus remission of tuition, which was $80 per student per year, for a total value of $11,600. Other awards that first year included twenty Hopkins Scholarships and five University Scholarships, with a combined value of $1,900. The total value of the Fellowships and Scholarships awards during the first year was $13,500. The instructional budget that same year for the Hopkins was $60,000. That meant that the outlay for Fellowships and Scholarships represented more than one-fifth of the total instructional budget, a considerable commitment indeed. It also meant that a major fluctuation in the University's income might be expected to have a direct bearing on those programs.

The story of the financial situation of the Hopkins from 1876 until 1889, the terminal date of this study, and indeed on into the early years of the 20th Century, was directly related to the economic health of the Baltimore and
Ohio Railroad. The bulk of Johns Hopkins bequest to establish the University was in Baltimore and Ohio common stock. According to Hopkins' will, the stock was not to be sold.

An omen of what was to come occurred in 1878, when the railroad issued the yearly dividend on its common stock, then eight per cent per year, in additional shares, rather than in cash. To raise funds urgently needed to operate the institution, the Hopkins trustees sold the dividend shares for cash. This action of the trustees greatly incensed John Work Garrett, the president of the railroad and a trustee of the University, and resulted in a strained relationship between the University and the railroad on which it so greatly depended that lasted into the 1890's. Funds that had been put away for a future building program helped to ease what was to be only the first of a series of financial crises that were, by 1889, to virtually cripple the University. The result in 1878 was that the University was unable to expand its modest instructional programs as had been hoped.

Educational historians have focused a great deal of attention on the size of the original Hopkins' bequest. To be sure, the $3.5 million given by Hopkins for the founding of the University was by far the largest benefaction to an American educational institution up to that time. However, the revenues actually available to the institution, when the
railroad paid its regular dividend, were only about $200,000 per year. Hawkins points out that by the fall of 1878, the cost of buying, renovating, equipping and maintaining the College's buildings had exceeded $220,000, more than a year's total income. The Hopkins' great wealth was mostly on paper.

It soon became apparent that good graduate students could be attracted to the Hopkins for less than an expensive Hopkins Fellowship. Accordingly, in 1879 Gilman and the Hopkins' professors contributed $500 for the establishment of two Graduate Scholarships of $250 each, to be awarded to graduates of the class of 1879. The trustees established a new series of awards, also called Graduate Scholarships, to begin with the 1880-81 academic year. These awards were to be for $250 annually, plus remission of tuition. The regular Hopkins Fellowships' plan was not affected. According to Hawkins, the purpose of the new program was to encourage promising graduate students to begin their graduate studies at their own expense, then to progress on to a Graduate Scholarship and finally to a full Hopkins Fellowship. It was a good way to continue to build a strong graduate program without sharply

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28 Hawkins, Pioneer, p. 66.
increasing the amount of financial assistance funds.

The fame of the Hopkins continued to grow during this period, even if the revenues did not. In his biography G. Stanley Hall recalled his delight at being asked to deliver a series of twelve lectures in psychology at the Hopkins in 1881. He commented that the Hopkins was at that time "the cynosure of all aspiring young professors throughout the country." Hall had heard that his lecture series might result in a regular appointment, and so he spent a full summer preparing for the twelve lectures. He described his situation as follows:

At the close of these lectures I was asked to teach a half year, after which, to my great delight, I was appointed full professor for five years with the salary of four thousand dollars, then very generous. Thus in 1882 ended what might be called my long apprenticeship of fourteen years since graduation, during much of which I had been very uncertain of my future. 30

Hall's "long apprenticeship" prior to going to the Hopkins highlights again the dilemma of talented young scholars of the period in their efforts to build careers in higher education. In Hall's case, the Hopkins helped to provide him with an upward academic pathway, one that eventually led to his

29 Ibid., p. 121.
In 1885 came the first major adjustment in the Hopkins Fellowships program since its inception nearly a decade before. At that time the trustees voted to limit the Fellowships to one year, with limited exceptions. Previously, Fellows had been eligible in most cases to retain their awards for an additional year, and occasionally even beyond that time. Sihler for example received his Ph.D. from the Hopkins in 1878, after two years of study as a Fellow. He was one of a group of four to receive the first Ph.D.'s from the Hopkins. Afterwards he was unable to find a teaching position. He was permitted to stay on for still another year at the Hopkins, as a "Fellow in Greek History." His responsibility to the University during that year was to teach a course in Greek to a small course of undergraduates. By staying on, he took a Fellowship that would have been available to a new student.

In 1887, $10,000 was given for the establishment of a fellowship in biology, in memory of Adam T. Bruce, a former Hopkins Fellow who had died shortly after being appointed to the regular teaching staff. Applications for the awards were

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Sihler, From Maumee to Thames and Tiber, p. 113-115.
limited to former Hopkins Fellows. According to Hawkins, this
bequest opened the way for funding of Hopkins Fellowships from
outside sources in the even leaner financial years that were
32
to follow.

In the fall of 1887, the Baltimore and Ohio passed its
dividend, which meant the University was without its primary
source of revenue. Gilman was able to lead the University
through the remainder of the 1887-88 academic year without
disrupting difficulties by effecting stringent economies, and
by drawing on funds that had earlier been committed to the
building fund. As it turned out, the railroad continued to be
unable to pay dividends, a condition that lasted until 1890.
In the fall of 1888, Gilman publically announced the Hopkins'
financial plight, and appealed for the raising of $100,000
from the public. At the same time, he cancelled appropriations
for the laboratories and the library, and cut the Fellowships
and Scholarships funds. By early the following year, the
$100,000 Gilman had requested had been raised. Several private
donors had made substantial contributions. The fact remained
however that the University was at a standstill. The year
33
1889 marked the end of an era.

32
Hawkins, Pioneer, p. 121.
33
Ibid., pp. 318-320.
It is to Gilman's credit that the 1880's were as productive to the financially troubled Hopkins as they were. For the most part, he managed to keep the University's financial plight in the background. By so doing, he was able to maintain the sense of partnership and scholarly excitement that typified the Hopkins in its opening years. Hall, who went to the University in 1881 and stayed until 1888, when he left to assume the presidency of Clark, had this to say about that period:

Thus during my stay, which covered most of the decade that, I think, marked the acme of Johns Hopkins' preeminence and leadership, the student body was hardly less remarkable for quality than was the teaching force which, with few exceptions, was made up of young men. At any rate, the intellectual activity here was intense and the very atmosphere stimulating to the highest degree.34

In the Second Annual Report, Gilman wrote that he expected the number of students attending the University to be small for a number of years. Presumably he was referring to the twenty Hopkins Fellows when he stated that the University "should establish a good nucleus of students around which, year after year, other good elements may cluster." In that first year, eighty-nine students were registered. Of those, fifty-four (including the twenty Hopkins Fellows), were

34 Hall, Life and Confessions of a Psychologist, p. 231.
enrolled in graduate programs, twelve in undergraduate programs, and twenty-three were admitted as special students.

In the years up until 1889, the Fellows were indeed the nucleus of the Hopkins graduate program. In 1878, four of the original Fellows, Adams, Craig, Sihler and Royce, received the first Hopkins Ph.Ds. The following year, five more Ph.Ds. were awarded, again to Hopkins Fellows. In the period from 1878 through 1889, the Hopkins awarded 151 Ph.Ds., far more than any other American institution. During the same period, Harvard granted but fifty-five. It is not suggested that numbers in themselves are in any way a criterion of excellence. It often seems that the reverse is true; that numbers imply mediocrity. Such was not the case at the Hopkins during this period. The exacting standards that Gilman had helped to establish for the Hopkins Ph.D. in the opening years of the University were the same as those adopted more than two decades later, in 1900, by the newly-formed Association of American Universities. According to Cordasco:

The Hopkins doctorate became the model for the protean Ph.D.; it was carefully defined where there had been no definition,

35 Johns Hopkins, Second Annual Report, p. 3.
36 James, Charles Eliot, p. 345.
and its emphasis was on productive research. 37
And as the Hopkins helped to establish the standards for the Ph.D. during this period, so the Hopkins Fellows set the standard within their own institution. The effect of that achievement will be considered in the following chapter.

37 Cordasco, Daniel Gilman and the Protean Ph.D., p. 113.
CHAPTER VII

CONCLUSION

The Hopkins in Perspective

There is little question that Gilman was one of the great college presidents of the 19th Century. The university which he headed opened a new era in American higher education. Eliot, speaking at the twenty-fifth anniversary celebration of the Hopkins, said in tribute to the retiring Hopkins' president:

President Gilman, your first achievement here, with the help of your colleagues, your students, and your trustees, has been, to my thinking -- and I have had good means of observation -- the creation of a graduate school, which has not only been in itself a strong and potent school, but which has lifted every other university in the country in its departments of arts and sciences. I want to testify that the graduate school of Harvard University, started feebly in 1870 and 1871, did not thrive, until the example of Johns Hopkins forced our faculty to put their strength into the development of our instruction for graduates. And what was true of Harvard was true of every other university in the land which aspired to create an advanced school of arts and sciences.¹

¹ Johns Hopkins University, Celebration of the Twenty-Fifth Anniversary of the Founding of the University and the Inauguration of Ira Remsen as President of the University (Baltimore: Johns Hopkins Press, 1902) pp. 105-106.
Gilman's achievement in successfully developing the Hopkins as America's first graduate school was a complex one. It required the wholehearted cooperation and involvement of several diverse groups within the university, including the Hopkins trustees, the faculty and the students. Outside the institution, Gilman had developed a core of supporters for the Hopkins' concept that included, among others, the presidents of several major colleges and universities, key members of the press and significant segments of the general public.

While the factors involved in creating a favorable climate for the new institution were complex, the idea behind the Hopkins was relatively simple. Gilman believed that there was a ready market in this country for research-oriented, graduate programs, with emphasis on the sciences.

Gilman was a skilled administrator. He was not an advanced scholar. As Hawkins pointed out, his deficiencies in scholarship were no doubt painful to him at times as the chief officer of an institution that was dedicated to the highest standards of scholarship. J. Franklin Jameson, a young Hopkins historian who assisted Gilman in the preparation of the copy for his book, *James Monroe*, published in 1883, noted in his diary that Gilman had made forty-two errors in thirty-eight
Gilman's ideas for an institution devoted to graduate study were not original with him. Henry Tappan, for example, had attempted to implement a somewhat similar program, patterned on a German model, at the University of Michigan in the 1850's. What was unique was Gilman's approach. He enlisted first the support of the Hopkins trustees, whose support he retained to a considerable degree throughout his long presidency. He himself recruited the members of the first Hopkins faculty, and was able therefore to assure the hiring of professors amenable to his concept of the research objective. Likewise he involved himself actively in the recruiting and orienting of the first Hopkins Fellows, the nucleus of the Hopkins student population.

Gilman was active outside the University as well as he sought to create a climate favorable to graduate education. His friend, E. L. Godkin of The Nation helped to give the concept favorable attention nationally. Unlike many of his fellow college presidents, Gilman made himself readily available to the press. Publications of the University, such as the

2 The Jameson Diary, as quoted in Hawkins, Pioneer, p. 103.
Annual Reports, were widely distributed. Gilman, along with his close friends and fellow presidents, Eliot and White, were effective public advocates for their viewpoints. Veysey offers a somewhat negative opinion of the advocacy-leadership style of presidents such as Gilman and White:

Reasoning that popular support was essential for the success, numerical and financial, of the new institutions, these men leaned as far in the direction of non-academic prejudices as they dared. They stumped the surrounding country with ingratiating speeches; they made friends with the influential; they campaigned like politicians in seasons of crisis.3

He added that such educational leaders, sensing the power of public opinion and fearing its wrath, often became meekly submissive to it. It would appear that Veysey's characterization in this instance is somewhat overdrawn. Gilman was reserved and perhaps a bit courtly in manner, but he was not subservient or meek. The Hopkins bore his personal stamp; in a real sense it was his institution, shaped and directed by his firm hand.

Veysey did not overstate the case however when he summed up, in one sentence, what it was that presidents such as Gilman and White were able to accomplish:

With one hand they built the university, borrowing from

3 Veysey, Emergence of the American University, p. 16.
Europe and improvising as they went; with the other they popularized it.\textsuperscript{4}

The success of the Hopkins under Gilman's direction was due in part to several innovative measures that he implemented at the new institution. Not surprisingly, they were directly related to the concept of research. From the beginning Gilman placed his emphasis on human resources, rather than on imposing buildings. For more than a quarter century the University was located in a nondescript cluster of elderly buildings in downtown Baltimore. While the buildings were not modern, the research supports were. Hall commented on the resources available for his work in psychology as follows:

\begin{quote}
I was given a laboratory, first in the physiological building and then a more generous one in the physics building, and one thousand dollars a year for its equipment. I was enabled to develop not only the first but by far the largest and most productive laboratory of its kind in the country up to the time of my leaving, . . . \textsuperscript{5}
\end{quote}

A second research-oriented innovation of the early Hopkins was the creation of a series of professional journals. Hawkins termed the Hopkins "the cradle of the scholarly journal in America." According to Professor Sylvester, Gilman sought to try and persuade him almost from the day of his arrival in

\begin{footnotes}
\textsuperscript{4} Ibid., pp. 16-17.
\textsuperscript{5} Hall, \textit{Life and Confessions of a Psychologist}, p. 227.
\end{footnotes}
this country to found a journal in mathematics. Sylvester declined, but Gilman was persistent. The *American Journal of Mathematics* was the result. It was soon followed by the *American Chemical Journal*, and a host of others. In several instances the University underwrote part of the costs.

A third innovation of Gilman's was the establishment of a comprehensive visiting lecturer plan. As was indicated in Chapter II, Gilman was thereby able to effectively supplement his small regular teaching staff with men of national note.

A fourth innovation, and perhaps the most significant one of all, was the development and implementation of the Hopkins Fellowships plan. To succeed, the new University needed a solid base of competent graduate students. It was commonly believed at that time that there was not a real need for an institution to offer a comprehensive program of graduate studies, leading to an advanced degree. The enthusiastic response to the Hopkins Fellowships program quickly proved otherwise.

Each of the innovations introduced by Gilman at the Hopkins were significant. It is not possible to say what the results might have been had one or more of the innovative

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ingredients blended together so effectively by Gilman not been present.

**Implications for Higher Education**

As has been shown, the concept of providing financial assistance to students seeking advanced studies was nearly as old as Harvard itself. In the intervening years a number of colleges had acquired funds for the support of graduate students. Such funds usually became available through bequests. The amounts involved were usually small. There was apparently little interest on the part of the colleges in attracting funds for the support of graduate study. This is not surprising, since the colleges' focus was almost entirely on traditional undergraduate programs. Graduate students such as Gilman himself were tolerated or ignored, rather than encouraged.

Perhaps the most significant of the contributions that Gilman made to higher education was his success in modifying the role of the graduate student in American higher education. At Gilman's Hopkins, and later in newly-formed graduate departments across the country, the graduate student was welcomed for what he (and later she) was, a needed and necessary participant in the educational process.

It is true that the Hopkins situation provided Gilman with an opportunity that appears to be unique in the history of
American higher education. The founder of the Hopkins did two important things perfectly; he left a large sum of money for the new institution, and he died without attaching repressive restrictions to the bequest. Gilman had a freedom to develop the institution to a degree that was not approached until the days of William Rainey Harper at the University of Chicago.

The initial step in Gilman's plan to create a climate favorable to graduate education in America was to develop an integrated system of Fellowships awards that would help to attract a highly competent core of graduate students to the new and untried Hopkins. No other American institution up to that point had developed a comprehensive support program at the undergraduate, much less at the graduate level.

Once the plan had been carefully worked out, Gilman introduced another concept that was soon to be widely copied. Quite simply, he mounted an aggressive promotional campaign in behalf of the Fellowships program. The following article appeared in the Maryland Gazette in March of 1876:

The trustees of the Johns Hopkins University have issued a circular offering to young men from any place ten fellowships or graduate scholarships, to be bestowed for excellence in any of the following subjects: philology, literature, history, ethics and metaphysics, chemistry and natural history. The object of this foundation is to give scholars of promise the opportunity to prosecute further studies, under favorable circumstances, and likewise to
open a career for those who propose to follow the pursuit of literature or science.\textsuperscript{7}

Newspapers across the South and East carried the same story. In most instances they printed it word for word as Gilman had written it. The item appeared in the news columns, and not in the advertising sections of the newspapers, though the material certainly qualified as an advertisement for Fellowships applicants.

Gilman stood alone among the college presidents of the period in his willingness to become actively involved in a project such as the recruiting of the first Hopkins students. As it was thought undignified for a college president to go to the general public with his ideas, so it was beneath the dignity of such men to actively seek out talented students. There is no indication that Gilman suffered a loss of respect for his efforts. His biographer comments that while Gilman was dignified and reserved, he easily managed to convey a feeling of interest in, and concern for, those with whom he worked. Hall put it this way:

Gilman was essentially an inside president. His interest in the work of the individual members of his faculty did not end when they were engaged, but began. He loved to

\textsuperscript{7} Maryland Gazette 18 March 1876.
know something of their every new investigation, however remote from his own specialty, and every scientific or success felt the stimulus of his sympathy. His unerring judgement of men was triumphantly justified in the achievements of those he appointed; and although in selecting young men he had to walk by faith, he nowhere showed more sagacity than in applying individual stimuli and checks, so that in this sense and to this extent he was a spiritual father of many of his faculty, the author of their careers, and for years made the institution the paradise and seminarium of young specialists.  

It has been well documented that the Hopkins in its opening years was considered to be "the" place to be for an aspiring scholar. There was a sense of excitement about it, a feeling that great contributions were being made in the cause of science and research. That feeling was not limited to the faculty. According to Franklin:

... the Johns Hopkins fellowship in those days did not seem a routine matter, an every-day step in the regular process toward a doctorate or a professorship, but a rare and peculiar opportunity for study and research, eagerly seized by men who had been hungering and thirsting for such a possibility.

A mystique grew up about the Hopkins in its early years. The University became a symbol of excellence in research, a magnet to which aspiring young teachers and students were drawn. A youthful instructor at Harvard wrote to Eliot in 1881, complaining that Harvard did little to reward scholarly effort, in

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8 Hall, Life and Confessions of A Psychologist, p. 246.
9 Franklin, Life of Gilman, p. 228.
contrast to the Hopkins where "quick and generous sympathy is extended to every scholarly effort."

In his opening address at the Hopkins, Gilman had indicated that the University would seek the best young scholars, and as they developed in their disciplines, would promote them to regular teaching positions. The opportunities inherent in that statement were not lost on the first Fellows, as Page indicates:

Nor do I yet claim a sight of all its possibilities. The eyes of the world are on us here; and if I deserve it and as soon as I can do it I shall doubtless have good work somewhere. There's no other place of half the advertising power for a young scholar as the place I hold. 11

While Eliot lamented the fact that there were no comparable replacements for the aging luminaries on the Harvard staff, Gilman moved to resolve the problem. He borrowed an idea from the German educational system, whereby young promising scholars, known in that country as "Privatdozenten," were able to find work in their general field after they completed their higher studies and before they found a teaching position in a university. In Germany a graduate scholar would often accept a teaching position in a "Gymnasium," which was a university

10 James, Charles Eliot, p. 22.
preparatory school, until he had developed an academic reputation, at which time he hopefully would receive a call to a university teaching position. In this country, a student who took a teaching position in a secondary school was seldom able to obtain a college teaching position afterwards. A definite stigma was involved. Sihler, who could not find a college teaching post, reluctantly accepted a position in a secondary school:

Finally I heard of a private school in New York City, mainly collegiate in work and aim, whose proprietor and principal, Dr. Julius Sachs (a Columbia alumnus and Ph.D. of Rostock) was seeking a well-trained classicist. . . . Whatever my aspirations and ideals of life, the stern time had now come when my knowledge must go on the market of life. . . . 12

Gilman's plan was to provide financial assistance to promising students at the university level, through Fellowships and temporary teaching positions, during which time the students would be building their academic reputations through advanced studies and productive research. The University would help them in a variety of ways, including the publishing of the results of their research in the Hopkins' newly-created scientific journals. In addition, Gilman advertised the achievements of the Hopkins Fellows by a listing of their research and publication efforts in the widely-circulated Annual Reports of the

12 Sihler, From Maumee to Thames and Tiber, p. 115.
University. This was done even for those Fellows who had since left the University and were employed elsewhere. The listing for Fellow Thomas Craig in the Fourth Annual Report is revealing:

4. THOMAS CRAIG (Mathematics, 1876-78; Physics, 1878-79), from Pittston, Pa.; C. E., Lafayette, 1875; Ph.D., Johns Hopkins, 1878; Tidal Division, U. S. Coast and Geodetic Survey, 1879-80.

Representation of one Surface upon another, and on some points in the Theory of the Curvature of Surfaces. (Graduating Thesis, J. H. U., 1878.)

Motion of a Point upon the Surface of an Ellipsoid. (Am. Jour. of Math., 1878.)

Mathematical Theory of Fluid Motion. (Van Nostrand's Eng. Mag., 1879.)

Motion of a Solid in a Fluid. (Am. Jour. of Math., 1879.)

General Differential Equation for Developable Surfaces. (Jour. of Franklin Inst., 1879.)

Treatise on the Mathematical Theory of Projections. (U. S. Coast Survey, 1879.)

Projection of the General Locus of Space of Four Dimensions into Space of Three Dimensions. (Am. Jour. of Math., 1879.)

Motion of an Ellipsoid in a Fluid. (Am. Jour. of Math., 1879.)

In one sense, the Annual Reports performed the function of a modern-day university placement office, though in many cases the Fellows were not necessarily looking for new positions. No doubt Gilman felt that the publicizing of a summary of the research achievements of the Fellows on an annual basis added both to the Fellows' stature and to that of the University which

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13 Johns Hopkins, Fourth Annual Report, p. 43.
trained them.

The almost immediate positive response to the Hopkins' efforts from academic circles brought a wave of imitators. As Eliot had stated at the twenty-fifth anniversary of the Hopkins, Harvard did not begin to emphasize graduate instruction until the success of the Hopkins made it necessary to do so. The process of imitation was stimulated further in the 1880's as increasing numbers of Hopkins-trained researchers, most of them former Fellows, took up teaching positions in other colleges. Of the sixty-nine men awarded Ph.D.s in the first ten years of the Hopkins, fifty-six took teaching positions in thirty-two colleges and universities. According to Ryan:

To look through the list of the first students at the Johns Hopkins University is to obtain a preview of the men who were to become the distinguished members of the faculties of American universities in the thirty or forty years that followed.14

Included among the Hopkins Fellows of those times were men such as J. McKeen Cattell, Charles R. Lanman, Walter Hines Page, Josiah Royce, Herbert Baxter Adams, Woodrow Wilson, and John Dewey.

Financial problems beset the University in the mid-1880's, and for a time severely restricted its development. Two

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new institutions, Clark University, founded in 1889, and the University of Chicago, begun in 1891, patterned themselves closely on Gilman's Hopkins. Clark, headed by G. Stanley Hall, devoted itself in its early years entirely to graduate studies. At Chicago, William Rainey Harper incorporated the basic concepts established by the Hopkins, but on a massive scale. In the first year alone, Harper was able to offer a total of sixty Graduate Fellowships.

In summary, Gilman's Fellowship program was an integral part of the Hopkins' success in advancing the concept of graduate education in America. Nicholas Murray Butler, the distinguished president of Columbia University, summed up the Hopkins' achievement as follows:

For here, still young and still taking form, was the promise of a real university. Here had been brought together by the genius of President Gilman a company of really advanced scholars and productive university teachers. Everything was being subordinated to the university ideals of inquiry, of productive scholarship and of publication.15

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The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

May 11, 1976
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