1934

A History of Rice Institute

Dora A. Fitts

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A HISTORY OF RICH INSTITUTE

BY

DORA A. FITTS

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree
Master of Science

COLLEGE OF EDUCATION
BUTLER UNIVERSITY
1934
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CHAPTER I.

INTRODUCTION

This study is the outgrowth of the writer's interest in education in the southwest portion of the United States and in the founding and development of Rice Institute. It is the purpose of the investigation to make a historical study of one of the most needed institutions of higher education under strictly private administration, founded in recent years. It is proposed to show that Rice Institute occupies an important place among the colleges in this section of our country for the following reasons: (1) because there was a need for such an institution as it purports to be; and (2) that Rice Institute offers a desirable kind of education - an education of hand, body and head; and, judged by its twenty years of successful operation, it is a worth-while institution.

While in this discussion no comparisons of Rice will be made with other institutions to prove its uniqueness, this quality may be suggested by the description which will be given of its architecture; life tenure of its president and trustees; its curriculum; the method of selecting its stu-
dents; the formal opening, and its methods of discipline, by which it especially emphasizes the spirit of freedom and democracy.

It is not the purpose of this dissertation to consider insignificant details, but rather those incidents that have played a major part in the development of the institution. A further objective will be to show that its contribution to the cause of higher education in America has been largely due to the factors mentioned in the foregoing paragraph.

In the light of the many advantages that the average person has today, both educationally and otherwise, it is well for him to take a retrospective view of the happenings of the past and attempt to ascertain what have been the forces that have been most largely responsible for these blessings; therefore, a study of these forces, as they apply to Rice Institute, will now be made.

After the first Spanish settlement was made in Texas, 1690, many years elapsed before there was much in the way of formal education in this vast region. During the early days, the struggle for existence was strenuous. The task of providing food, clothing, and shelter so occupied the people that little time was left for mental development.

There were, however, among the hardy pioneers a few scholarly men, trained in the universities of the United States or in the old world, who possessed a genuine love for culture, and were vitally interested in teaching, and who had caught the vision of universal education. These few men kept the torch of education burning during the early pioneer days. They did all in their power to advance the interests of education and learning. Their labors were not in vain; however, at times things were very discouraging. After a number of years their efforts and desires for better things were supplemented by similar efforts and desires on the part of many of the people of the state. The paramount question which confronted the people of this period was, what steps to take in order to bring about the desired educational conditions in the state.

Prior to the Civil War the promotion of all schools devolved upon private effort or purely local organizations. During this era it was easy for either an individual or a local body to establish and maintain a school in which pupils of various grades attended. While these schools were not ideal, the foundation was laid for a more complete education. Subsequently elementary education was taken over by the state and attendance was made compulsory, with the result that the chief source of revenue for

all private schools was very seriously impaired, as compared with later years.

Following the writing of a new constitution in 1869, providing for a most highly centralized system of education, the most highly centralized system Texas has ever had, the growth of municipal high schools tended to drive out all the remaining private institutions. As a result of this movement, the institutions fostered by local and private efforts were superseded by those maintained by the state and by a few institutions of denominational character, sponsored by organizations of state-wide scope.

An important change following the Civil War which was momentous in its results was the adoption of co-education by higher institutions. The first institution of higher learning in Texas to adopt this policy of teaching both sexes was Waco University, whose president, Rufus C. Burleson, recommended this to the trustees in 1865. His plan was forthwith adopted.

During the first decade of the twentieth century there was an extraordinary growth of higher institutions. This growth was beyond the highest hopes of those really interested. It has been only within the last twenty-five years that an effort has been made in Texas to measure higher institutions of learning by

1. Ibid., pp. 156, 281-2.
2. Ibid., p. 284.
common standards and to bring them up to the level of real college work. Not only were the former standards low, but degrees were given with some laxity.

Texas now has twelve standard senior state institutions and many private colleges, all of which are recognized by the State Board of Examiners. These state institutions are as follows:
The University of Texas at Austin, established in 1861; Agricultural and Mechanical College at College Station, opened in 1876; College of Industrial Arts at Denton, opened in 1901; North Texas State Teachers College at Commerce, opened in 1917; Sam Houston State Teachers College at Huntsville, established in 1879; Southwestern Texas Teachers College at San Marcos, opened in 1905; West State Teachers College at Canyon, opened in 1910; Sul Ross State Teachers College at Alpine, opened in 1920; Stephen F. Austin State Teachers College at Nacogdoches, opened in 1923; Texas Technological College at Lubbock, opened in 1925; and Texas College of Arts and Industries at Kingsville, opened in 1926.

The private colleges of Texas are worthy of mention here, since they play a very important part in the education of the

1. Ibid., p. 298.
2. Ibid., p. 299.
4. Ibid., pp. 764, 751.
state. Some examples are: Austin College at Sherman, founded by the Presbyterians in 1849, coeducational; Baylor, for Women, at Belton, founded by the Baptist Church in 1845; Baylor University at Waco, founded by the Baptist Church in 1845, coeducational; College of Incarnate Word at San Antonio, founded by the Roman Catholic Church in 1900, for women; Daniel Baker College at Brownwood, founded by the Southern Presbyterians, in 1888, coeducational; Southwestern University at Georgetown, founded in 1873, by the Methodist Episcopal South, coeducational; Texas Christian University at Fort Worth, founded in 1873 by the Christian Church, coeducational; Texas Presbyterian College at Milford, founded in 1902 by the Presbyterians, for women; Texas Woman's College at Fort Worth, founded in 1914 by the Methodist Episcopal Church South, and Rice Institute at Houston, founded in 1891, by William Marsh Rice, non-sectarian, coeducational.

The preceding discussion considered the two great classes of institutions in Texas, namely; the State schools, which are under the state administration, and the private institutions, which are under private control. Rice Institute, a richly endowed institution belongs to the latter class.

In order to reveal the chief factors that have made possible

Rice Institute the following pages are intended to give an idea of the life of the founder, his will, the organization of the institution, the formal opening, the buildings and grounds, the curriculum, the faculty, and the student body. There is also an attempt to convey some conception of its output so as to indicate, at least in a measure, what contribution Rice Institution has made to the cause of education in this country.
CHAPTER II

BIOGRAPHY OF THE FOUNDER

William Marsh Rice, philanthropist of Houston was a native of the Old Bay State of Massachusetts, where he was born in Springfield, March 4, 1816. He was the third in a large family of ten children - a family of excellent type, honest, industrious, dependable, thrifty New Englanders. His parents were David Rice and Patty Hall Rice. In his early years he was much like other boys and girls of his day in physical and mental development. He attended the grammar school and then the Springfield high school. Obsessed with an overmastering desire to get out into the world and carve a name for himself, he turned his back upon the schoolroom at the age of fourteen, and from that time became independent and self-supporting.

For a short time he endeavored to find work in Springfield, which was then an insignificant village; but failing to secure employment there, he went into the country with the idea of securing a job on a farm. He was not particular as to the character of the work, but was willing and eager to secure any

honorable employment, regardless of the wages he might receive for his services. With that diligence, characteristic of so many New Englanders, the dominant desire of his heart was to find some kind of occupation by which he could earn his daily bread. Finally, after considerable fruitless wandering from place to place in quest of work, he one day went into a little country store and asked the proprietor if he could give him anything to do.

The proprietor answered, "Why, yes. What do you know about selling dry goods, groceries, notions, etc.? Have you ever had any experience along that line?"

The boy replied, "None whatever, sir. I am just fresh from school."

The merchant, scanning the boy with a scrutinizing eye, said, "I do not know that you can be of much service to me, but you look like an honest fellow and willing to work. Do you wish to learn?"

"Yes, indeed, I do."

Then, said the man, "Well, come back in the morning and start to work." The boy went away with happy heart and was at the store in good time the following morning, eager to be- work. That was the beginning of the business career of

1. Ibid., p. 128.
William Marsh Rice. The lure of success dispelled all barriers, and, overflowing with energy and enthusiasm, his vision of success, which was always before him, impelled him onward. He was always ready to pay the price by making any sacrifice for its attainment. He was an early riser, working from early in the morning until late at night. As a result of the fact that the boy was always found at his post and manifested by his faithfulness that he was magnifying his position by looking after his employer's interest, the latter soon discovered that he was a valuable assistant, and pushed him on to greater responsibilities. It was only a little while until young Rice was delegated the duty of buying the stock. He had the knack of knowing his customers by name, which is invariably a marked asset in a salesman. Moreover, he had a captivating manner; his customers were always greeted with a smile. He was so popular that they would rather trade with him than anyone else. His reputation gradually increased during the seven years following his employment in the store, and on his twenty-first birthday, having saved some money by that time, he purchased the store business. In the transfer he paid part cash, his father signing his note for the remainder of the amount. He climbed steadily, prospered in his

business, and invariably adhered to his principle to save a portion of his earnings.

Meanwhile, in Texas events were transpiring which helped to shape the destiny of Mr. Rice, chief of which was the Battle of San Jacinto on April 21, 1836. He read of this thrilling event and, as he was a great reader, he had learned much concerning the prospective future of the newly created Republic of Texas, and also of its brave Fannin and his four hundred men who died a horrible death at Goliad; and of Travis, Bowie, and Crockett, who gave their lives at the Alamo.

It was the example of those brave men that fired the young and ardent soul of William Rice with the spirit of patriotism and adventure. He resolved to cast his lot with those heroic souls who had done such valiant work at the Battle of San Jacinto. In 1838, after shipping his small stock of goods to Galveston, he himself came by boat and stage to the new Republic. He arrived in Houston one beautiful autumn morning just as the sun was rising. He came from Galveston in a little boat which was plying between that city and Houston.

From the day of his landing in Houston until the close

1. Ibid.
of the Civil War, Rice made Texas his home. Although he was very happy when he reached his destination in the southwest, with its undeveloped possibilities, still his joys were not unmixed with heartaches and disappointments. One of these was the sinking of the boat on which all of his goods, wares, and merchandise were shipped. In addition, the courageous young man from the North found himself a stranger in a strange land, without money, without friends or even acquaintances. However, because of his indomitable will, such handicaps failed to discourage him, but rather pushed him on to greater effort. The word "fail" was not in his vocabulary. Before the close of that year, 1863, he obtained a position as clerk in a mercantile store. By utilizing his evenings in reading, by careful saving of his money, by practicing the most rigid economy, and by being at all times attentive to his business, his efforts were followed by the same measure of success that he had attained while in the country store at Springfield, Massachusetts, and so he continued to rise. He practiced the same virtues in his contacts with his customers that he did when he first worked as a clerk in New England. He was always cordial and ever tried to be useful. He advanced from his clerkship rapidly and continuously from year to year until he became a member of the firm which was
henceforth called "Rice and Nicholas, Exporters and Wholesale Grocers of Houston", and this name soon became well known from the Gulf to the Red River, and from the Sabine to the Rio Grande.

When the Civil War broke out Rice, who was a Unionist, went to Matamoras where he continued, in spite of the blockade, to do business as an exporter and importer. He pursued his mercantile business from the time of his landing in Texas until the close of the war between the states, when he moved to New Jersey. During his residence in Houston he was intimately associated, in business and otherwise, with many of the founders of the City, some of whom were the following: Cornelius Ennis, Thomas M. Bagby, H. E. Taylor, Paul Bremond, W. R. Baker, and A. Grosebeck. He was for a time largely interested in the construction of the Houston Texas Central Railroad, extending from Houston to Denison, Hemstead to Austin, and from Bremond to Waco. He was also for many years the financial representative of this corporation in New York City, and on many occasions came to its relief in vital financial transactions.

Mr. Rice was twice married: first, in the forties, to Miss Margaret Bremond, the daughter of Paul Bremond, wealthy pioneer of Houston, who, with his own means largely built and

2. Ibid., p. 133.
operated the Houston East and West Texas Railway, from Houston to Nacogdoches and to Shreveport. After her death, and not long after the close of the Civil War, he married Mrs. Elizabeth Baldwin Brown, the widow of a physician of prominence. There were no children by either marriage. Soon after his last marriage Mr. Rice went to live in the East, making his home thereafter in New York City, except for the three years during which he occupied a beautiful mansion at Dunellen, New Jersey. During the period of his residence in New York he was not actively engaged in business; nevertheless, being a man of means, his own private affairs, particularly the management of his wealth, made large claims upon his time. He owned extensive interests in Texas and Louisiana, which required much of his time and attention. He also had large real estate holdings in Houston. Inasmuch as he was childless he devoted considerable attention to the matter of disposing of his fortune after his death. He realized that the lack of educational advantages had been a great handicap to him in his youth, and, therefore, desired to do everything he could to increase his property as rapidly as possible with a view of leaving it after his death to aid worthy boys and girls.

When he left Texas at the close of the war between the states he did not sever his business and social connections...
in Texas. Throughout the time of his residence in the states of New Jersey and New York he remained in close touch with the southwest. He was very fond of Houston and never lost faith in its future as a city of growing possibilities for trade and influence. He often talked about the proposed disposition of his property in order that it might bring the greatest good to the greatest number.

In conversations Mr. Rice often spoke of his family life in Massachusetts, and how he was compelled to leave home at the tender age of fourteen and shift for himself. With such a background, he well understood the trials and tribulations that barred the pathway of a boy, who, without money, influence, or friends, and with only a very inadequate education, was thrown out on the unsympathetic world to survive or to perish. His early experiences, involving many trials and privations, were the factors most largely responsible for his determination to dedicate his fortune to the boys and girls of the Southwest, whose protecting wing had been his shelter and salvation from material want in those days of storm and peril when he was a stranger in a strange land without money and without friends.

At one time in his life Rice had thought seriously of, and had actually decided, to establish an institution for

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young people on his 160 acre farm at Dunellen, New Jersey. However, after 1883, having spent more time in Texas than formerly and having renewed his contacts with old time Houston friends, there was brought home to him the realization of the fact that practically all of his fortune had come as a result of investments made in Houston and in Texas. With this conviction in mind, and after mature deliberation, he finally decided that the boys and girls of this section should have the benefits of his fortune. In 1891 he made definite plans for an educational institution to be opened in Houston after his death. In his will, executed in 1896, he made the foundation, to which he had already considerable in the way of preliminary gifts, the chief beneficiary of his estate. Houston was thereby assured a valuable bequest, pending, of course, any unforeseen circumstances.

Mr. Rice, who had thus shown himself to be one of the principal benefactors of the Southwest, died at the ripe old age of eighty-four years, September 23, 1900 - just twelve years before the institution which he founded, and which bears his name, opened its doors. In these more than four score years of his life, spent when the nation was passing through its most interesting developmental stages, he demonstrated the possibilities of a person who starts out in life
at the bottom of the ladder, and who, in spite of misfortunes and many apparent handicaps, struggles on, using these as stepping stones to reach the top.
CHAPTER III

THE WILL

In the period of his early manhood Mr. Rice had conceived the idea of founding an institution of higher education, and as he advanced in years he did not give up the idea, but resolved to carry out his project. There was one matter that had given him some concern and that was the location of the proposed university. He changed his mind in regards to the site for the institution after he was sixty years of age. For several years his home was in the East. It was while occupying his beautiful residence at Dunellen, New Jersey, consisting of an estate of 160 acres, that he decided to establish such an institution as the Rice Institute on these premises. He was so zealous about the establishment of the institution that he made his will with this in mind. No change was made in the will for a number of years. If he had died before he was three score years of age, the Rice Institute or some similar institution would have been established in New Jersey instead of Texas. In fact, his will, establishing this institution and naming the trustees, was introduced as evidence in the famous trial in New York soon after his

death. He made another will after he passed his sixtieth year, and in this latter will stipulated the founding of Rice Institute in the city of Houston. This legal document stood the acid test of the courts, and at the close of a long period of litigation the will was upheld. This was a very important decision so far as the site of the institution was concerned, for had the will been broken, Houston would have lost it. This loss was also threatened when Mrs. Rice died. Strange as it may seem, the founding of Rice Institute hinged upon two deaths, that of William Marsh Rice and that of his second wife.

In 1896 the second Mrs. Rice died, and soon after her death, there was filed in Houston her last will and testament, in which she made an attempt to distribute half of Mr. Rice's estate, which was then estimated at about four million dollars. Litigation immediately followed the filing of this will, and after its probate further litigation began in the courts of Texas between Mr. Rice and the executors of his will.

In order that the reader may understand the nature of this litigation it might be well here to state that under the laws of Texas the marriage relation between husband and wife

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is treated very much as a business co-partnership, or, in
other words, the Texas marriage laws give the wife equal
rights in property, so that whatever is accumulated in mar-
riage, whether by one or the other, is the joint property
of both, in which each has equal undivided interest. Mrs.
Rice's attorney was well informed on the Texas marriage law,
and was of the opinion that she could bequeath any part of
her share in the estate to anyone she pleased; so he drew
up her will accordingly. In this document she bequeathed half
of the estate to relatives and public institutions in which
she was interested.

When Mrs. Rice died and the will was read Mr. Rice, being
a business man, realized that if the will stood, and her be-
quests were taken from the estate it would be impossible for
him to carry out his plans, as these gifts would reduce the
estate by one-half. He therefore made a thorough study of
the marriage laws of Texas himself, after which he took the
position that the interpretation of the community law of Texas
applied only to citizens of the state of Texas and was not
applicable to him and his wife. His reason for this conclusion
was based on the fact that they had not been residents of the
state during their married life, but had lived in the East

1. Vernon's Annotated Revised Civil Statutes of the State of
ever since their marriage, having made their home either in New York or New Jersey, in both of which states the marriage laws were different from what they were in Texas. In these two states the common law of England, which gives the wife only a dower interest in community property, was in force.

Litigation followed both the filing of the will and its probate. The suit dragged through the courts of Texas for several years. The testimony of witnesses in Texas and New York was taken on both sides. Mr. Rice's testimony was very lengthy, and tended to show that he had not been a resident of Texas since 1865. It is interesting to observe that during the entire period of the litigation, which was begun soon after the death of Mrs. Rice, Mr. Rice lived in New York.

When the Supreme Court of Texas finally rendered its decision in the case it upheld the contention of Mr. Rice. Following this decision the executors of Mrs. Rice's estate were enabled to settle all claims against her estate, and under her will, for nominal amounts. Thus the estate, as a whole, was held intact for the establishment of the Institute.

One matter that should be made clear at this point is that the decision of the court hinged on one point; namely, the residence of Mr. and Mrs. Rice at the time of the latter's

death. After all the evidence had been taken and weighed in the balance of the courts, it was decided that their legal home was in New York when Mrs. Rice died. The court also accepted the contention that all of their married life had been lived in New York or New Jersey.

An attorney by the name of O. T. Holt of Houston represented the beneficiaries named in Mrs. Rice's will. He was later made executor of her estate and engaged Albert T. Patrick, formerly of Austin, to assist him. Mr. Patrick took testimony in New York and forwarded it to Texas. Later he held a prominent role in the dramatic death of Mr. Rice.

During the time that Mrs. Rice's will was being fought in the courts Mr. Rice lived in his simply furnished apartment at 500 Madison Avenue, New York City, almost alone. His sole companion was his secretary, Charles F. Jones, a young man about thirty years old, who had been in his employ for several years. A short time before the case above-mentioned was ready to go to trial, Mr. Rice died under peculiar circumstances. This was on the evening of September 23, 1900 about 7:30 o'clock. The following morning, September 24, a pall of gloom was spread over Houston when information was flashed over the telegraph wires to the effect that William

Marsh Rice, their benefactor, was dead. The telegram was sent by Mr. Rice's secretary, stating that he had died the night before while under the care of a physician. Old age was given as the cause of death. The telegram added that funeral services would be held the next day at nine o'clock, that interment would be at Waukesha beside his wife, and the message requested that Captain Frederick A. Rice, a brother of the deceased, send word when he was coming. This brother and James A. Baker, attorney for the deceased, were making arrangements to go East when a second telegram was received, which was from Mr. Rice's bankers, to the effect that he had died the previous night under very suspicious circumstances; that his body would be cremated the following morning at nine o'clock, and that interment would be, as mentioned in the previous telegram, at Waukesha.

While this second telegram was being read in Houston, preparations were being made at the Berkshire Apartments on upper Madison Avenue for the removal of Mr. Rice's body to a crematory in Brooklyn. Fate, however, seemed to conspire against these plans, for it was only a short while before Arthur A. Carey, for sixteen years chief of the Homicide Bureau for the New York Police Department, was notified that

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the body was about to be removed to a crematory. When he received this information a hearse had already left Brooklyn. The hearse and the hansom vied with each other as to which should be the first to reach the Berkshire Apartments. The hearse was the first to arrive and was waiting when the hansom drew up. Mr. Carey went quietly but quickly upstairs to the Rice Apartment and stopped the undertaker; he ordered him to take the body to the police morgue where the contents of the stomach were removed for microscopic examination. An autopsy was performed later, which showed traces of mercury poison.

Upon the receipt of the telegram stating that the body would be cremated, Messrs. Rice and Baker went immediately to New York. On arriving in the city they hastened to the Apartment and were received by the secretary, Charles Jones. Many questions were asked about the sudden death of Mr. Rice, some of which Jones answered readily, some of which he evaded; others he refused to answer at all. He finally informed them that Albert T. Patrick, attorney, had charge of the Apartment; and also of Mr. Rice's body. It should perhaps be observed here that this was the same Patrick who had assisted Attorney O. T. Holt in some matters relative to Mr. Rice's will.

He had done all in his power to bring it about that one half of Mr. Rice's property should go to the beneficiaries named in Mrs. Rice's will. It seemed a rather strange turn of affairs, which placed Mr. Patrick in charge of the apartment and the body of Mr. Rice. Patrick was a shrewd lawyer and he had a ready explanation as to how he came to be placed in this unusual position. His story ran something as follows: He was very anxious to settle the long litigation centering around Mr. Rice's will, for it seemed to him that Rice's attorneys and the Texas attorneys for Mrs. Rice would never reach an agreement. He claimed that he had inserted an advertisement in a New York paper asking for a conference with the heirs of Mr. Rice, believing that if he could get on friendly terms with Mr. Rice, he could bring about a settlement that would be satisfactory to all concerned.

In order to carry out his deceptive scheme he needed the assistance of Jones, Mr. Rice's secretary. This was readily secured, for Mr. Patrick had entertained him with wine and banquets on various occasions and had shown him many good times after they both had taken up their abodes in New York City. The part that Jones was to play was to call Mr. Rice's attention to the advertisement in the paper. This he did;

and Mr. Rice forthwith wrote to Mr. Patrick asking him to come to see him. Patrick responded and went to the Berkshire Apartments, but under an assumed name, for he realized that if Rice knew him, he would refuse to give him a hearing. He was received at the apartment and toward the close of the interview disclosed his identity. Mr. Rice became enraged at the deception, but after sometime became reconciled to the situation. Now Patrick was in a position to proceed with his wily scheme. Things worked out to suit him and before he had left the apartment he claimed he had effected a settlement with Mr. Rice whereby he agreed to pay the legatees under his wife's will $250,000 on condition that they release all claims against the estate. Patrick declared that following this interview and settlement he and Mr. Rice became friends, and that he had been his counsellor for sometime.

According to Patrick's story Mr. Rice desired to have a new will and requested him to prepare this document. This he did. As a consequence the will in favor of Rice Institute was revoked and Patrick was made residuary legatee of the estate. In fact, he claimed to be a trustee, with power to take over the estate and administer it in such a way as to carry out some secret trusts verbally specified by Mr. Rice.
When Patrick was called upon to give an account of Mr. Rice's last illness and death, he emphasized the fact that the latter was troubled with indigestion. As the story goes, an old friend advised him to eat baked bananas for the trouble. He secured nine of them and ate them all. Mr. Patrick accordingly attributed the death to the eating of the bananas.

Patrick expatiated on the cremation of Mr. Rice's body, holding firmly to the idea that it was the millionaire's desire to be cremated after death, but that the police had prevented this wish from being fulfilled. He then read a letter to Messers. Rice and Baker concerning the cremation. The signature at the close of the letter looked very much like that of the deceased man. The following is a copy of the letter:

New York, August 3, 1900.

Albert T. Patrick, Esq.,
No. 277 Broadway, City.

Dear Sir:

Concerning the matter of cremation. I sent down to the United States Crematory office for information and got the circulars which are very interesting. I will show them to you when you come up. Ever since Col. Robert Ingersoll and Col. Waring were cremated, I have thought that I should like to be cremated also.

1. Edmund Pearson, Five Murders, p. 204.
Col. Ingersoll was a very smart man and a man of great judgment about all things which is possible for a man to know but about religion a man cannot know. Ingersoll may be right or he may be wrong; that is all guess work.

Col. Waring was a great sanitary man, and it seems to me that the law should not allow dead bodies to be buried all over the country, after dying of all kinds of diseases. I would much rather have my body burned than eaten by worms or stolen by some medical student and carved to pieces. If I should die I want you to see that I am not embalmed as they fill you with chemicals when they embalm you, but I want you to have my body cremated at once and my ashes put in an urn and interred with my late wife, Elizabeth B. Rice. As to funerals I do not think my relatives would care to come to mine and I see no use having one until my ashes are interred with my wife.

I write these things because I happen to think of them although you told me to give you written directions sometime ago. But I expect to live twenty years, as I came of a long lived family and am in pretty good health for a man of my age.

Yours truly,

W. M. Rice.

The courts later found that this signature was forged.

The testimony of Jones was of valuable assistance to the courts in reaching this decision. He had testified under oath that the letter was "concocted", and that there was no foundation for Patrick's claims. Charges were preferred against both Mr. Patrick and Jones for forgery and for murder, and they were committed to the Tombs Prison. In the silence of the prison walls they talked of committing suicide, and Jones actually attempted to take his life by cutting his throat with a pen-knife; however, in the midst of his self-mutilation he was discovered by the keeper; medical
attention was immediately given to him and in a fortnight he had practically recovered.

On October 13, 1900, an application was filed by the executors, William Marsh Rice Jr., nephew of the donor, by John D. Bardin and James A. Baker, to probate the genuine will of William Marsh Rice. The witnesses were C. W. Nether- be and William F. Harman, both of Brooklyn. In this will Mr. Rice bequeathed the greater part of his estate to the Rice Institute. However, close relatives and some friends were remembered in the document. This will was contested by some of the relatives, but not by those living in Texas. These contesting claims were finally settled by the payment of a small amount to those who were causing the trouble. Then the genuine will was admitted to probate. Meanwhile another will was filed for probate; this was the Patrick will. It met with opposition from the representatives of Mr. Rice’s estate. They claimed it to be a forgery and so it was finally adjudged in the courts of the state of New York; it was accordingly denied probate.

In the meantime, other important events were transpiring; Patrick and Jones were indicted for forgery and for the murder of Mr. Rice. The valet, who also was implicated in the

1. "Attempted Suicide", in The Houston Daily Post, November 2, 1900.
suspected crime, turned state’s evidence and confessed that he had murdered Mr. Rice by undermining his health with medicines while he was ill. In this horrible deed he had been aided by two other persons, namely, Patrick, and his personal physician, both of whom prescribed the medicine resulting in death. From his testimony it was developed in the court trial that chloroform had been procured from Patrick, who told him how to use it. The meeting with Patrick took place about six o'clock in the evening, September 23d. After the consultation with Patrick the valet returned to the apartment, where he found Mr. Rice sleeping peacefully. The maid was away for the day; there were no other servants present, and so the apartment was silent and deserted, except for the presence of those mentioned. Evidently this seemed to be an opportune time for the valet to perform the tragic act; at any rate he availed himself of the opportunity, and, according to his own testimony, he saturated a sponge with chloroform, constructed a cone with a towel, placed the sponge in the cone, and put the cone over the sleeping man’s face. He then hurried out of the room and waited in an adjoining room about thirty minutes for the chloroform to take effect. At the expiration of this period he returned to the bedroom, removed the cone from
Mr. Rice's face and saw that he was dead. He then set about trying to cover up his tracks by burning the sponge and towel in the kitchen range. He opened all the windows in the apartment so that the odor of the chloroform would disappear and not leave any traces of what had been done. Then he tidied up the room, after which he had Mr. Patrick's physician sent for. At the same time he notified Patrick by phone of Mr. Rice's death.

Patrick was convicted of murder and at four different times was sentenced to be executed. The sentence was, however, commuted to life imprisonment. Ten years later, Governor John A. Dix, near the close of his term of office, on November 23, 1912, officially pardoned Patrick. According to available evidence the latter is now living in Oklahoma. Because he had turned state's evidence in the case, Jones was dealt with leniently with the authorities and was never prosecuted. It was undoubtedly his evidence that had convicted Patrick.

Following the conviction of Mr. Patrick, all expenses growing out of the trial were paid, including those incurred by the litigation of the Patrick will, and the probate of the genuine will. The road was now clear to carry out the plans of the benefactor for an educational institution. The

2. Ibid., p. 253.
estate, less expenses against it, amounting to between four and five million dollars, was turned over by the executors of Mr. Rice's will to the trustees of the Institute in 1907. These were the same trustees who had been appointed by Mr. Rice some years before when he founded the Institute.
CHAPTER IV

THE ORGANIZATION

Thus far in portraying the events and factors leading to the establishment of the Rice Institute, the life of the donor and also his will have been considered. It is now in order to give some brief consideration to the evolution of the organization of the institution from the time of its inception in the mind of its founder to the time of its opening, September 23, 1912.

A little more than forty years ago a half a dozen of Mr. Rice's intimate friends were happily surprised when he called them around him and informed them of his desire to found an institution of higher education for the permanent benefit of the city and state of his adoption. The good news regarding this proposed gift from Mr. Rice occasioned the more surprise from the fact that not many months previous to this particular time he had refused the solicitation by a number of public spirited citizens to build a high school for the city. His reason for refusing to grant this request was that he had in mind a larger and more permanent gift for the city in the way of a broader educational enterprise. However, he did not reveal his project to them on this occa-
sion, but waited until he had the plan organized in his mind and was able to give them something definite.

Mr. Rice was a man of vision and no doubt realized the establishment of a great university would be an enduring monument to his name, and that the good influence that would emanate from it would be everlasting. William Henry Car- penter says: "No human institution is so permanent as a university. Dynasties come and go, political parties may rise and fall, the influence of men may change, but the univer- sities and what they stand for go on forever." Perhaps the founder had caught the enduring vision regarding universi- ties pictured here and it helped him to determine the purpose for which he should leave his money after his death.

The six gentlemen whom Mr. Rice invited to meet with him were, Frederick A. Rice, his brother and associate in business for many years; A. S. Richardson, the secretary of the Houston Texas Central Railway Company; Caesar Lombardi, of the firm of William D. Cleveland & Company, of Houston; Emanuel Raphael, then attorney-at-law and secretary of the Houston public schools; J. Everett McAshan, the father of S. M. McAshan, now president of the South Texas Commercial Bank; and James Addison Baker, a lawyer in Houston. All were

prominent men in the affairs of the city and all except the last-named person are now deceased.

Mr. Rice made the opening address at this meeting and it was at his suggestion that these gentlemen were organized into a Board of Trustees for the new foundation, in which was incorporated the institution of William Marsh Rice in 1891 under a broad charter granting the trustees great freedom in the organization of a non-political and non-sectarian institution of liberal and technical learning for the advancement of literature, science and art, to be founded in the city of Houston, Texas.

The six above-mentioned men, together with Mr. Rice himself, constituted the first Board of Trustees. Mr. Rice suggested that James Addison Baker be made chairman of the Board. This was an apt suggestion and was agreed to unanimously. Emanuel Raphael was elected secretary and served faithfully in that office during his lifetime. At this point the question arose as to who would be treasurer of the Institute. Mr. Rice had already given the matter much consideration and did not hesitate to express his opinion regarding the question. He informed the members that he thought he should serve in that capacity. He was accordingly

elected and served as treasurer of the Institute until his death. The Board now had a treasurer but no money. However, Mr. Rice immediately gave the original Board of Trustees a note for two hundred thousand dollars, bearing interest at the rate of 2½% annually, the whole amount payable at the death of the donor. Prior to his death he had transferred other valuable portions of his estate, included among which were ten thousand acres of land in Jones County, Texas, and forty thousand acres of land in the State of Louisiana, which were covered with valuable pine timber. Later he transferred to the Institute the Capitol Hotel Building, located on Main Street, on the present site of the Rice Hotel. After Mr. Rice's death the trustees sold the acreage in Texas and Louisiana.

Under the terms of the charter the Board is a self-perpetuating body of seven men elected for life. Vacancies have occurred on the Board from time to time since its organization. These vacancies have been filled by the election of Messrs. William Marsh Rice Jr., Benjamin Botta Rice, Edgar Odell Lovett, John Thaddeus Scott, Alexander Sessums Cleveland and Edgar Andrew Peden. James Addison Baker, chairman of the original Board, holds the same office on the present Board.

It was the wish of the founder that the development of the work which he had conceived and so nobly begun, should not be carried further during his lifetime. His desire was that the estate be held intact during the remainder of his days; however, as has been previously stated, he did increase the endowment fund to some extent before his death, but in the end he made Rice Institute the object of his beneficence. At the close of a long litigation following Mr. Rice's death, the Board of Trustees found the institution in possession of a large estate. In 1929 the assets were conservatively estimated at more than fourteen million dollars. A provision in the founder's will divided the estate into two almost equal parts, available for equipment and endowment alike. The Trustees are determined to follow the policy of building and maintaining the institution out of the income, and hold intact the principal of the endowment fund, and also that of the equipment fund.

Now that the estate had been turned over to the trustees, they began to get busy, for already many people in Houston were impatient to see the work begun; in some instances sharp criticism had fallen upon the management for the apparently unnecessary delay in getting operations under way. As soon as

they were ready for business they began by converting the non-productive properties of the estate into income-bearing investments, and thus was laid the foundation for the enhancement of the property.

The next matter which engaged the attention of the Trustees was the selection of a president for the future institution. They fully realized that this task was one of more than ordinary importance, and in the performance of which largely depended the destiny of the institution. Notwithstanding the fact that they were in control of a princely endowment, they were aware that something more than money was needed to launch such an institution as proposed by the founder. They well knew that the president must be not only a man of letters, a man of character and culture, but that he must also be a man combining executive ability with these qualities. The paramount question was, where were they to find such a man?

They began this important task by writing letters to noted men in the United States asking them to suggest a man for the position. They corresponded with former President Grover Cleveland and also with Theodore Roosevelt who was then President, requesting each to name a man for the position.

Letters were written to the presidents of the larger colleges and universities of the nation, asking that a suitable man be suggested. Many were mentioned, and among them was the name of Edgar Odell Lovett. At that time Lovett was professor of physics at Princeton. A number of possibilities among recognized educators came to Houston, looked over the field, and gave the proposition some consideration. Meanwhile, they themselves were being looked over by the Trustees. Among those who came was Mr. Lovett. He had been highly recommended by Woodrow Wilson, then President of Princeton University. After much consideration the Trustees selected Professor Lovett. He, however, was not in a hurry to accept the post. His home and family ties were in New Jersey, but being urged to accept by Mr. Wilson he finally did so. The matter of selecting a president consumed one year, the matter having been settled in the early months of 1908.

Prior to taking up his residence in Houston, President Lovett made an extended tour of the Old World, where he visited the leading educational and scientific institutions with a view to gathering ideas for the new Institute. He was gone one year, after which he returned, in the summer of 1909, from a journey of study that extended over the wide expanse of territory lying between England and Japan.

1. Ibid.
While Dr. Lovett was making his tour of foreign colleges and universities, the Trustees at home were forging ahead with their part of the program. Much of the time, in this interval, was spent in finding a site for the university. When Dr. Eliot of Harvard made a visit to Houston in 1910, the Trustees conferred with him relative to the number of acres that the Institute should have. He advised them to get a large campus, urging them to secure at least one hundred and fifty acres. They decided to act upon this advice, as well as upon the advice of Dr. Lovett and other educators. At this time land was cheap in the city or immediately adjoining it, and there was plenty of vacant property surrounding Houston, but nevertheless it was a difficult matter to secure a site. Finally a most suitable campus was secured, embracing three hundred acres in the southern portion of the city, which met the requirements as to accessibility, drainage and other conditions. The negotiations for the purchase of the property consumed nine months.

Now that the purchase of a campus had been taken care of, there was another problem which immediately confronted the Trustees. This was the housing of the university. However, they were not long in deciding that the institution should be housed in imposing architecture, such as would be in keep-

1. Ibid.
ing with Mr. Rice's high aim. Having this idea in view they sought to establish on the campus of the Institute a group of buildings that would stand as an enduring monument to the memory of the benefactor. Having definitely decided upon this matter, they committed to Messrs. Cram, Goodhue and Ferguson, of Boston and New York, the task of designing a general architectural program to be submitted in behalf of the Institute. The general plan, which was the work of Mr. Ralph Adams Cram, was a very attractive one, and embodied many elements of the architecture of Italy, France, and Spain. The Board was much pleased with the general plan and accepted it in the spring of 1910. After the plan was accepted the work progressed more rapidly, and without delay plans and specifications were prepared for an administration building. The contract was let in the following July and the cornerstone was laid on March 2, 1911. The ceremonies incident to the laying of the cornerstone were very impressive. Almost every institution of higher learning in Texas was represented at the event.

About three months after the awarding of the contract for the administration building, the erection of a mechanical laboratory and power-house was begun, and by the next autumn the construction of two wings of the first residential hall

1. Ibid.
for men was nearly completed. The work on these buildings was carried on quite rapidly and all were ready for occupancy at the beginning of the academic year, September 23, 1912.

The Institute was very fortunate in having for its initial building program the assistance and cooperation of an exceedingly competent advisory committee, consisting of Professor Ames, director of the physical laboratory of Johns Hopkins University; Professor Edwin Grant Conklin, director of the biological laboratory of Princeton University; the late Professor Theodore William Richards, chairman of the Department of Chemistry of Harvard University, and Professor Samuel Wesley Stratton, who was director of the National Bureau of Standards.

Building operations were suspended for a few months subsequent to the opening of the first academic year. However, the work was soon resumed, and the third wing of the first residential hall was begun in 1913 and was first occupied by students in the fall of 1914. The construction of the physics laboratories and the lecture amphitheater was also begun in 1913, and was completed in the summer of 1914, from plans which had been prepared by Messers. Cram and Ferguson under the supervision of Dr. H. A. Wilson, Professor of Physics in the Institute.

1. The Rice Institute, Annual Catalogue, 1912-1913, p. 20.
stitute. In January 1916 ground was broken for the first wing of the second dormitory for men; the work was hastened and the construction completed by September 1916.

During the World War, owing to the unsettled condition of the country, building operations were suspended at Rice Institute for a time, but after the Armistice was signed the work of building was resumed, and in 1920 the Athletic Field House and other structures of the exhibition field were completed. In the midst of the gaiety of the commencement exercises of 1923, ground was broken for the new chemistry laboratory, the plans for which were drawn up by Messers. Cram and Ferguson and by W. W. Watkin, associate architect, under the direction of H. E. Weiser, Professor of Chemistry in the Institute. This building was not ready for occupancy until the academic year of 1924-1925.

The mapping out of plans embracing the educational course of the Institute was a huge undertaking and required much serious thought on the part of Dr. Lovett. While the Institute had a liberal endowment, this did not, to any extent, lessen the need for careful thought regarding its educational features, including its curriculum. Dr. Lovett found it neces-

1. Ibid., 1931-1932, p. 10.
2. Ibid., p. 11.
sary to make a careful study of just what should be the character of the first courses and the first buildings in order to meet the needs of the situation. After having determined upon the various branches of the educational course, his next problem was the selection of the faculty. The success of the Institute and the success of the president depended largely upon the faculty brought together. Many months passed and a vast amount of correspondence was carried on before they were finally selected.

After the faculty had been selected the next step was to assign activities to the different members. These various activities of the institution have, ever since the beginning, been administered by the president and the faculty. The faculty worked primarily through committees. The Committee on Examinations and Standing takes care of matters pertaining to the curriculum in general and to students' schedules and grades in particular. The management of the honors courses and graduate work, as well as the guidance of the students enrolled in this work, is in the hands of a Committee on Honors Courses and Advanced Degrees. Athletics of the institution are controlled by a Faculty Committee on Outdoor Sports. In addition to the committees that have been mentioned, there are the usual administrative people subordinated to the
resident, such as the Dean, the Bursar, and the Registrar. These men are entrusted with the work which is ordinarily administered by officers bearing these titles. The distribution of faculty assignment was the procedure which marked the conclusion of the academic organization.

The Institute was first opened for actual class work on September 23, 1912. The first general assembly was held in the faculty room of the administration building on September 26th. The president, the trustees, and a large number of citizens received the first class of students with appropriate ceremonies. The exercises were not elaborate, for these were held in reserve for the formal opening of the Institute which occurred later, and which was one of the most noted events in the history of Rice Institute. This formal opening was of such great significance that it has been given the appellation, "The Academic Festival", and because its consideration is worthy of a separate treatment, it will constitute the discussion of the following chapter.

1. Conference with Samuel Glenn McCann.
2. "First Class Week of the Institute", in The Houston Daily Post, October 6, 1912.
CHAPTER V

THE ACADEMIC FESTIVAL

As was set forth in the preceding chapter an account will now be given of the academic festival which was held in observance of the formal opening of the Institute, which occurred in October, 1912. The ceremonies incidental to the formal inauguration of this school of liberal and technical learning were opened on Thursday morning, October the 10th, under the most favorable circumstances. The weather was ideal. The sun was warm, but a delightful breeze was blowing from the Gulf during the day and evening. The generous cooperation of the citizens of Houston and the State, and the inspiration from several hundred scholars and scientists who came to the City to assist in the launching of the University made it a happy occasion.

This was a gathering of scholars who had attained eminence in their professions. They came from most of the larger colleges and universities of the United States, and several were present from foreign institutions. Chief among those who had consented to participate in the inaugural program were twelve foreign savants. They were asked to prepare a series of lectures on philosophy, history, letters, and art.

and in the fundamental sciences of mathematics, physics, chemistry and biology. The twelve educators from abroad were as follows: Professor Rafael Altamira y Crevea, of Madrid, Spain, Professor of History of Spanish Law in the University of Oviedo; Professor Emile Borel, of Paris, France, Director of Scientific Studies at the Ecole Normale Superiure, and Editor-in-Chief of La Review du Mois; Senator Benedetto Croce, of Naples, Italy, Life Senator of the Italian Kingdom; Professor Hugo de Vries, of Amsterdam, Holland, Director of the Hortus Botanicus and Professor of Anatomy and Physiology of Plants in the University of Amsterdam; Professor Sir Henry Jones, of Glasgow, Scotland, Fellow of the British Academy and Professor of Moral Philosophy in the University of Glasgow; Privy Councilor Baron Dairoku Kikuchi, of Tokyo, Japan, President of the University of Kyoto; Professor John William Mackail, of London, England, Professor of Poetry in Oxford University; Privy Councilor and Professor Wilhelm Ostwald, of Gross-Bothen, Germany, Professor of Chemistry in the University of Leipzig; the late Professor Henri Poincaré, of Paris, France, Professor of Mathematics and Astronomy in the University of Paris; Sir William Ramsay, K. C. B., of London, England, Professor of Chemistry at University College, London;

1. The Rice Institute, Annual Catalogue, 1913-1914, p. 8.
Professor Carl Stormer, of Christiania, Norway, Professor of Pure Mathematics in the University of Christiania; and Professor Vito Volterra, of Rome, Italy, Dean of the Faculty of Science and Professor of Mathematical Physics and Celestial Mechanics in the University of Rome.

The ceremonies began with a formal breakfast which was given in the Bender Hotel at eight o'clock in honor of the visitors. The next feature of the morning was the educational lectures in the faculty chamber of the Institute in the Administration Building. The room was appropriately decorated. The walls were bedecked with the flags of the nations. In the center above the rostrum was a large flag of the Institute. On a background was the shield of the Institute and the Texas shield circled with magnolias. The side walls and rear wall bore flags of the Institute and large American flags, beneath which was the seal of the United States. Dr. Lovett, President of the Institute, introduced leading educators from Italy and Holland, who closed the morning exercises.

On Thursday four lectures were delivered, the first of which was by Professor Senator Vito Volterra, of Rome, Italy, who delivered a series of three lectures: one on "The Pro-

gress of Science, in Particular, Its Advancement in Italy". The speaker stressed the great strides that had been made in Italy during the past two decades. This was followed by Professor Hugo de Vries, of Amsterdam, Holland, who read a series of papers on "The Ideals of the Naturalist"; Mutations in Heredity"; "Geographical Botany"; and "Modern Cytological Problems". The thoughts in these papers were profound, some of which will be discussed in the thesis under "Facts About Mutation", the subject of a lecture given by the speaker at the Majestic Theater on Thursday evening.

One important feature of the day was a luncheon at one o'clock in the Banquet Hall of the City Auditorium, in honor of the guests of the Institute, and given by the City Commissioners of Houston. There were responses by several delegates to addresses of welcome by the Governor of Texas, the Mayor of Houston, and the Chairman of the Board of Trustees of the Institute. This luncheon was a cosmopolitan affair. About the table were gathered two hundred ladies and gentlemen, among whom were men from England, Holland, France, Scotland, Norway, Italy, Japan, and Spain. Almost every state in the United States was represented.

Governor O. B. Colquitt, of Texas, occupied a position of

1. Ibid.
honor, with the members of his staff grouped about him. Mayor B. Baldwin Rice, nephew of the founder of the Institute, sat at the Governor's right, and was the Master of Ceremonies. After the guests had partaken of the luncheon, Mayor Rice on behalf of the city extended a warm welcome to the guests. He then introduced Captain James Addison Baker, the Chairman of the Board of Trustees of Rice Institute, who, in substance, spoke as follows: That just as America a little more than one hundred years ago had declared her independence and had established here an asylum for those seeking liberty, so had the promoters of Rice Institute established it through the generosity of the donor. Furthermore, they gave to all a welcome to come and drink from the fountain of knowledge. He extended a hearty welcome to the guests from other nations.

Following Mr. Baker's address Governor Colquitt welcomed the visitors from abroad in the name of Texas, which, he said, was made up of some of the best men and women from all nations. He observed that his mother was from Holland, for which he was proud. He declared that America had made more progress in science since the declaration of American independence than had been made during the six thousand years before.

Mayor Rice then introduced Professor Sir William Ramsay of London, England, who expressed the opinion that Rice Institute had before it a magnificent future. He stressed the fact that its founder had begun it well by making appointments of eminent men to be its professors and by the number of students whom they had enrolled, and added that he understood that only approximately one fourth of the number of applicants for admission had been accepted. This policy convinced him that they were going to keep the standard high. He closed his address by declaring that the one danger threatening American Universities was the large number of students enrolled, and that he felt that this number was growing too large. He gave by way of illustration the fact that the Professor of Chemistry in the University of California had told him recently that he had over two thousand students to teach. Professor Ramsay asserted that for one to teach two thousand students was an impossibility. He declared that the better plan was to increase the number of teachers and not to appoint assistant teachers or lecturers, but to create entirely separate departments; that if two professors of philosophy were required, then have them, even at double expense, for it would pay. He further indicated that one could not turn out students
as he would needles and wire nails, for the reason that learned men cannot be made that way, but that each student must come into personal contact with his teacher.

Provost William Henry Carpenter of Columbia University extended congratulations to Rice Institute in behalf of the older Eastern universities. He stressed the solidarity and the permanency of the interest indicated by this educational gathering. He emphasized the permanent influence of the university, and the fact that opportunities were greater than ever before in the history of the world.

The next speaker was Senator Volterra of the University of Rome, one of the oldest universities in the world. Senator Volterra brought greetings from his institution and extended hearty congratulations to the Rice Institute. Sir Henry Jones of Glasgow, who followed Senator Volterra, began his address by asserting that he had two duties to perform; first, to express his feeling of satisfaction at being present among so many who love learning, not only in the City of Houston, but also from the States of America and of western and southern Europe. He informed the audience that the last occasion of such a gathering as this, which he had attended, was the celebration of the jubilee of Lord Kelvin

2. Ibid., pp. 33-35.
as Professor in the University of Glasgow, which occasion Professor Ker of London University compared to heaven because of the fact that one meets so many old friends and is so surprised to see them. His second duty, the speaker added, which gave him still greater pleasure, was to join with those present, in presenting good wishes for the prosperity of the Rice Institute.

Following Sir Henry Jones, Dr. George Cary Comstock, of the University of Wisconsin, spoke for his own University and for the other universities of the West. After briefly reviewing the life of Cecil Rhodes and the purpose for which he left his vast fortune, he gave as a definition of a university, an institution to which the community may turn for guidance, for leadership, for expert advice in matters of science and scholarship that are beyond the range of everyday experience. Continuing, he declared that it should be a place in which knowledge grows; in which, year by year, substantial additions are made to science, to letters, and to art; but in no less measure should it be a place in which that knowledge is utilized which is of benefit to the men in the street. He emphasized the fact that a major function of the university is to make abstract science concrete and profitable for mankind, which condition cannot be secured by the

1. Ibid., pp. 39-40.
dreamy recluse such as Mr. Rhodes, although this type, indeed, has its uses, for with its disappearance something would be lost from the sweetness of life, but it should not be trusted alone when selecting an academic staff.

President Henry Sturgis Driker, of Lehigh University, was then introduced. He expressed his gratitude for having the privilege to participate in the ceremonies of the day, and extended hearty felicitations to the Institute. He paid a high tribute to the founder of the institution.

Professor Emile Borel of Paris, France, came as a delegate from the University of Paris, and in his talk extended greetings to Rice Institute as a new institution of learning. He then offered a toast to Houston and the institution, as follows: "I drink most heartily to the prosperity of the City of Houston and to the prosperity of the Rice Institute."

Chancellor James Hampton Kirkland, of Vanderbilt University then expressed his pleasure for having the opportunity of being present at such an educational feast. He congratulated this new institution in the Southwest on having such a magnificent endowment, for the special reason that they of the South knew what it was to pass through both individual and institutional poverty. He went on to explain that while

1. Ibid., p. 41.
2. Ibid., pp. 45-46.
personal poverty is trying, institutional poverty is still more trying.

Professor Hugo de Vries, of Amsterdam, Holland, followed Professor Kirkland. He brought greetings from the University of Amsterdam and showed a beautiful spirit by declaring that there was room in the world for more and more universities, because the tasks of science and of education, always vast, were becoming greater and greater. For the new university he predicted a bright future, full of service to science and to Texas. He said, "To the prosperous future I raise my glass in high hopes and confident expectations."

President Samuel Palmer Brooks, of Baylor University, was the last speaker at the luncheon. On behalf of the educational institutions of Texas which he represented he extended a most generous welcome to the delegates. He declared that the educational institutions which he had the honor to represent, had high respect for the learning of the men of the scientific world, and that they no longer became surprised by their discoveries; it mattered not how wonderful they might be; that if these men were to be able to reduce all old physical elements to one, or to conserve the waves of the ever-rolling sea, or even to extract the heat from unmined

1. Ibid., pp. 46-47.
2. Ibid., pp. 49-50.
coal, or if they were to find perpetual motion, or perform the great feat of increasing the working-hour of honey-bees by crossing them with lightning bugs - nevertheless, they of Texas would never run from the facts.

On Thursday afternoon at three o'clock, in the faculty chamber, Professor Emile Borel, of the University of Paris, delivered a lecture on the "Theories of Molecules and Mathematics". In this lecture he emphasized the importance of mathematics to navigation. As an illustration he pointed out how mathematics had been an aid to Columbus in discovering America; likewise how it has aided other navigators since that day. The closing lecture of the afternoon was delivered by Sir Henry Jones, of Glasgow, Scotland - really three lectures in one, on the theme: "Philosophical Landmarks". It was a survey of the recent gains and the present problems of reflective thought.

At the Majestic Theater on Thursday night at 8:30 o'clock, Professor Hugo de Vries, of the University of Amsterdam, lectured on "Ideals of the Naturalist". The lecture was illustrated by stereopticon views. Professor de Vries, while a firm believer in evolution, declared that all forms and types of life are not the result of the principle which was discover-

1. Ibid., pp. 49-51.
ered by Charles Darwin fifty-years ago. Some forms of plant life are developed as distinct types almost spontaneously; they spring from parents without passing through any intermediate stages. He illustrated this fact with a dozen different pictures and as many different plants, and declared that the idea that there are mutations in heredity is an established fact, but that the scientists who are working out the laws of mutations have not gone very far in the undertaking. He observed that some plants come into existence through mutation rather than through the slow process, as shown by a number of different scientists in various parts of the world a few years ago. He informed his audience that he became interested in the phenomenon and started a series of experiments in his gardens at Amsterdam, and that through the process of seed selection he began to reap the results in about eight years.

On Friday morning there were three lectures given in the Faculty Chamber of the Administration Building, where all the lectures were delivered. The first one was given by Professor Rafael Altamira y Creven, of Madrid, Spain, whose subject was, "The General Ideas of Human Progress". He discussed this subject from the standpoint of its application

1. Ibid.
to the political institutions of society and their illustration in the Spanish background of American civilization.

The next speaker was Professor Sir William Ramsay, of London, England, the celebrated chemist. His subject was, "Three Lectures on Transmutation; Some Deductions from Modern Views Concerning Atoms and Molecules". In his address he expressed the conviction, gained from recent discoveries, that some day delvers into organic chemistry would discover a method whereby gold might be transmuted from baser metals. He declared that unquestionably scientific work was just beginning, and that as wonderful as had been the advancement of science in the past, the discoveries that had been made are merely a basis for future investigation. Professor Ramsay was asked in what field he looked for the greatest advance in the future, and he replied, that he believed that science applied to medicine would show the greatest advance. He pointed out that at present scientists really knew very little of medicine compared with what there was to learn. And yet, he admitted, that science as applied to medicine had made considerable progress up to this date.

Professor John William Mackail, of London, gave the closing address of the morning, his subject being, "The Func-

tion of a University". He stated that while the number of American universities was undergoing striking and fruitful expansion, it was being recognized that an institution of university rank must have a sphere of study and influence as wide as the whole width of human activity; that it can no longer confine itself to some special study, and can no longer be merely a theological seminary, or a school of letters, or a training college of commerce, or a collection of laboratories and workshops, but that its function and scope must be universal. It must proclaim the unity of all knowledge, the kinship of the arts and science, the mutual interdependence of all study and research towards the conquest of nature and the complete civilization of man. To this task there are no bounds; beyond the widening frontiers of knowledge lie ever more and more the unexplored territories.

The growth of knowledge is the growth of power; the organization and communication of knowledge are the organization and communication of power; and that power is not merely a power over what is not known, but a power and a will and an endless purpose to know more.

Following a luncheon in honor of the guests at the Thai-

lian Club, given by Mr. and Mrs. Jones Shearn Rice, all the

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delegates enjoyed a treat in the way of a concert at the Majestic Theater by the Kneisel Quartet of New York City. After this musical feast there was a garden party given by Mr. and Mrs. Edwin Brewington Parker at their home, "The Oaks". Then followed a concert in the Faculty Chamber a concert by the Kneisel Quartet. The program was made up of selections from such composers as Haydn, Bach, Grieg, and Glière.

The Congress of Scientists gathered in Houston for three days to assist in the inauguration ceremony, for it was recognized that the opening of Rice Institute was an event of more than ordinary character. Those representing the educators of American colleges and universities, as well as those from abroad, looked upon the event as one of the most significant in their experience. The formal dedication was an imposing affair. The ceremonies of the inaugural and dedication of the Rice Institute were marked for their brilliancy from the beginning, but the final and formal ceremony in the court of the Administration Building on Saturday morning was the most marked, and furnished a fitting climax to the whole occasion. Seats were placed in the court for the people attending. The ceremonies were open to all who desired to attend. A vast throng of people availed themselves

1. Ibid., vol. I, p. 54.
of the opportunity which was afforded. The ceremonies opened with an academic procession which began at the Residential Building. In the procession were members of the faculty and trustees of the Institute, its special representatives from foreign countries, and delegates from the many colleges and universities of America. All were attired in academic cap and gown; the whole making an imposing spectacle.

The procession was headed by the Municipal Band of Houston, which played, "My Dream of the U. S. A.", a melody march which introduced all the national airs of America - "The Star Spangled Banner", "My Maryland", "Dixie", and "Yankee Doodle". The line of the procession moved from the Residential Hall to the west wing of the Administration Building. The group of educators filed down the cloister to the sally-port where the dedicatory throne, a handsome piece of work done in mission, had been erected. Dr. Edgar Odell Lovett, President, and Dr. Henry Van Dyke, the Poet Laureate of the Institute, led the procession, followed by Bishop Gailor of Sewanee University. Then, in turn, came the representatives from European colleges and universities, each marching with a member of the Board of Trustees. After them came the members of the Faculty, each marching with a visiting delegate.

1."Formal Dedication", in The Houston Daily Post, October 13, 1912.
delegates from the colleges and universities of the home land completed the long procession. While the group filed in and found seats, the Houston Quartette, led by Hu Hoffmaster, rendered a Latin hymn, entitled, "Veni Spiritus", the Municipal Band furnishing an accompaniment.

Those who had the honor of occupying seats on the throne were Dr. Lovett, Dr. Henry van Dyke, Bishop Gailor, Dr. Robert Ernest Vinson, Chief Justice Brown, Sir William Ramsay, Rev. Charles Frederick Aked, Sir Henry Jones, Senator Rafael Altamira Y. Crevea, C. Lombardi, E. Raphael, James Addison Baker, William H. Rice, Dr. Henry Cram, Professor Huyler, and J. E. KoaShan.

The ceremonies were opened by Dr. Ernest Vinson of Austin, who read a Scripture lesson and then offered prayer, invoking the blessings of God on the purpose for which they had assembled. Following the devotional services, Dr. van Dyke read the Rice Institute inaugural ode, the subject of which was, "The Wild Bees". This was followed by Dr. Lovett's inaugural address. As portions of this address have been referred to in different parts of this thesis, a brief outline only will be given here enough to give the reader some idea of the character of the address, which is suggestive of the genius of the Institute, its

1. Ibid.
ideals and its standards. His theme was, "The University", and he considered it under the four headings: "Its Source, Its Site, Its History, and Its Strength and Support". Under the last heading he stressed the fact that it was not the walls that make the city or the university, but the men within it.

"Chief Justice Brown, of Texas, followed Dr. Lovett with an address on "Education and the State", in which he stressed the duties of the successors of those who fought for their country to properly educate their children and also the masses. For in a democracy such as this, where the people are sovereign and constitute the controlling power, there is need of education. He observed that one of the reasons for the War with Mexico was that the powers in control failed to look after the education of the people; that it was because of this that we fought. In fighting, we made a pledge to the generations coming after us, and we must redeem that pledge. We ought to have schools where men may learn to think and to reason correctly, and arrive at correct conclusions.

Bishop Gillor of Tennessee, Chancellor of Sewanee University, was the next speaker. He pointed out that he was present in response to the invitation of the President; not as Bishop of Tennessee, but as a representative of the Christian Church,

and he emphasized the fact that the early Christian Church found the classical literature of Greece and Rome filled with fables and deceits and foul stories of the gods, which were calculated to injure both the faith and the morals of a simple people; and that, therefore, there appeared very early a growing prejudice against pagan learning. Continuing, he declared that in spite of this fact, and in spite of the fact that the persecution of Christians up to the beginning of the fourth century in the present era had bred in them a distrust and dislike for books. The moral and social riot which accompanied the decline of Roman civilization created a reaction in favor of Christian asceticism and monasticism, which declared its hatred of the common world and everything connected with it - its culture, its learning and its refinement, as well as its falseness, its cowardice, and its degradation. He concluded his address by saying that in spite of all these temptations, and propulsions toward barbarism, the Christian Church became, and continued to be, the home and the nursery of intellectual culture.

Dr. Gailor here touched upon the subject of education during the Middle Ages, and here took occasion to express the thought that in every period there were educators and scholars possessing a broad outlook on life, but, who, however, did not
redeem the period in which they lived. There was a right for higher ideals throughout a period of four hundred years, and when the change did come, it was brought about by Christian schools, under the Benedictines and the schools of Charlemagne; also by the schools established by Alfred the Great. Following Dr. Gailor's address, in response to an expressed desire on the part of the guests to extend congratulations to the Institute from many of the colleges and universities which they represented, they were given the opportunity to do so at this time by President Lovett.

Sir William Ramsay was the first to express felicitations. He was personally the conveyer of congratulations from the University of London, from University College, London, and from the American Philosophical Society, and in the name of these institutions he wished a very long life and great prosperity to the new institution. He had received a number of cablegrams from learned institutions in almost every part of the world, whose representatives were not present at the Academic Festival, asking that he extend their good wishes to the Institute. As the time was limited, he did not read the cablegrams, but he named the places from which they were sent, as follows: Moscow and St. Petersburg, Russia; Denmark; Bucharest, Roumania; Berlin and Göttingen, Germany; Christiana, Nor-

1. "Congress of Scientists", in The Houston Daily Post, October 13, 1912.
way; Stockholm, Sweden; Lemberg, Poland; Rome, Italy; and still others from all points of the compass. In the names of these institutions most hearty congratulations and best wishes were given for a long and successful life to the newly founded institution.

Professor Borel of the University of Paris presented the best wishes of his University and those of the Ecole Polytechnique. In his talk he commented upon the artistic beauty of the buildings on the Rice Campus. Following Professor Borel, Dean William F. Magie of Princeton University spoke. He took occasion, first of all, to extend to President Lovett and the Board of Trustees of the Institute his warmest congratulations. He also brought to President Lovett, personally, the good wishes of his many personal friends on the Princeton faculty and those of Mrs. Grover Cleveland. Then Professor William Holding Echols of the University of Virginia, the Alma Mater of President Lovett, spoke briefly, closing his address with the following words: "From old Virginia on the east to young Texas on the west, I extend hearty greetings and best wishes."

From the University of Texas came warm congratulations to this new laborer in the vineyard of education. Greetings from the state institution were given by the President of

the University, Sidney Edwards Menzes, who also conveyed the sentiments of other Texas educational institutions. He closed his remarks by saying that the University of Texas welcomed Rice Institute into the brotherhood of Texas universities.

President Lovett then expressed his appreciation for all the good wishes. He thanked God for their presence and gave voice to the hope that they would all come back some day. The ceremonies of the day closed with a reception for the guests at the Houston Country Club, given by President and Mrs. Lovett. Messrs. Julian Paul Blintz, cellist; Jahn, pianist, and Saft, violinist, rendered music for the occasion during the hours from five until six-thirty P. M. At the conclusion of this function a special train was boarded at the University grounds for Galveston. The guests proceeded to that city where they were entertained at the Hotel Galvez by the Trustees of the Institute.

On Sunday morning the party returned to Houston on a special train in time to participate in a special religious service at the City Auditorium. All the churches of the City joined in these services. The choir and band furnished sacred music for the occasion. President Lovett gave the invocation and Dr. Henry Van Dyke read the Scripture lesson

1. Ibid., pp. 234-235.
from I Corinthians, XIII, and offered the prayer. Rev. Charles Frederick Axed, the pastor of the First Congregational Church of San Francisco, preached the sermon on the subject, "Waiting for the Sons of God". In the presence of an audience of five thousand people he read his text from Romans 8:19. The first point treated in his sermon was the coming of the Kingdom of God. He predicted that more men and women than ever before contributed to the world's happiness. He added that we are waiting for the sons of God, who are the energy of all moral effort - namely, a steady supply of good men and women. This, he emphasized, is the steam which makes the engine go. The second point treated in his sermon was to the effect that force will fail and in the end only spiritual values will endure permanently. He cited several examples to show the truth of this principle. In his third point the speaker discussed the excess of machinery methods in the churches today. Following this he discussed the study of methods. The last thought stressed in his sermon was that this newly founded Institute should be dedicated to God.

The speaker referred to the fact that on the day before Rice Institute had been dedicated with joy and deep thanksgiving.

1. Ibid., 240-260.
to the purposes set forth in the founder's will. He concluded his sermon by urging that all persons present unite with him in dedicating the institution to the advancement of Letters, Science, and Art; and to the service of the imperial Commonwealth of Texas; to the material and moral progress of the Southland; to the cause of human improvement all over the earth; and to the glory of God. He invoked the benediction of the Most High upon the President, Trustees, and Faculty, and upon other great-hearted men and women who might bring to the aid of this institution, then and in the coming days, gifts of heart and brain and hand; and he prayed that in the years to come the sons and daughters of Rice Institute might bring honor to its name; that their children and their children's children might rise up and call it blessed; that they might show themselves to be the sons of God for whose coming Creation waits and longs, cooperating with the World's eternal purpose, and preparing for a redeemed and renovated earth. This sermon furnished a most appropriate close to the three days of impressive ceremonies incident to the formal inaugural of the institution, and will live long in the memories of those who heard it.

1. Ibid., pp. 260-261.
CHAPTER VI

BUILDINGS AND GROUNDS

Having given a description of the academic festival which occurred at the opening of the Rice Institute, it would seem appropriate at this point to give some consideration to the Buildings and Grounds of the institution; these, shall, therefore, form the basis for this chapter.

Rice Institute is located in Houston, the Magnolia City, on the extension of the city's main thoroughfare, about three miles from the center of the city, and on its southern border. When the large campus, which contains three hundred acres, was purchased, it had no background. Now that almost a quarter of a century has passed, it has a very attractive setting. It is flanked on three sides by palatial homes, while in front of the campus and buildings is the wide thoroughfare, in the center of which is a beautiful esplanade, with a profusion of blooming roses the entire year. Beyond the thoroughfare is the Herman Park of five hundred and forty acres, containing thousands of shade trees and many miles of good surfaced roadways. Its floral gardens and the zoo are the main features of interest. At the entrance to the park just in front of Rice Institute is an equestrian statue of Sam Houston, who is pointing to the future possibilities of Texas. One

block north of the campus are the sunken gardens with many blooming flowers. A few steps north of the sunken gardens is the Art Museum, where are hung pictures from the brushes of the old masters. The scene with the campus and the buildings makes indeed a most pleasing sight.

The campus acreage is very irregular and has a frontage of four thousand feet on the main street of the City. It has four main entrances. The principal one lies at the corner of the grounds nearest the city. The approach from this entrance to the Administration Building is a broad avenue several hundred yards long, bordered on each side by shady oaks and wide-spreading lawns, and terminating in a forecourt. Through the vaulted sally-port of the Administration Building is opened up a vista of more than a mile within the limits of the campus. The driveway from the main entrance divides at the forecourt, encircling the ends of the Administration Building, from where it extends for half a mile in two drives, heavily bordered with foliage and separated by a distance of several hundred feet. Rose gardens meet one's view in passing through the sally-port from the forecourt, beyond which gardens is a large court measuring three hundred by five hundred feet, beautified with cypresses. Still further beyond is an academic court even larger in dimensions, planted in groves of wide-spreading live oaks. The avenue from

1. The Rice Institute, Book of the Opening, vol. I, p. 188.
THE BALLYPORT
the second entrance leads into the avenue from the first entrance, while from the third entrance there is a long driveway leading to the Mechanical Laboratory, the Machine Shop, and the Power House.

The fourth entrance on Main Street leads to the Athletic Field and to the Residential Colleges for Men. Although each unit of the Colleges for Men has its own inner court, the various buildings themselves, together, enclose a long rectangular court, bounded on the east end by the Gymnasium, which opens on to the Athletic Stadium in the rear. Lying between the Botanical Gardens and the Laboratories of Pure and Applied Science, and north of the Men's Residential group, across the great court, is the Quadrangle of the Graduate School with its professional departments.

The Administration Building is the most beautiful and artistic building on the campus. The corner-stone for this building was laid on April 21, 1911. The architecture employed in its construction and finish has excited the admiration of many people. The front entrance to the sally-port is an exquisite piece of art. At the rear entrance to the sally-port is a long cloister with granite columns. On the caps of the cloister's granite columns are the heads of sixteen founders, lead-

ers and pioneers in the following subjects, classical and scientific:

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<tr>
<th>Subject</th>
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<tr>
<td>Religion</td>
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<td>History</td>
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<td>Philosophy</td>
<td>Immanuel Kant</td>
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<td>Art</td>
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<td>Jurisprudence</td>
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<td>Biology</td>
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<td>Aerodynamics</td>
<td>Samuel Langley</td>
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<td>Radioactivity</td>
<td>Pierre Curie</td>
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<tr>
<td>Eugenics</td>
<td>Richard Galton</td>
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Oswald Lassig, a German who had been in this country only a few years, carved the faces on rough stone and surrounded them with much flora and foliage.

On the exterior walls of the faculty chamber are three tablets on which are engravings dedicated respectively to Letters, Science, and Art. The tablet to Letters bears the head of Homer, below which is inscribed Macnail's translation of Pinder's tribute to style, to the effect that the thing one says well goes forth with a voice unto everlasting.

The tablet to science bears the profile of Isaac Newton, go-

1. Rice Institute, Book of the Opening, vol. 1, p. 149.
THE ADMINISTRATION BUILDING
gether with Job's anticipation of the method of scientific inquiry, in which he says, "If you speak to the earth, it shall teach you." The tablet to Art bears the head of Leonardo da Vinci, under which is the inscription to the effect that the chief function of art is to make gentle the life of the world.

The architecture of the Administration Building reflects that of the early period of the Mediterranean countries. It exhibits many attractive elements of the architecture of Italy, France, and Spain. The building is constructed of local pink brick, a delicately tinted marble from the Ozark Mountains, and Texas granite. The beautiful color scheme is enhanced by the use of tiles and nineteen foreign marbles. The building has many windows to meet the local climatic conditions. The vaulted Byzantine cloisters are open to the salubrious gulf breezes. The building is fireproof throughout. It is three stories high, three hundred feet long, and fifty feet deep, with a basement running its entire length. In the center of the building is a tower of four stories through which a vaulted sally-port thirty feet high leads from the main approach to a long cloister in the rear.

John A. Roberts, who has a reputation of high standing in

the construction field, superintended the construction of the Administration Building. It is interesting to observe that he once told a representative of the Houston Post that he considered this building the most outstanding piece of structural work he had ever superintended.

The Administration Building was designed to take care of the executive and administration agencies of the institution in the future. At present the building has on all of its floors lecture rooms, classrooms and rooms for conferences, and offices for members of the faculty. A large portion of the north wing is occupied temporarily by the library and reading rooms. The general offices of administration, including those of the dean, the registrar and the bursar, are located on the first floor of the south wing. A large part of the second and third floors of this wing is used for a public hall. In subsequent years this assembly hall will become the faculty chamber. At present the meeting room of the Board of Trustees and the offices of the President are located in the tower, this being the only available space to be found after other important needs had been taken care of.

The Physics Building is located on the north side of the Administration Building Court. It was begun in 1913 and brought to completion the following year. The construction is


of brick and marble, and its design corresponds to the style as defined in the Administration Building; it is not, however, by any means so elaborate. The main wing is two stories in height, two hundred and seventy-five feet long, and fifty feet wide, with a basement throughout. This building is connected with a large Lecture Amphitheater, one hundred and twenty-one feet long and seventy-two feet wide. In this lecture room are four hundred seats and a twenty-eight-foot table. The laboratories in the Physics Building contain, among other rooms, three large lecture rooms fitted with special lecture tables well equipped for all kinds of experimental demonstrations. There are two large classrooms which will accommodate one hundred and twenty students each. The practical side has not been overlooked in planning this building. Four laboratories have been provided with a total floor space of ten thousand square feet for practical classes. The building is also well equipped for the carrying on of special research work. It contains ten rooms for this purpose, three dark rooms for optical work and other rooms for battery liquid air, one with a constant temperature, and another used as a workshop. In planning the building the needs of the individual student were kept in mind; as a consequence, all the laboratories, lecture rooms, and research rooms are provided with individual service for the students, including, among
others, such things as gas, water, steam, compressed air, vacuum, and direct and alternating currents of electricity.

The Chemistry Building occupies the northwest section of the quadrangle for pure science. The building, completed during the academic year of 1924-1925, is of steel and concrete construction, and of brick and stone, and harmonizes in architectural beauty and simplicity with the other science laboratories of the Institute. This is a three-story building with a spacious attic and basement, and in length measures three hundred and seven feet, with a width of one hundred and eighty-one feet. The structure is provided with many windows, giving an abundance of natural light throughout the building. An improved ventilating system removes all fumes through a central draft tower which is so designed as to constitute one of the architectural features of the building. Adequately equipped laboratories are provided both for research and instruction in a half a dozen major branches of chemistry. These laboratories compare favorably in every respect with those of larger establishments built recently at other similar institutions.

The Mechanical Laboratory, the Machine Shop and Power House are located north of the Chemistry Building, at the end

1. The Rice Institute Pamphlet, p. 28.
of a broad direct driveway from the third Main Street entrance. The Laboratory Building was begun late in the year of 1911 and was completed before the opening of school in the fall of 1912. The construction is of materials similar to those used in the construction of the Administration Building. It is a two-story structure and is fireproof throughout. It is two hundred feet long and forty feet deep, and like all the other buildings on the campus, it has a long cloister extending the whole length of the court side. It has a spacious basement which is used to the extent of its capacity for apparatus. On the other floors of the building are science, architecture, and engineering laboratories, lecture halls, recitation rooms, departmental libraries, and offices for the instructors in these departments. The Machine Shop provides a direct connection from the Mechanical Laboratory to the Power House in which is installed equipment for steam, refrigerating, and electrical engineering and distributing systems. The Rice Institute buildings have many conspicuous towers, but the lofty campanile of this group surpasses all of the others. It is visible for miles in every direction.

There are three dormitories for men - the South, East, and West Halls. They are located southwest of the Adminis-

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tration Building. These buildings are approached from the main thoroughfare by a broad driveway from the fourth entrance to the campus. The residential wings are long, three-story, fireproof buildings, with towers of five stories. On the front of each building are broad cloisters and underneath them are basements extending their whole length. The buildings are constructed of brick and stone. The ground surrounding them are beautifully landscaped. One side of each wing opens on a garden; the other side opens on to its own attractive court. The buildings are modern both in their arrangement and equipment. Every room has perfect ventilation and ample natural light; the central power plant provides power for artificial light and heat. These buildings will accommodate three hundred students who may live in single or double suites. Two large halls have been set aside for the temporary use of literary and debating societies. On each floor are lavatories, shower baths and sanitary connections sufficient for all needs. The wing known as the Commons contains a large dining hall, club and reading rooms, and also quarters for graduate students in a beautiful clock tower. There are no dormitories for women, but the broader plans of the institution include these for the future.

1. The Rice Institute Pamphlet, p. 28.
THE COHEN HOUSE
The Cohen House is located in the group of men's dormitories, southwest of the Administration Building. Mr. George S. Cohen gave $125,000. to the Institute with which to erect a club-house for the faculty, the sum having been given in memory of his father and mother, Robert I. Cohen and Agnes Lord Cohen. Of the total amount, $100,000. was used in the erection of the building, the remainder of the amount having been held in reserve. From the time of the founding of the institution to the present date, this is the only large gift that has come to the Institute.

The construction of the Cohen House is of brick and stone, and the roof of tile. It is two stories in height with a tower of three stories. The architecture follows the general lines of the other buildings. In front of the building is a beautiful flower garden; in its rear is a Spanish court and an artistic cloister of much beauty. Carved on the columns of the cloister are the features of sixteen of the present members of the faculty. The court makes a most exquisite scene with its many blooming flowers and its artistic fountain. On the first floor are the reception hall, the dining room, and the kitchen. The library, rooms for ladies, and a billiard hall are on the second floor. On the third floor are quarters for the manager of the building.

The Athletic Field House is located southwest of the Administration Building, on the Athletic Field. It is built of brick and concrete, reinforced with steel. It is two stories high, with a roof of tile. This building was designed by William Ward Watkin and was built in 1920 at a cost of $75,000.

The south wing is eighty by forty-eight feet. The first floor of this wing is devoted solely to a basketball room. The second floor of the same wing is used for boxing, wrestling, bowling, and dancing. The north wing is of the same dimensions as the south. On its first floor are training quarters, dressing rooms for athletic teams, lockers, shower baths, and lavatories. On its second floor are offices of the Department of Physical Education, equipment rooms, and locker rooms for students. The Field House fronts on the Athletic Field, which is surrounded by a cinder track a quarter of a mile long. The track contains a straight-away two hundred and twenty yards long.

The buildings described in this chapter constitute all the structure on the campus at the present time; however, when the broader plans of the institution are completed there will be about fifty buildings. The towers and cloisters constitute two very conspicuous features of these buildings and give them a distinct flavor of Old World architecture, while the

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spacious flower gardens and the foliage serve also to emphasize the oriental effect.

Having endeavored in the foregoing description to give the reader a picture of the various buildings of the Institute, together with its campus, an attempt will now be made to analyze the curriculum of the institution.
CHAPTER VII

THE CURRICULUM

The curriculum is a very important feature in the program of any educational institution. Consequently the preparing of a course of study for the Institute was not a simple nor an easy problem. It was quite an undertaking and required much time, thought, and energy. There were many problems to be kept in mind while constructing the curriculum. A problem that made the task of particular difficulty was that the Institute's objective was to begin with science. It has already been pointed out that Mr. Rice recognized the true worth of an education. He had advocated the training of the hand, the body, and the head. This requirement of threefold training meant therefore that programs of letters, arts, and the sciences had to be considered. Science constitutes the chief emphasis of the institution's program, though it should be mentioned that ample provision and facilities have been made for elementary and advanced courses in classical learning—thus enabling the Institute to offer both the advantages of a liberal general education and those of special and professional training. Very extensive general courses in scientific

knowledge are available. The program consists chiefly of subjects closely related and requiring close concentration and study.

The Institute offers degrees for the various courses of study, as follows: the Bachelor of Arts and the Bachelor of Science degrees are granted when certain specified requirements have been met. Degrees are also offered in architecture, in the several engineering courses, and in physical education. Rice also confers the following higher degrees upon students who meet the required conditions: Master of Arts, Master of Science, Doctor of Philosophy, and Doctor of Engineering.

The course of study leading to the degree of Bachelor of Arts after four years' work is the same for all the students in the first two years, but the third and fourth years' work falls in two divisions: first, general courses leading to the degree of Bachelor of Arts; and second, honors courses leading to the degree with honors in certain subjects. The general course has been so arranged as to provide thorough training for those students who desire instruction in literature and science, either as a part of a liberal education or preparatory to a business or a professional career. This course therefore

1. The Rice Institute, Annual Catalogue, 1931-1932, p. 43.
requires the study of quite a number of subjects on par with a high university standard, but does not require a highly developed specialized study of any one subject such as is essential in order to do research work or to teach in the university. Students who desire to specialize in order that they may do research work or become instructors in institutions of higher learning may accomplish their purpose by either completing the Bachelor of Arts course, with honors, with the additional courses and work leading to the degree of Master of Arts and that of Doctor of Philosophy, or they may first complete a general Bachelor of Arts course and then proceed with their work toward the higher degrees.

The Bachelor of Arts course was organized and put into effect in 1912. The work for this course extends over a period of four years. During the first two years the greater part of the work is prescribed, but during the last two years each student is allowed much freedom in the matter of electing his subjects. In the freshman year of the first class the normal academic schedule was made up of five courses, as follows: mathematics, English, German, chemistry, and physics. In the second year French was available, and, if desired, could be taken in place of German. Biology might also be elected for

1. Ibid., p. 46.
sophomore science. In addition to these, a course in the history of architecture was available as an elective in the sophomore year. A typical sophomore academic schedule would therefore run as follows: History of English Literature, French or German, Differential and Integral Calculus or science, and an elective, which might be architecture or another science or mathematics course. The studies of the first junior and senior students who were working for the degree of general Bachelor of Arts were the following: for the juniors, four subjects, of which two must have been taken in the second year and one in both first and second. For the fourth year, four subjects, two of which must have been taken in the third year and one in both second and third, or in the first and third.

The studies of the Bachelor of Arts course for the freshmen and sophomores in the school year 1931-1932 are given below:

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>SECOND YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure mathematics</td>
<td>Pure mathematics or a science</td>
</tr>
<tr>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>A modern language</td>
<td>A modern language</td>
</tr>
<tr>
<td>A science</td>
<td>Two other subjects</td>
</tr>
<tr>
<td>One other subject</td>
<td></td>
</tr>
</tbody>
</table>

It will be seen therefore that the changes for the first two years of this course have been very slight since the opening

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1. Conference with Samuel Glenn McCann, Registrar.
of the institution. The chief difference between the course at present and at the beginning is that in the first year the courses were definitely prescribed, whereas in 1931-32 there was more flexibility, the students having been given a rather wide range of selection. In the third year of the general Bachelor of Arts course the courses are the same now that they were in the days of the first Juniors at Rice. From the beginning of this course in the fourth year, students were required to take at least one subject from each of the groups, A and B, which were then available. About ten years ago a change was made whereby students were given the privilege to specialize in the fourth year, with the understanding that they substitute an advanced group for the required A or B group subject. This regulation allowing specialization in the fourth year is one of the important changes that has been made in the curriculum.

The third and fourth year honors courses which were designed to prepare students for a specific work are now available in a number of subjects, some of which are pure and applied mathematics, theoretical and experimental physics, physical science, modern languages and literature, biology, chemistry, English history, and philosophy. The honors courses were

1. The Rice Institute, Annual Catalogue, 1931-1932, p. 47.
given in mathematics and physics as early as the academic year, 1913-1914. The courses were available in pure and applied mathematics and in theoretical and experimental physics in 1915. These honors courses were offered in modern languages, literature and biology in 1915-1916. The requirements in the honors courses are more rigid than they are in the general course of the same subject. Unless a student is well qualified in the first and second years' work and shows exceptional ability, he is not permitted to enroll in the course.

The degree of Bachelor of Arts with first, second, or third class honors is awarded at the end of the fourth year to students who have completed an honors course.

The outline of studies in the honors courses of the several subjects is different; the following, however, is typical of a physics course:

THIRD YEAR

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Physics</th>
<th>One other study</th>
</tr>
</thead>
</table>

FOURTH YEAR

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Physics</th>
<th>One other study</th>
</tr>
</thead>
</table>

Rice Institute operates on a year basis and the year course is the unit of credit. This year course is equivalent to six semester hours. Each study requires three hours a week in the way of recitation, besides laboratory work. The

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honors courses are similar to the honors courses offered in English Universities, as for instance, at Oxford and Cambridge. A student is admitted to such a course at the beginning of the junior year, when and if that student's general average seems likely to indicate that he will earn the degree with "distinction", and when the student has furthermore demonstrated exceptional ability in the subject. The degree with distinction goes to the highest ten per cent of students in the graduating class. The degree with honors carries distinction with it and also indicates unusual ability in one subject. The degree with honors is the highest degree that the Institute gives. After the student has completed the general or honors courses for the Bachelor of Arts degree he may receive the Master of Arts degree by the completion of one year of graduate work, by writing a thesis, and by taking an oral examination. After completing the course for the Bachelor of Arts degree a student may be admitted also as a candidate for the degree of Doctor of Philosophy, the requirements for which are, in addition to high attainment, usually about three years of graduate work. It is also required of all candidates for this degree that they submit a thesis which must be an original contribution. They

1. Conference with Samuel Glenn McCann, Registrar.
must also pass a public oral examination. The thesis must be published in an accredited journal or some series and fifty copies must be deposited in the Institute Library.

The Institute offers a full course in architecture, the work for which was organized in 1912. This work was started the same year under the direction of William Ward Watkin who holds the Bachelor of Science degree in architecture from the University of Pennsylvania. During the first year's offering the work required the full time of only one instructor. Since that time there has been such an expansion in the field that there is now a corps of six instructors to take care of the instruction, with Mr. Watkin at the head. The complete course in architecture extends over a period of five years. The outline of studies for the first four years leads to the Bachelor's degree, and to an architectural degree at the end of the fifth year. The faculty of the Institute has held to the principle that students needed a good background before beginning the study of architecture proper; consequently, the student is encouraged to take a general or honors Bachelor of Arts course previous to taking architecture. If the student has an opportunity to be in school several years this is the usual procedure. The primary object of the Architectural

1. Ibid.
course is to give the students during their residence a comprehensive understanding of the art of building, to familiarize them with the history of architecture from the beginning of civilization to the present time, and also to develop within them an appreciation of those conceptions of beauty and utility which are essential to the cultivation of ability in the art of design. The course includes not only the essential elements of a liberal education but also those of engineering and of the technical subjects which are necessary to the general education of a practicing architect. Design is given the most important place of the architectural subjects. In order that the student may keep in touch with the progress of his profession and the details of its practical side, he is requested to spend a part of each of his summer vacations in an office of some practicing architect.

The following is the outline of studies for the five years' course, which leads to a bachelor's degree in four years, and a degree in architecture in five years:

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>SECOND YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>Pure mathematics</td>
</tr>
<tr>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>French or Spanish</td>
<td>French or Spanish</td>
</tr>
<tr>
<td>Physics</td>
<td>A Science</td>
</tr>
<tr>
<td>Architecture; consisting of</td>
<td>Architecture; consisting of</td>
</tr>
<tr>
<td>(a) Elements of Architecture</td>
<td>(a) Design</td>
</tr>
<tr>
<td>(b) Freehand Drawing</td>
<td>(b) Freehand drawing</td>
</tr>
<tr>
<td>(c) History of architecture</td>
<td>(c) History of architecture</td>
</tr>
</tbody>
</table>

This course has undergone only a few changes since it was first organized. The changes consist of these substitutions: in the second year, "French or Spanish" has been dropped for "A modern language"; in the third year, mathematics has been substituted for "History of Economics"; and "History of Architecture" for "Pan and Ink Rendering". In the fourth year "Architecture: Design" has been substituted for "Antiquated Drawings and Design".

Extensive courses are offered in chemical, civil, electrical, and mechanical engineering. These courses were organized in 1912 and the work began the same year. Professor Francis E. Johnson, who held the B. E. and E. E. degrees from the Uni-

versity of Wisconsin, was the first and only instructor in
1912, for, since there were only six in the Freshman class,
one instructor was sufficient. He remained with the Institute
until 1917. The work in this field has grown steadily until
now there are seventy-four students and twelve instructors.
The growth in the Engineering courses would have been greater
had the Freshman class in the Institute not been limited every
year to four hundred. It might be mentioned that for each
course or field the University organization provides for a
head professor.

The engineering work is housed in its own building. The
laboratory equipment excellent, the greater part of it being
less than twelve years old. The object of the Institute in
this work is to give broad general courses for the first four
years and do the specialization in the fifth year. There are
no courses offered in petroleum engineering; it is realized,
however, that many of the graduates will engage in the oil
industry; consequently care is exercised in making provision
for the foundation courses in this field.

It requires five years to complete a course in any of the
branches. The degree of Bachelor of Science is awarded to
the student who completes the first four years of the course.
After he has completed the remainder of his course satisfac-

1 Conference with Joseph Horace Pout.
torily, he is awarded an engineering degree. The work for the first two years is practically the same for all students, but from that point on there are sharp variations. On account of this difference in the work students must choose a particular engineering course. The chemical engineers make this choice at the beginning of the second year. The civil engineers do not make this choice until the beginning of the third year, and the electrical and mechanical engineers not until the beginning of the fourth year. The work of the first two years consists of courses in mathematics, physics, English, French or Spanish, chemistry, and engineering. The courses for the third year are mathematics, chemistry, economics, mechanical engineering, civil engineering, and electrical engineering. These three engineering courses are required of all engineering students. The branches of study for the fourth and fifth years are not of a common type; they are outlined to meet the needs of the different engineers in their particular lines of work. Instruction in shop work begins the third year. The object of this instruction is to acquaint students with shop methods, and not to make skilled mechanics of them. Furthermore, the purpose is to provide such knowledge of shop methods as is desirable for those who may be expected as engineers to employ mechanics and to superintend...
engineering shops. In the engineering courses the theoretical side is stressed because this knowledge is hard to obtain after leaving the University. The practical instruction is also essential and is not left out of the program at Rice Institute. During the last three years a variety of practical work in engineering is given.

There have been some changes in the engineering courses since the beginning of the work. In civil engineering there have been additions in the form of highway and municipal engineering. Communication has been added in the electrical courses in order to keep up with the rapid advances in radio, telephone, and wireless telegraphy. In mechanical engineering the following changes have been made: welding and the use of the different kinds of metals have been added due to the rapid expansion in mechanical engineering.

The last course to be considered is that of physical education. Ever since the opening of the Institute attention has been given to physical education. The students have participated in such sports as baseball, handball, football, basketball, tennis, and golf. In 1989, however, the course was re-organized in order to provide for a teacher's degree in the work. The School of Physical Education was organized as one of the professional schools. Harry A. Scott, Ph. D., from

2. Conference with Joseph Horace Found.
Columbia University, reorganized the course and has been its director ever since. The work in this course extends over four years and leads to a Bachelor of Science degree in physical education. The Department of Physical Education now includes teachers' training, intercollegiate, intramural, and individual (corrective) work. These activities are so organized as to utilize the play instinct as much as possible. All men in the Institute participate in physical training.

As further evidence that Rice Institute is interested in athletics, it is a member of the Southwestern Conference.

The four years' course in physical education is as follows:

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>SECOND YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>French, German, or Spanish</td>
<td>French, German, or Spanish</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Biology</td>
</tr>
<tr>
<td>Economics</td>
<td>Business Administration</td>
</tr>
<tr>
<td>Physical Education</td>
<td>Physical Education</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>THIRD YEAR</th>
<th>FOURTH YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>Biology</td>
</tr>
<tr>
<td>Physical Education</td>
<td>Physical Education 2</td>
</tr>
<tr>
<td>Three other subjects</td>
<td>Three other subjects</td>
</tr>
</tbody>
</table>

Each of the physical education studies consists of three hours of recitation per week and six laboratory hours. Students who, on taking their medical examination, are found to be physically unfit for a normal program of physical activities, are

assigned to a restricted exercise group involving less strenuous exercises. In such cases the work is so organized as to eliminate direct competition between the physically weaker and the physically stronger among the students.

In the foregoing treatment an attempt has been made to give a cursory view of the four distinct courses constituting the curriculum of Rice Institute, and also the necessary time required to complete each of these courses. In the next chapter there will be a discussion of the members of the Faculty whose responsibility it is to adapt this curriculum to the needs of the student body.
CHAPTER VIII

THE FACULTY

Equal in importance to the position which the curriculum occupies in an educational institution is that of its faculty. It is impossible in this thesis, nor would it be of sufficient importance, to mention all faculty members, or to point out all changes that have been made in the group. Some of the more important individuals and occurrences are discussed in order to convey some idea of the character of the men who are on the Faculty of the Institute.

In a previous chapter it has been pointed out that President Lovett gave much care and consideration to the selection of the first faculty for the institution. In organizing the faculty he and the trustees endeavored to get the best available instructors and investigators in their respective fields. It was their desire to bring together at Rice Institute a group of unusually able scientists and scholars. They were confident that through the productive work of such men the new institution would prosper and would soon become a great power for disseminating knowledge. Their efforts were not in vain, for a roll call of the Rice faculty introduces one to a group of able and distinguished educators. They are men

1. The Rice Institute, Annual Catalogue, 1913-1914, pp. 9-10.
who have made names for themselves in classroom and laboratory. They are not only scholars, but they understand the difficult art of imparting their knowledge to the students whom they instruct. The standard of work required of the students is high, and only those who are in earnest and have seriously set before themselves the goal of higher learning can attain it.

The members of the faculty are elected by the trustees, one of whom is President Lovett. The first faculty consisted of thirty members. Since the first academic year, 1912-1913, there has been a large increase in this number. At present there are seventy-three members, all of whom are men. Rice Institute is, however, a coeducational school. There are also at present twenty-seven assistants and fellows. As proof that President Lovett is a man of practical vision and not merely a visionary, it is sufficient to state that he made the prediction at the academic festival, incident to the opening of the institution, that there would be one thousand faculty members in the institution in twenty years, and this, if the assistants and fellows are included, has literally come true. Several of the faculty members have come from foreign countries, including Bogota, Colombia; Hainichen, Saxony, in Germany; York, England; and Sofia, Bulgaria.

Dr. Lovett was selected as president of Rice Institute

1. Ibid., 1931-1932, pp. 15-25.
only after much serious consideration on the part of the Board. The trustees realized that the duties of the president would be various and exacting. They did not overlook the fact that he would probably be called on to make speeches before many organizations and to attend many functions. He would also undoubtedly be made a member of many committees and councils. His opinion is sought on many educational problems. He would have to give assistance in the selection of faculty and also coordinate the work of the faculty and members of the Board.

A portion of his time would have to be spent in outlining policies for the institution. In many instances he would assist in raising funds to defray the operating expenses of the school and also to carry on the building program. Time has shown conclusively that the Board was extremely fortunate in securing Dr. Lovett for president of the Institute. If one may judge by the steady growth that Rice has made during the twenty years of its history, all of which time he has been at the helm, it would seem that he has given convincing evidence that he is just the man for the position.

Dr. Edgar Odell Lovett first saw the light of day at Shreve, Ohio, on April 14, 1871. His parents were from Scotland and Alsace-Lorraine. His father was Zepaniah Lovett and his mother was Mary E. Spreng Lovett. Dr. Lovett spent his boyhood days in Shreve where he received his early education.
On graduating from the Shreve High School he entered Bethany College, West Virginia, from which institution he received his B. A. degree in 1890. After his graduation from college he taught mathematics for two years in West Kentucky College. 1893 he became instructor in astronomy at the University of Virginia. He continued his studies there and received his M. A. degree, following which he completed the work for the Ph. D. which was conferred on him in 1895. In the following year he went to Europe and attended the Universities of Christiana and Leipsic, receiving the Ph. D. degree from Leipsic in 1896. After returning to the United States in 1897 he lectured for a time at the Johns Hopkins University and later at the Universities of Virginia and Chicago. In September 1905 he became instructor in mathematics at Princeton University. Later he became head of the Department of Astronomy at Princeton. It was while he was acting in this capacity that he was selected for president of Rice Institute. His resignation from Princeton went into effect in the summer of 1908. He travelled for one year and in 1909 took up his residence in Houston as President of Rice Institute, his life work. The honorary degree of LL. D. was conferred on him by Drake University in 1898, by Tulane University in 1911, and by Baylor University in 1920.

Dr. Lovett holds membership in several American and foreign scientific societies, some of which are as follows: Fellow of the Royal Astronomical Society and the American Association for the Advancement of Science; member of the Philosophical Society; of the Astronomical and Antrophysical Society of America; of the American Mathematical Society; of the Edinburgh Mathematical Society; of the Deutsche-Mathematiker Society; and of the Mathematique de France. In addition to the above memberships, he has written numerous scientific articles on mathematical and astronomical subjects which have appeared in journals both in the United States and foreign countries. Dr. Lovett married Mary Ellen, daughter of Henry Stephenson and Virginia Adelaide Hale of Mayfield, Kentucky, in 1897. They have four children.

A very competent instructor who has been with the Institute since 1912 is Dr. Stockton Axson. He was born in Rome, Georgia, in June, 1867, being the son of Samuel Edward Axson, a Presbyterian minister. His mother was Margaret (Hoyt) Axson. Professor Axson was a brother of President Woodrow Wilson's first wife; he and Mr. Wilson were fast friends. Since Professor Axson never married he made his home with the Wilsons at Princeton until he went to Houston. During his residence at

Princeton he and Mr. Wilson spent one summer touring England on bicycles.

Professor Axson when a boy attended the schools at Rome, Georgia. Upon completion of his elementary and secondary education he entered Wesleyan University, Middletown, Connecticut, where he received the A. B. degree in 1890. Later he continued his studies at the same institution and received the M.A. degree in 1892 and the L. M. D. degree in 1914. He then studied at the University of Pittsburgh from which he received the Litt. D. degree in 1909 and the L. L. D. degree from Knox College in 1920. He was Assistant Professor of English at the University of Vermont from 1892 to 1894 and a staff lecturer for the University Extension for six years. From there he went to Adelphi College, Brooklyn, New York, as Assistant Professor in English for three years. From Brooklyn he went to Princeton where he was Professor of English for nine years; he remained at Princeton until he accepted the post at Rice Institute, where he has been Professor of English for the past twenty years. Professor Axson is a noted lecturer. He is an authority on Shakespeare and whenever he delivers a Shakespearian lecture in Houston he is always sure of a large and appreciative audience. The Institute gives him frequent leaves of absence for lecture trips.

Another very efficient instructor of Rice Institute is Robert Granville Caldwell, who is a thorough teacher and a man of broad experience. He was born in Bogota, Colombia, South America, August 31, 1882, of American parents. His father was Milton Etsail Caldwell and his mother was Susanna (Adams)Caldwell. In 1915 he was married to Edith Jones of Columbia Grove, Ohio. Three children have come to bless their home.

Dean Caldwell received his primary education in South America and his higher training largely at Wooster College (Ohio) and at Princeton University. He received the B. A. degree from Wooster in 1904 and the Ph. D. degree from Princeton in 1912. Before going to Rice Institute in 1914 he had been an instructor at Forman College, Wooster College, and at Huron College. At Rice he is Professor of American History and Dean of the Institute.

Dr. Caldwell is a writer of considerable note. He is the author of "Lopez Expeditions to Cuba" (1915); "Peace Congresses of the Nineteenth Century" (1917); "A Short History of the American People", 2 vols. (1925, 1927), respectively, and numerous articles on history and politics. The most recent of his books is "James A. Garfield, Party Christian" (1932). He is a member of several historical, political, and scientific organizations.

Professor Harold Albert Wilson, who has been with the Institute since 1912, is not a native American. He was born in York, England, September 1, 1874. His forbears were Albert William and Ann Gill Wilson. Mr. Wilson spent his boyhood days and early manhood in the Old World. He finally came to Montreal, Canada, where he met Marjorie Paterson Smyth whom he married on August 1, 1912. He was educated principally in England, having received the Master of Arts degree from Cambridge University in 1904; the Master of Science degree from Victoria in 1897; and the Doctor of Science degree from London in 1900. In 1899 he was a student at the University of Berlin, Germany.

Professor Wilson is head of the Physics Department at Rice Institute. Before coming to Rice he was Professor of Physics at King's College, London (in 1905) and Professor of Physics at McGill University from 1909 to 1912. While the greater part of his work has been in physics he was at one time Professor of Natural Philosophy in the University of Glasgow. Professor Wilson is author of the following works: "The Electrical Properties of Flames" (1912); "Experimental Physics" (1915); "Modern Physics" (1918); and also some eighty papers that have appeared in various journals.

William Ward Watkin, Professor of Architecture at Rice In-

1. Ibid., 1930-1931, vol. XVI, p. 2361.
stitute is a native of Massachusetts. He was born in Boston, January 21, 1886. He is the son of Fred Ward Watkin and his wife, Mary Mathilda Hancock. Professor Watkin's father died at a young age. His mother was a member of a prominent family in Pennsylvania. At the age of twenty-eight years young Watkin married Annie Ray Townsend of San Antonio Texas. She died in Paris, France, March 2, 1929, during a stay abroad spend in foreign study.

Mr. Watkin attended the public schools of Pennsylvania and graduated from the high school at Danville in 1903. He then attended the University of Pennsylvania from which he was graduated in architecture with the Bachelor of Science degree in 1908. Upon the completion of his college work he studied and traveled in Europe for a year. He has been with Rice Institute since its opening. He was associate architect with Messers. Cram and Ferguson, the supervising architects of the Institute buildings.

Professor Watkin began his practice of Architecture at Boston in 1908 and is at present the head of the School of Architecture at Rice Institute. He has specialized in school and college buildings from the beginning, and was architect of the Houston Art Museum and the Houston Public Library; the Chemistry Laboratory and the Faculty Club Building at Rice;

and constructing architect of several public school buildings in Houston. He was also architect of the Auditorium of Agriculture and Mechanical College, College Station, Texas, and constructing architect of Technology College at Lubbock, Texas. Professor Watkin is editor of the "Southern Architect" and contributes frequent articles to numerous professional journals.

These men, as well as the others on the faculty, manifest to a marked degree the specific ideals of President Lovett as to the qualifications of a professor of such an institution as Rice. One of the chief of these is the ability to investigate successfully any problem within the scope of the field of research. He believes that the type of mind to lead students with inquiring minds into fields of investigation should have two vital elements: (1) a mind which is of itself of an inquiring disposition; and (2) that type that has the happy faculty of being able to reason in such a way from the known to the unknown as to arrive at correct conclusions. In this President Lovett is but following the philosophy of Burke who taught the same doctrine a half a century before the scientific renaissance. It is doubtless because of his steadfast adherence to this ideal that he has been so

successful in choosing the faculty for Rice Institute, for many of the faculty are authorities in their respective fields.

About fifty per cent of the leading members who composed the first faculty are still serving the institution. Thirty-four members of the present faculty hold Ph. D. degrees from the following universities: California, Columbia, Chicago, Rice, Iowa, Pennsylvania, Cornell, Harvard, Leipsic, Princeton, Rochester, Freiburg, Yale, Michigan, Johns Hopkins, and California Institute of Technology. Two members hold the degree of LL. D. from Knox, Drake, Tulane, and Baylor. Two have the degree of Litt. D. from Pittsburgh and Wooster, and one has the degree of D. Sc. from the University of London.

In order that the elements of permanency and stability of the institution may be the better realized, much attention has been given to the needs and comfort of members of the faculty. As an illustration of how their financial needs are provided for, it might be said that their salaries are secured from the interest of the endowment fund set up by Mr. Rice's will. There is also provided a building in which are facilities for reading, recreation, and amusement, as an incentive to the members of the faculty to keep their minds fresh and alert, and their bodies in a healthy condition. From this brief
digest some conception can be obtained of the personnel of the faculty, together with the means which are provided for their comfort and support. In the next chapter a closely allied subject will be considered; namely, the student body.
THE STUDENT BODY

The students are one of the most important factors in a university program. Aside from the faculty, they are the principal consideration. In fact, both are essential to an educational institution, and if either is weak, its success is proportionately diminished. The students constitute the raw materials with which the faculty molds the finished product. While a scholarly faculty can do much to develop the latent forces of the student, they cannot manufacture brains, and hence, the type of students coming to a university largely determines the calibre of the men and women that it shall send forth into the world. Rice Institute being aware of this fact, and wishing to maintain a high standard of excellence, has been very careful in choosing its students; they are hand-picked. The Secretary states that only one half of those making application to enter Rice can be accepted; that whereas in 1931 they had eight hundred applications, they accepted only four hundred, and that these, with those already in the Institute, aggregated fourteen hundred and fifty students. The Institute endeavors to hold the standard up and the number down. The authorities feel
that by this method they will be more likely able to discover outstanding young men. Thus quality rather than quantity is the controlling ideal.

The general policy of selecting students has been to adopt each academic year or group of years a specific number of students to be admitted on a competitive basis. For the year 1931 the plan of the committee in charge of this work was to admit four hundred students, and in selecting the members of the Freshman Class the committee was guided by the following principles: No candidate was accepted with fewer than fifteen units; preference was given to those who showed a maximum number of units in English, Mathematics, Foreign Languages, Science, and History; and also to those not in the above groups who proved their fitness by taking entrance examinations in one or more subjects; and to those who made application at an early date.

The first class of Rice students consisted of fifty-nine boys and girls. These students came from almost every section of Texas, and one member of the student body was from the Philippines. Houston was well represented, and especially the graduating classes from the high school of 1910, 1911, and 1912. The Institute had very promising material with

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1. The Rice Institute, Annual Catalogue, 1931-1932, pp. 36-38.
which to begin its work. While it was claimed by the authorities that it could have opened with more than four hundred students, it was decided to allow only Freshmen to register. Thus it is manifest that it was their purpose to maintain a high standard from the beginning.

The number of students is now much larger than it was in the early days of the institution. In the academic year of 1931-1932 there were 1450 students, distributed geographically as follows: 965 from Houston; 485 from Texas outside of Houston; 71 from other states; and 6 from Mexico. There were eight hundred new applications, four hundred of which were accepted. It is the present policy of the Institute to receive four hundred new students annually, which, with the students already enrolled, taxes the facilities of the institution to its capacity. These students come largely from cities and towns; comparatively few of them are from rural sections. Their families are merchants, mechanics, and members of the professional classes.

Tuition and the opportunities for research are free. Students are required, however, to pay for textbooks, drafting material, note books, examination papers, and all materials

1. "The First Class", in The Houston Daily Post, October 6, 1912.

used in pure and applied science. They are also expected to pay an annual registration fee of ten dollars and those living in the Residential Halls are required to pay an annual medical fee of five dollars. A contingent deposit of ten dollars is required annually, and laboratory deposits of twenty-five dollars are required to be maintained throughout the year for the course of biology, chemistry, and physics. A deposit of twenty-five dollars is also required for the junior and senior courses in civil and mechanical engineering, as well as for the course in architecture.

Rooms in the Residential Halls for men may be secured for from eighty to one hundred and twenty-five dollars per year. Board may be obtained for one dollar and five cents a day during the early autumn, the figure being a little more in the winter season.

As an encouragement to ambitious students to put forth their best efforts, several scholarships are offered, some of which are as follows: The Graham Baker Studentship, a prize of three hundred dollars, offered annually to the student having the highest standing in scholarship. This is a gift of Captain and Mrs. Graham Baker of Houston. Six Hoenthal scholarships, from the estate of the late Lionel Hoenthal of Houston, are awarded annually to the students who are

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earning a substantial part of their college expenses, on a basis of a high standing in scholarship, each carrying an annual prize of two hundred dollars. Scholarships in Civics and Philanthropy are awarded by Will G. Hogg and by Messrs. William L. Clayton, Ed Frather, and Harry C. Wiess of Houston, to graduates of high standing who intend to prepare for work in social service, the award representing an annual amount of two hundred and fifty dollars. The D. A. R. Scholarship is awarded by the John McNitt Alexander Chapter of the Daughters of the American Revolution, an endowed undergraduate scholarship with an annual valuation of three hundred dollars. The Axson Club, an organization of Houston women, awards the Ellen Axson Wilson Scholarship, with a value of six hundred dollars, in the interests of literary pursuits, to some young woman of Rice. The Elizabeth Baldwin Literary Society Scholarship is available to a student of Rice, either a young man or a young woman, the candidate to be chosen by the faculty on the grounds of scholarship, personality, and physical vigor, the stipend being three hundred dollars. The Daniel Ripley Scholarship was established by Mrs. Edith Ripley by the donation of ten thousand dollars to Rice Institute, the income from which fund is to be used as an award to the self-supporting man or woman student completing the
Freshman year at Rice with the highest grades, the candidate to be selected by the faculty. The Edith Ripley Scholarship also established by Mrs. Edith Ripley of Houston provides a fund of ten thousand dollars, the income of which is to be distributed equally every year to three young women students of Rice. Mr. Fred A. Gieseke of Houston and his daughter, Mrs. Frances Sara Gieseke, the latter a graduate of Rice, have donated to the Institute a fund of five thousand dollars to establish the Mary Parker Gieseke Scholarship, to be awarded annually for high standing in scholarship to the student of Rice who has been in residence at least one year, the award amounting to three hundred dollars. A sum of ten thousand dollars bequeathed by the late Pauline Martin Dickson, and held in trust by the San Jacinto Trust Company, has gone to create the Thomas Audrey Dickson and Pauline Dickson Scholarship, the income from the fund being paid semi-annually to Rice Institute for the support of a scholarship to be awarded by the faculty, on the basis of scholarship, to self-supporting students of the University. Besides the above mentioned scholarships, there is an aggregation of eight thousand five hundred dollars accruing to the Institute as annual income from other scholarships and from trust funds.

2. Ibid., pp. 30-36.
In addition to the scholarships and trust funds that are provided for the aid of students, there are many opportunities for self-help. Among these are such as cutting lawns, assisting in the dining room and kitchen, coaching, typing, keeping children by the hour, telephone, hospital, and recreation work. Students of the institution have organized clubs for the specific purpose of cleaning the windows of the downtown office buildings. This work is done at night, many of the students working until after midnight. Prior to the economic depression which confronted the nation late in 1929, two thirds of the students earned all or a part of their expenses.

Notwithstanding the fact that Rice has no permanent building in which to house its library, it has quite an adequate supply of both books and periodicals, so that the students have no complaint about lack of material for their study. On June 1, 1932 there were ninety-three thousand books in the Library. In addition to these volumes there are several hundred current literary and scientific journals, and about thirty thousand volumes in back files of serial publications, all giving the results of the latest research in the various fields of science, mechanics, exploration, and other departments of knowledge. Many of these serial sets are entirely complete, among which are the following: Abstracts of Bacterio-

The student weekly publication is The Thresher. It is a well-edited journal as the following will abundantly show: In a national contest, May, 1932, carried on under the auspices of the National Scholastic Press Association, The Thresher scored eight hundred and twenty points out of a possible one thousand, and it was voted first class honor rating by the judges in the annual critical services of the Association. Competing in Class A, consisting of four-year colleges and universities of one thousand enrollment, this paper was termed "excellent". The points in its rating follow: News value and sources, 215 out of a possible 250 points; news writing and editing, 255 out of 300 points; editorial and entertainment matter, 150 out of 200 points; and headlines, typography and make-up, 200 out of 250 points.

Rice Institute has no weekly Chapel, but at frequent intervals it does have an Assembly where speakers bring special messages to the student body and the faculty. Besides the

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1. Ibid., pp. 125-126.

lectures by members of the faculty, men of note are secured to give lectures to the students of the Institute, among whom have been Dr. Terrot Reavely Glover, of Cambridge University; Sir Aukland Geddes, British Ambassador to the United States; William Howard Taft, Chief Justice of the United States; President Lawrence A. Lowell, of Harvard University; John Powell, the American composer and pianist; and John Grier Hibben, Princeton University.

Perhaps there are few institutions in this country where personality is developed to a greater extent than at Rice Institute. Freedom in the best sense of that term might be said to be its watchword. The honor system which has been adopted to a more or less extent in other institutions in this country in recent years, and with varying degrees of success, has been adopted at Rice Institute to such an extent that not only is it exemplified in examinations where each student is placed on his honor, but it also pervades the whole governing system of the institution to such an extent that the idea may be expressed by the term, SELF-GOVERNMENT.

College spirit has free course among the student body at Rice. This is especially manifested in their songs and yells. These reflect the joy, the vitality, and the enthusiasm of the University. Some of these songs are the following: "The Eyes of Texas Are Upon You"; "Old Gray Bonnet"; "Rice
Fight"; "The Blue and the Gray"; and "Rice's Honor". They sing these songs under the flags of the "Lone Star of Texas" and the "Owls" of Rice, with the Blue and the Gray floating from their standards - a blue a little deeper than the oxford blue, and the Confederate Gray, with a tinge of lavender, a more elaborate description of which will be given subsequently under the consideration of the color scheme.

On the flag of the Rice students are two shields, one of the State of Texas, and the other of Rice. The latter shield was designed by Mr. Pierre de Chaignon la Rose, of Cambridge, Massachusetts, who cleverly combined the main elements of the arms of the several families bearing the names of Rice or Houston. He first examined the arms of several families bearing these names. The problem was not so difficult, for he found that the shields of about ten Rice armorial bearings were always divided by a chevron, and always carried three chargers which were either crows or ravens. By closer examination he found that the shields of the Houston who bore arms were divided by a chevron and that the three chargers were always martlets. After some consideration it was decided to use the double chevron, and as neither the crow nor the raven nor the martlet had any historical signifi-

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dance, owls of Athens were chosen for chargers, and used in the form of a triangle, two being placed above the double chevron, and one below.

The choice of color was more difficult. It was the desire of the committee that the combination of color should be stable, and should not trespass upon the five or six hundred combinations already chosen by other institutions, and should harmonize with the State and National emblems for purposes of decoration on gala occasions. It was also necessary that the colors be standard, and both economical and easy to procure; and, finally, that the colors should be in keeping with the climate; that is, they should have sufficient color and yet be cool enough for warm summer days, which abound in Texas.

Rice students have their clubs and other social groupings and activities which are characteristic of other collegiate institutions. An event of special interest is their May Fete, held near the close of the school year. This is a unique and also a very elaborate occasion. It has a pleasing flavor of the Old World monarchies. The Royal Court every year is both colorful and surpassingly charming. This is usually flanked by the background of an English garden theme. The King, the Queen, and the various attendants, are all announced

by a herald as they march down a long covered lane. The Court Jester is also in evidence and performs the usual antics of this functionary, much to the amusement of the large company of spectators who annually come to witness the event.

This thesis would hardly be complete without a consideration of the fitness of the graduates of Rice to grapple with life's problems, for, in the last analysis, the value of an institution is to be measured by its output, including both quantity and quality, which is what the late Professor William James called the pragmatic test, which means the practical value that Rice imparts to its students in preparing men for their respective places in the world. In order that too much should not be expected of its alumni at this present date, the fact should be borne in mind that it has been only sixteen years since Rice turned out its first graduates. The figures below will indicate the number of graduates that the institution has turned out during this brief period, and their various degrees will give some conception of their equipment and their ability to cope with the problems of this age:

<table>
<thead>
<tr>
<th>Degree in Arts</th>
<th>Bachelor of Science in Chemical Engineering</th>
<th>Bachelor of Science in Civil Engineering</th>
<th>Bachelor of Science in Electrical Engineering</th>
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</thead>
<tbody>
<tr>
<td>Bachelor of Science</td>
<td>1666</td>
<td>106</td>
<td>76</td>
</tr>
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2. Letter from Samuel Glenn McCann, Registrar.
<table>
<thead>
<tr>
<th>Degree</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Science in Mechanical Engineering</td>
<td>79</td>
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<tr>
<td>Bachelor of Science in Architecture</td>
<td>34</td>
</tr>
<tr>
<td>Bachelor of Science in Physical Education</td>
<td>4</td>
</tr>
<tr>
<td>Chemical Engineer</td>
<td>4</td>
</tr>
<tr>
<td>Electrical Engineer</td>
<td>4</td>
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<tr>
<td>Mechanical Engineer</td>
<td>1</td>
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<tr>
<td>Master of Science</td>
<td>110</td>
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<td>Master of Arts</td>
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<tr>
<td>Doctor of Philosophy</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,222</strong></td>
</tr>
</tbody>
</table>
CHAPTER X

CONCLUSION

Having traced the development of Rice Institute from its beginning to its present status, together with the background of its founder's life, it has been demonstrated that Mr. Rice's dream of establishing an institution of higher learning in Houston has been realized in a splendid way. It is the writer's conviction that the major objective of this thesis has been established, which is, that Rice Institute is a worth-while institution. This conviction is based on these three facts, which have also been treated as minor objectives in this discussion:

1. That there was a need in the Southwest for such an institution as Rice has shown itself to be in the last twenty years.

2. The fact that Rice Institute offers what many educators believe to be the most desirable kind of education, namely, an education of hand, body, and head.

3. Because Rice, judged by its twenty years of successful operation, has demonstrated that it is decidedly a worth-while institution.

Proof of the first of these three propositions is to be found in the fact, as has been indicated, that tuition is
free, which enables many students to attend who otherwise
would be deprived of entering institutions of higher learning.
This need is especially manifested by a well known fact
- namely, that neither at the time of its establishment, nor
since, has there been another institution in that section of
the country doing the same type of work as that being done
by Rice Institute. Finally, the large waiting list that
of those who all along have been asking for admission, would
seem to be conclusive evidence of the need for such an insti-
tution.

In support of the claim that Rice Institute in educating
hand, body, and head, offers the most effective kind of educa-
tion, appeal has been made in this study to Professor William
James' volume on Pragmatism, which estimates the value of an
object according to its utility or practical value. This im-
plies that an education that will enable the hand, the body,
and the head to function best, must be the most desirable.

As proof that the twenty years of Rice's history testify
to its being a worth-while institution, it has been shown that
in this brief span of its existence it has had a growth of
from fifty-nine to fourteen hundred and fifty students, and
that it has had two thousand two hundred and twenty-two graduates, ranging all the way from the degree of Bachelor of Sci-
ence to Doctor of Philosophy. The faculty has also grown from
thirty to one hundred, or more than two hundred per cent. An institution with such a record abundantly justifies its existence.

If a tree may be judged by its fruit, as the Great Teacher has declared, it seems apparent that it may be modestly claimed that Rice Institute has won for itself a place among the schools of higher learning, not only in the Southwest, but throughout the nation. If the writer has made an humble contribution towards demonstrating this fact, and also in emphasizing those high ideals for which the institution stands, the work involved in this dissertation will have been amply repaid.
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