The University of Virginia and the Creation of the American Campus*

La Universidad de Virginia y la creación del campus americano

Richard Guy Wilson
University of Virginia

Recibido: 18/1/2014
Aceptado: 23/5/2014

Abstract: The history of collegiate architecture and planning in the United States is a complicated story that ranges from Thomas Jefferson's University of Virginia which is widely hailed as one of the most cohesive and influential designs ever completed in North American to the opposite extreme of a miscellaneous collection of buildings lacking any overall order. From the initial beginning of American higher education in the 17th century to the present, colleges and universities have grown in size and complexity and have been analyzed in many books and studies. Jefferson's original design of a large U shaped common ground planted with trees and bordered by rows of columns—larger in from the professor's pavilions and smaller Tuscan order in front of the student dormitories, and capped by a large domed structure known as the Rotunda at one end still inspires. To understand the significance of Jefferson's "Academical Village" at the University of Virginia and its impact one must consider the broader context and background of American institutions of higher learning and some of the issues and the special terminology employed.

Key Words: Campus, Architecture, University of Virginia, planning, names of architects.

Resumen: La historia de la arquitectura académica y su planificación en los Estados Unidos es una historia complicada que arranca de la Universidad de Thomas Jefferson de Virginia, ampliamente considerado como uno de los diseños más cohesionados e influyentes jamás realizados en América del Norte. Desde los comienzos de la educación superior en Estados Unidos en el siglo XVII hasta la actualidad, las universidades han crecido en tamaño y complejidad y se han analizado en muchos libros y estudios. El diseño original de Jefferson de un gran terreno común en forma de U, con árboles, bordeado por hileras de columnas y coronado por una gran estructura en forma de cúpula conocida como la rotonda aún hoy sirve de inspiración. Para entender el significado de lo que Jefferson llamó "Ciudad Universitaria" y, en concreto, su diseño de la Universidad de Virginia debemos considerar el contexto, el funcionamiento y objetivos de las instituciones estadounidenses de educación superior y la terminología empleada.

Palabras clave: Campus, arquitectura, Universidad de Virginia, planificación, arquitectos.

* I appreciate the recommendations done by the external evaluators for the improvement of my article.

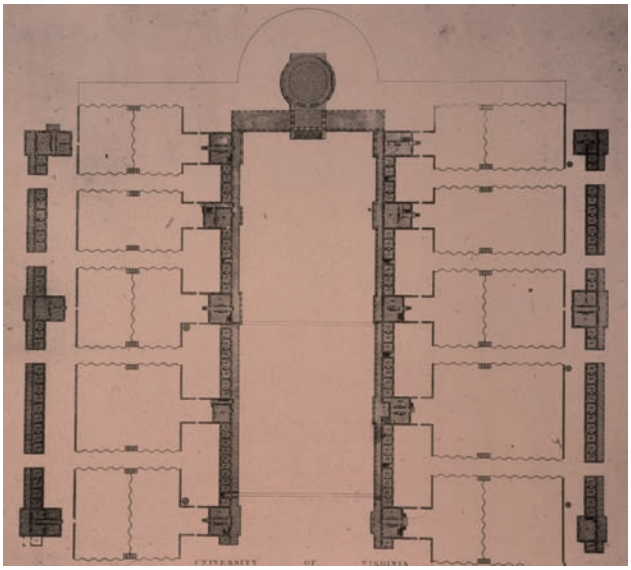
The history of collegiate architecture and planning in the United States is a complicated story that ranges from Thomas Jefferson's University of Virginia which is widely hailed as one of the most cohesive and influential designs ever completed in North American to the opposite extreme of a miscellaneous collection of buildings lacking any overall order. From the initial beginning of American higher education in the 17th century to the present, colleges and universities have grown in size and complexity and have been analyzed in many books and studies.[1] Jefferson's original design of a large U shaped common ground planted with trees and bordered by rows of columns—larger in from the professor's pavilions and smaller Tuscan order in front of the student dormitories, and capped by a large domed structure known as the Rotunda at one end still inspires.[2] To understand the significance of Jefferson's "Academical Village" at the University of Virginia and its impact one must consider the broader context and background of American institutions of higher learning and some of the issues and the special terminology employed.

Terms and Background

A number of traits and terms common to American colleges and universities need to be put forth prior to embarking on a short history of their planning and architecture. In the United States the words "college" and "university" are virtually synonymous and many people employ them interchangeably. Initially most of the institutions were named "college" but as time passed and the schools grew larger and took on more disciplines and graduate degrees, they frequently changed their name to "university" and then had as subsets a

[1] The major book on the subject is: Paul Venable Turner, *Campus, An American Planning Tradition* (New York: Architectural History Foundation and Cambridge: MIT Press, 1984). Also of importance are: Charles Z. Klauder and Herbert C. Wise, *College Architecture in America and Its Part in the Development of the Campus* (New York: Scribner's, 1929), Jens F. Larson, and A. M. Palmer, *Architectural Planning of the American College* (New York: McGraw Hill, 1933), Richard P. Dober, *Campus Planning* (New York: Reinhold, 1963) Helen Lefkowitz Horowitz, *Alma Mater: Design and Experience in the Women's Colleges from Their Nineteenth Century Beginnings to the 1930s* (New York: Knopf, 1985), and Michael David Cohen, *Reconstructing the Campus: Higher Education and the American Civil War* (Charlottesville: University of Virginia Press, 2012)

[2] For the University of Virginia see: Richard Guy Wilson, ed. *Thomas Jefferson's Academical Village: The Creation of an Architectural Masterpiece*, rev ed. (Charlottesville: University of Virginia Press, 2009); and Richard Guy Wilson, David J. Neuman and Sara A. Butler, *University of Virginia: The Campus Guide* 2nd ed. (New York: Princeton Architectural Press, 2012). The Princeton Architectural Press has published guides to many American campuses.



college or a school for the different areas such as "College of Arts & Sciences" "College of Engineering, or "School of Architecture." At Harvard University and many others the word "College" is still employed for the undergraduate program. And in many cases smaller institutions retain the word college such as the College of Sweet Briar near Lynchburg, Virginia. But overall the term university has become more common.

Initially most colleges/universities had a common curriculum for each class or year and all the students took the same course in Latin, Greek, history and etc. This was a direct copy from England. Jefferson tried to modify this initially at the College of William & Mary and later at University of Virginia and have students specialize in different disciplines such as biology or ancient languages. However this was very controversial and following his death in 1826 the University of Virginia allowed the faculty to return to the common curriculum. But by the mid-nineteenth century some specialization began to appear at different universities and then in the 1880s the German model of majoring in a specific area and also graduate degrees (MA, Ph. D. and etc.) was imported which greatly changed American institutions of higher learning.

Accompanying the diversity of majors and degrees was the extraordinary growth in numbers and also in population of colleges and universities. From only 2 colleges in the seventeenth century it is estimated that today there are about 4,500 institutions in the United States that offer collegiate

training at some level, whether undergraduate or graduate. The number of students has obviously grown as for example the University of Virginia which was designed for 400 now enrolls more than 21,000 students and from 10 faculty now more than 3,000 teach.

Religion played a strong role in the early years of many American colleges and most of them were founded by, or controlled by different dominations such as Congregational at Yale, Presbyterian at Princeton, and Baptist at Brown. One of the purposes of these colleges was to train religious leaders and while this diminished over the years still chapels and religious services remained prominent and many of the faculty up to the Civil War were "men of the cloth." Religion still dominates at some universities such as the Catholic oriented Notre Dame in South Bend, Indiana and Salve Regina in Newport, Rhode Island, as well as certain fundamentalist institutions such as Jerry Falwell's Liberty University in Lynchburg, Virginia.

Only males attended the early colleges and universities, females were excluded. Oberlin College in Ohio founded 1833 was the first to allow females joint enrollment with males in 1837. Female seminaries began to appear in the 1820s and by 1861 when Matthew Vassar founded Vassar College for Women, there were several. Over the years a number female colleges were created some as "sister institutions" such as Radcliff College (founded 1879) at Harvard University. Some of the public universities did allow women and beginning in the mid-20th century most institutions removed the barrier to women. Similarly, and not surprising because of slavery, African-Americans/Blacks were banned from most colleges (the first to admit them was Oberlin in 1835). The first university intended for African Americans was Lincoln University in Chester, Pennsylvania founded in 1853. Soon after the Civil War Howard University, Washington, D. C. and the Hampton Institute for Freemen, Hampton, Virginia, were created in 1867 and 1868 respectively. A number of others followed and again, beginning in the mid-20th century the racial barrier was removed from most American colleges though problems of integration still remain with many.

All of the initial colleges were "private" and not public institutions with a board of governors/trustees/visitors elected by various means though the churches controlled them and admission was restricted to a certain class of the elite. The first publically funded intuitions were the universities of North Carolina (founded 1792), South Carolina (founded 1801) and the University of Virginia (founded as Central College 1817). In spite of being public their student body remained primarily elite. With the Morrill Act or the Land Grant University act of 1862 which gave public land to the states on which

to establish public college and universities the student makeup changed and more middle and working class began to attend. These Land Grant schools were initially known as "Agriculture and Engineering" (or A&E) or "Polytechnic Institute" (PI), though only a few retain this name. This was very much in response to public opinion that the existing schools were too elite. The result was a dramatic growth of colleges and universities and a more democratic spread of students in the next several decades.

A special word which defines American colleges is "campus" whose origin lies with the Latin word "campus" or field and was apparently first used with reference to Princeton University in 1774 and the land set aside for it.[3] Campus as a term was quickly picked up in the United States and employed with reference to many colleges and universities and although now used in other parts of the world, is particularly an American term. Commentators constantly remarked on the openness of the American university such as Charles Dickens writing in 1842 about his experience at Yale with its buildings "erected in a kind of park." [4]

One of the defining characteristics of many American colleges and universities was their spaciousness and their location, which is reflected in the term "campus." Many owned a sizable acreage of land and most were not located in the center of cities or towns, but outside, somewhat removed. Part of this separation came from the religious issue and to remove the student (and the faculty) from the temptations of wild life in the town. Although in many –if not all cases—the town has grown up around the institution still the removal remains and the university retains an element of an ideal world.

One exception to the outside the town rule were institutions devoted (at least initially) to training in the trades such as technology and design. The university now known as Massachusetts Institute of Technology (MIT) was originally the Institute of Technology, founded in 1861, and located in a single building in Back-Bay Boston. Intended to train engineers and also the first school of architecture in the United States it grew rapidly and in 1916 relocated to a large swath of ground across the Charles River in Cambridge, Massachusetts. The Rhode Island School of Design (known as RISDI) was founded (1877) to train designers for the large textile mill industry located in the Providence area and was—and still is—located adjacent to the city and former mills.

[3] *Oxford English Dictionary*, second edition (Oxford: Clarendon Press, 1989) vol. II, 815

[4] Charles Dickens, *American Notes* (New York: Fromm Publishing Co. 1985 [London, 1842]), 76.

Early Architecture and Planning

The architectural-planning pattern that developed with the first colleges was in all cases a single large building in which all the activities –teaching, eating, sleeping and living—took place. These structures were normally built of brick and 2 stories plus attic space in height and could contain between 10 to 20 rooms. Large spaces would be located on the ground floor and the number of students ranged from 20 to 60. This model and/or form can be found at all the early schools such as Harvard College founded in 1636, Yale (1701), Princeton (originally founded as the College of New Jersey in 1747 and then renamed), and Brown (founded as Rhode Island College in 1764, later renamed), and it would continue well into the nineteenth century. In addition to the main building a few subsidiary structures would serve the need for toilets, food storage such as root cellars and ice houses, and perhaps a kitchen.

As the colleges enrolled more students and needed additional space several patterns of building expansion begin to emerge. In many cases they would make additions to the main building such as a wing or two. Or they might add another building nearby. The pattern of the adjacent buildings could either be in row, or perpendicular to the original which began to create a sort of courtyard space that more new buildings would help to create. The buildings in a row scheme was very common and could be found at numerous colleges such as Brown and Dartmouth College.[5] At Harvard the various additions created more of an enclosed type of space or a courtyard.

The College of William and Mary in Williamsburg, which Thomas Jefferson attended between 1760-1762, and then remained connected with for many years is the second oldest institution of higher learning in English North American being founded in 1693. It departed slightly from the above format in that the major structure (known today as the Wren Building) was located at the west end of the Duke of Gloucester Street which is the main street in Williamsburg and faced the Colonial Capitol at the east end about a mile distant. However, the location of the College actually came prior to the laying out of Williamsburg and so while it was part of a small town, the surrounding buildings and tenants came later. William and Mary was an Anglican institution run by priests. The main building originally constructed in 1695 (which was rebuilt because of fire several times and then "restored" in

[5] Bryant Franklin Tolles, Jr. "College Architecture in New England Before 1860 in Printed and Sketched Views," *Antiques* March 1973. Raymond P. Rhinehart, "Special Sense of Place," *Brown Alumni Magazine* 114 (Sept. Oct, 2013), 32-39.

the 1930s with the development of Colonial Williamsburg) was a large two story plus attic brick structure with 13 bays across the front. The original plan called for wings enclosing a quadrangle, but only a portion of the north wing was constructed. About 1730 a small south wing contained a chapel was added. The interior had several large rooms on the ground floor for teaching and eating and other activities and then on the second floor rooms for faculty and students. Then in 1723 Brafferton Hall (for training Indians) and in 1732 the President's house were added to the town side. These houses were symmetrically placed and identical two story brick boxes with hipped roofs in the so-called Georgian style.[6] These buildings provided an entry way to the campus and are examples of some sensitivity to collegiate planning.

During Jefferson's attendance the student body numbered about 40 and the faculty was seven, six of which were priests while the seventh, William Short, taught philosophy. Short became Jefferson's mentor. Several of the Anglican priests led lives of debauchery including getting the students liquored up and rampaging through the town. Jefferson remained connected with the College and around 1771-72 was asked to design an addition in which he extending the wings back and creating an enclosed courtyard with an arcade. Construction started but in 1774 because of the impeding revolution it stopped with only some foundations in place. [7]

Jefferson's Architecture and Training

Perhaps best known as the author of the American Declaration of Independence (1776) and the country's third president (1801-1809) Thomas Jefferson (1743-1826) had many interests which ranged from politics, philosophy, farming, archaeology, and wine to architecture. Training in architecture (with the exception of France which had a school) generally came through the apprentice system in which you learned by working with a person who called themselves an architect. An architect would be proficient not just in design of buildings, but also in construction and in many cases either supervised or actually built the structure and also engineering. Since architects only began

[6] Mark R. Wenger, "Thomas Jefferson, the College of William and Mary, and the University of Virginia," *Virginia Magazine of History and Biography*, 103 no. 3 (July 1995), 339-374; and James D. Kornwolf, *So Good a Design: the Colonial Campus of the College of William and Mary: its history, background, and legacy* (Williamsburg, Va. : College of William and Mary, Joseph and Margaret Muscarelle Museum of Art, 1989)

[7] Ibid.

to appear in North America around the 1790s Jefferson's learning of architecture came from a different source. An avid bibliophile with a collection of more than 7,000 books, Jefferson owned the largest architectural library in the young American republic with more than 40 titles. From these books such as English language edition of *The Architecture of A. Palladio* whom he greatly admired, Jefferson learned the classical rules of architecture. He also learned about architecture through building and he directed with great attention to detail the various construction projects on his vast plantation holdings. He knew the process of brick making, how to operate lathes and carve details. He also learned about architecture through travel and observation including trips to Baltimore, Philadelphia and Newport, and then in Europe where he served as Minster to France from 1784 to 1789 and traveled extensively in France, the Rhineland, England, and Northern Italy. Jefferson was a classicist and based his architecture upon the various Renaissance treatises that he collected. Important to him was symmetry, balance, the proportions of the different orders and how they might be employed. He knew classical details intimately and also the hierarchy of the orders.

Jefferson believed passionately in architecture, he constantly advocated it as in a letter to James Madison he claimed: "But how is a taste in the beautiful art to be formed in our countrymen, unless we avail ourselves of every occasion when public buildings are to be erected, of presenting to them models for their study and imitation? " [8] He viewed architecture as ennobling the public good and as inspirational, and in another place he wrote: "architecture is among the most important arts and it is desirable to introduce taste into an art which show [s] so much. [9] He designed in 1786 the first major public building built in the United States after the revolution, the Virginia State Capitol in Richmond whose model, the Roman temple at Nimes helped set the classical precedent for much American governmental architecture for the next 150 years. He was very involved in the planning and laying out of the new city of Washington, D. C. and the design of the President's House (now White House) and the Capitol building. On a personal level he constantly remodeled the houses he lived in or rented such as his quarters in Philadelphia and Paris. He avidly purchased furniture, examined and designed drapery hanging, and built several houses for himself, including two versions of Mon-

[8] Thomas Jefferson (hereafter TJ) to James Madison, September 20, 1785 DLC, *The Writings of Thomas Jefferson*, ed. Andrew A. Lipscomb and Albert E. Bergh (Washington, D. C.: Thomas Jefferson Memorial Association, 1903-05), 5:134-13.

[9] Notes on objects of attention for an American," *The Papers of Thomas Jefferson*, ed. Julian P. Boyd (Princeton: Princeton University Press, 1956) v. 13: 269.

ticello (no.1: 1768-1782, no. 2: 1796-1826), and his retreat house Poplar Forest at Lynchburg (1806-26). He lived in a construction zone for much of his life and a female friend recorded this statement: "Architecture is my delight, and putting up and pulling down one of my favorite amusements."[10]

Jefferson's involvement in collegiate design began very early as noted above with his scheme for a quadrangle addition to the College of William & Mary in 1771-2. While Governor of the Commonwealth of Virginia from 1779-81 and during the Revolution he submitted a bill to the State Legislature to establish a system of public education for the state's population that would have three tiers: a primary level open to all "free" children; a collegiate level for the teaching of Latin, Greek, and higher mathematics; and, at the apex, a state-supported university devoted to specialized knowledge. He proposed that the Commonwealth take over the College of William & Mary and transform it. Although nothing came of his proposal Jefferson as governor was instrumental in reforming the College of William & Mary, eliminating the divinity school and hiring professors in other areas. Jefferson saw an educated populace as essential to the new American republic for as he explained to George Washington "our liberty can never be safe but in the hands of the people themselves, and that too of a people with a certain degree of instruction."[11]

In the ensuing years Jefferson became known for his educational views arguing for—unsuccessfully—to have a National College on the new Mall in Washington, D. C. and various proposals in Virginia. Requests came in from people in other states for his ideas on establishing a college and he gave similar replies such as the following in Tennessee: "I consider the common plan followed in this country, but one not others, of making one large and expensive buildings as unfortunately erroneous. It is infinitely better to erect a small and separate lodge for each separate professorship, with only a hall below for his class, and two chambers above for himself; joining these lodges by barracks for a certain portion of the students, opening into a covered way to give a dry communication between all the schools. The whole of these arranged around an open square of grass and trees would make it, what it should be in fact, an academical village, instead of a large and common den of noise, of filth, and of fetid air."[12]

---

[10] Statement attributed to TJ in, Margaret Bayard Smith, *A Winter in Washington* (New York: E. Bliss and E. White, 1824) 2:261.

[11] TJ to George Washington, January 4, 1785 [i.e. 1786], in *The Papers of Thomas Jefferson,* Julian P. Boyd, et al., eds. (Princeton: Princeton University Press, 1950-) vol. 9, 151.

[12] TJ to Trustees concerning the Lottery of the East Tennessee College, May 6, 1810, in *Writings of... Jefferson*, ed. Bergh and Lipscomb, 12: 387-88.

Finally in 1814 a real opportunity presented itself when he assisted some local Charlottesville area residents in the design of a proposed Albemarle Academy. The Albemarle Academy group had been in existence for a several years but little had happened until Jefferson became involved. He drew up a plan almost identical to one he had described many years earlier with nine identical pavilions flanked by ten dormitories on the side of each, situated around three sides of a square and connected by covered walkways. The square was very large measuring 257 yards in length on each side. In each of the small pavilions, Jefferson provided a hall on the ground floor for instruction and two rooms upstairs for living quarters for the instructors; this was quite similar to the scheme described in 1810. He showed the dormitories fronted by a series of square brick piers crowned by a chinoiserie railing strongly resembling the treatment of the wings at Monticello.

Jefferson intended that the Albemarle Academy would be something more than just a school for local young males and began politicking with various associates to get state funding for a college. Things moved slowly but finally in 1816 the legislature passed a bill establishing Central College and allotted some funding and the governor appointed a Board of Visitors who at their first meeting elected Jefferson as the head, or Rector. In 1819 the legislature passed another bill that changed the name to the University of Virginia and also gave more funding that came from appropriated land that had been owned by the Anglican/Episcopal church which lost it status of state support.

In early 1817 Jefferson as Rector and also principle architect set about purchasing land, initially 44 acres; in the next several years more land would be acquired. The site for the future university was a narrow ridge bordered by two roads, with a stream at one side. His 1814 plan would not fit and he modified it, creating rows of eight pavilions and dormitories facing each other 200 feet apart. He fit parallel rows onto the site by grading to make three terraces. On July 18, 1817, Jefferson surveyed the site, laid out the parallel rows of buildings, and noted that "some principal building" would be placed in the center of the north terrace. [13]Jefferson's concept of the "principal building" resulted from his inquiries in mid–1817 to William Thornton (the original architect of the US Capitol) and Benjamin Henry Latrobe (the second Capitol architect) two of his architectural colleagues. His letters to

[13] Jefferson, Specification Book, "Operations at and for the College," July 17, 1817, 5. University of Virginia Special Collections (hereafter UVA).

both contained a sketch of the earlier Lawn scheme, but his primary motive was to gain advice on the facades of the pavilions, for they should be "models of taste and good architecture, and of a variety of appearance, no two alike, so as to serve as specimens for the Architectural lecturer."[14] Jefferson had recently sold his extensive library, including the books on architecture, to the Library of Congress, and was without references. Thornton replied with two drawings for the facades suggesting that the central pavilion should receive more emphasis, and replacing the square piers in front of the dormitories with columns. Jefferson combined Thornton's facade and his own 1814 prototypical facade for the first pavilion built (VII), whose cornerstone was laid in October 1817.

Latrobe suggested a number of different facades for the pavilions, several of which contained giant-order porticos, and at the center, a large domed structure serving as a focal point. Jefferson adopted these ideas in the next several pavilions to be erected, and Latrobe's domed building became a library and classrooms, or the Rotunda. Jefferson had previously, around 1791, suggested a cylindrical domed structure for the US Capitol in Washington, DC. Its plan was close to that of the Rotunda. The exact circumstances surrounding this design are unclear, but two of Jefferson's Capitol drawings have survived.[15]

In the next several years Jefferson refined the design in some cases because of political pressure such as an order from the State Legislature for the University to have 10 disciplines and hence he inserted two pavilions, but since construction was well underway, the spacing between the pavilions changed. The consequence was that pavilions at the north end (nos. I, II, III, and IV) were pushed into the line, and the spacing became irregular between them. The distance across the Lawn was constant at the top as at the bottom—200 feet—but the intervals between the pavilions widened toward the south—or open—end. The proposed student body was to be 400 and hence Jefferson created outer rows of dormitories and then added hotels where the students would take meals. These were connected by an arcade in contrast to the run of Tuscan columns on the lawn.

Jefferson controlled the design but did take suggestions such as one by board member Joseph Cabell who proposed moving the gardens between the pavilions and the outer row of dormitories and hotels. Initially Jefferson

[14] TJ to William Thornton, May 9, 1817, Jefferson Papers, Library of Congress, Washington, D. C.

[15] Drawing no. 386, in Jefferson Collection, Massachusetts Historical Society, Boston.

resisted, but on reflection recognized the merits and simply cut out the old portion of his original drawing and taped in the new design. He reported on the change in the ground plan: "I think it a real improvement, and the greater, as by throwing the Hotels and additional dormitories on a back street, it forms in fact the commencement of a regular town, capable of being enlarged to any event which future circumstances may call for." [16]By July 1819, Jefferson had modified the plan even more by drawing in the famous serpentine walls.

Initially Jefferson supervised the entire project even calculating the number of bricks needed and providing measurements down to 1/100th of an inch. However, he was an old man and by March 1819 he turned the supervision of the project over to Arthur S. Brockenbrough. A vast crew of workers was employed along with slaves on the project; the total number is well over 400. Some were local but crews came down from Philadelphia and specialized craftsmen did the ornamental plaster work. The elaborate capitols were caved by Michele and Giacomo Raggi out of marble in Carrara, Italy. [17]

Needing books for the project Jefferson purchased again several architectural books, including works by Palladio and James Gibbs, and Charles-Edouard Errard and Roland Fréart de Chambray's *Parallèle de l'Architecture Antique avec la Moderne* (1766). One of the Palladio books, Giacomo Leoni's edition of *The Architecture of A. Palladio* (1742), was his favorite and as a friend and member of the Board of Visitors wrote: "With Mr. Jefferson I conversed at length on the subject of architecture—Palladio he said 'was the Bible'—you should get it and stick close to it. . . . " [18]These two books provided most of the external details for the different pavilion facades and the Rotunda. For the colonnade on the Lawn, Jefferson used the Tuscan order, the most solid and rustic order of antiquity. Although Jefferson viewed the Tuscan order as "too plain" and "not fit for a dwelling House," he chose it because of its lack of ornament and supposed simplicity of construction. Jefferson probably turned to Jombert's *Architecture de Palladio* (1764), a small volume that he owned and praised as being "portable," and more easily used in the field in contrast to large folios.[19] In a drawing Jefferson attempted to make the Tuscan order more elegant by elongating it to a height of more than

[16] TJ. to General James Breckenridge, July 8, 1819, Jefferson Papers, UVA.

[17] Richard C. Cote, "the Architectural Workmen of Thomas Jefferson," Ph. D. diss, Boston University, 1986.

[18] T. J. quoted in, Colonel Isaac A. Coles to General John Hartwell Cocke, February 23, 1816, (UVA, Cocke Papers, No. 640, Box 21).

[19] TJ to James Oldham, December 24, 1804, UVA.

nine times the lower diameter, instead of the more orthodox proportion of seven to one.

The ten pavilions, five per side that line the lawn with the student rooms in-between were intended to be teaching tools for the students, they would learn the orders, proportions and the ancient monuments upon which they were based. Built between 1817 and 1826 there is no discernable order in them except that each is different with fronts based upon the Temple of Fortuna Virilis, the Baths of Diocletian and others. Jefferson relied upon his different books and also drew upon Thornton and Latrobe's suggestions. Initially he planned on each pavilion to have the entire ground floor be a class room with the professor living upstairs in two rooms, but shortly after beginning modifications took place splitting up the ground floor and adding more rooms upstairs. Cooking would take place in the basement.

The Rotunda (Jefferson also called it the Pantheon) is based upon Latrobe's suggestion and his scheme of many years earlier for the U. S. Capitol. On the rear of one of the drawings Jefferson explained: "The diameter of the building 77 feet, being 1/2 of the Pantheon, consequently 1/4 A, area, H 1/8 volume."[20] Although drawing upon the Roman model and in his drawings Jefferson shows it to contain the most perfect of all of natures forms, the sphere and circle, still many modifications were made. The library or the mind of the university –occupied the top 1/3 and contained the volumes Jefferson

[20] Drawing N-328, UVA.

selected. The lower floors contained class rooms and spaces for chemistry and other activities. Raised up much higher than the Roman model shown in Palladio, great steps leads one to the six columned portico rather than the 8 columns on the original. Instead of concrete and masonry as in Rome the Virginia model was brick and timber with a wood truss dome.

In his drawings Jefferson indicated that the Lawn, or central place "grass & trees" but he never specified the exact form in drawings or correspondence. In 1823, and again in 1825 the University purchased a huge selection of plant materials some of which were intended for a proposed Botanical Garden, which because of Jefferson's death never happened. Some of these were locust trees and by 1830 a double row marched on each side up the Lawn, which as a professor noted gave "promise of shade in years to come." [21]Over the years these were replaced, and today most of the Lawn is planted with a double row of ash trees.

The University of Virginia as largely completed in 1826 at the time of Jefferson's death was one of the most complete and coordinated schemes in the United States. Several others came along about the same time such as Joseph-Jacques Ramee's for Union College in Schenectady, New York with a design date of 1813, but never fully completed, and schemes by Charles Bulfinch to create an organized grouping of buildings at Harvard about the same time. But Jefferson's was the most complete and it had some impact primarily in the South at Davidson College, Davidson, North Carolina and at the University of Alabama, Tuscaloosa which was designed in 1828 by William Nichols. In many ways similar to Jefferson's scheme, unfortunately it was burned during the Civil War and rebuilt in a very different manner.

However, the location of the University of Virginia in a relatively isolated and rural area and the lack of knowledge about it caused it to be ignored for many years. Also additions made to it frequently ignored Jefferson's original scheme. Changes in curriculum and growth of student body led to changes and how Jefferson would have handled these remains unknown and a subject for speculation. But what did happen were both additions to existing structures and new buildings decidedly at odds with Jefferson's original intentions. A new method of composition sometimes called the "picturesque" or "romantic" or "Victorian" dominated. New buildings were haphazardly spotted around the grounds such as an Italianate Dispensary, a Gothic gate lodge, a natural history museum with a Mansard roof in the

[21] John A. G. Davis quoted in Richard Guy Wilson, David J. Neuman and Sara A. Butler, *University of Virginia: The Campus Guide* 2nd ed. (New York: Princeton Architectural Press, 2012), 43.

French Second Empire mode, a Gothic revival chapel. Jefferson's vision appeared to have been lost.

Discovery and the Campus Beautiful

The lack of unity that began to appear at the University of Virginia beginning in the 1830s was a common feature of most American collegiate institutions. The earlier model of a single building and then additions with little overall planning was standard. Certainly there were attempts at coordinated university plans such as Thomas U. Walter's Girard College, 1833, in Philadelphia, and Alexander Jackson Davis's schemes for the University of Michigan, 1838 in Ann Arbor and the Virginia Military Institute, 1848 in Lexington, Virginia, but in most cases only a small portion was constructed because of funding issues and when later expansion took place, the original plan was not followed. However, one feature does emerge and that is the central yard and the tendency over the years to place new buildings around a space creating a common.

A big shift in American architecture and planning begins to occur in the 1880s when the impact of architects trained at the French Ecole des Beaux Arts in Paris begin to dominate the scene. The result was a new approach that placed emphasis on the larger scene and overall coordination of projects especially at the urban scale. Various names have been associated with this transformation that range from the City Beautiful, the Beaux-Arts style, and the American Renaissance. In spite of the classicist leanings of many of the designers, this was not a style but a vision of coordinated spaces and buildings and could incorporate medieval inspired quadrangles and also designed park like spaces filled with trees. One of the earliest examples was Leland Stanford, Jr. University, Palo Alto, California, where Charles Coolidge of the Boston firm of Shepley, Rutan and Coolidge in 1888 along with the landscape architect Frederick Law Olmsted created a series of Romanesque styled quadrangles linked by round arches. Olmsted and his successors contributed to the design of numerous American campuses and at times could be picturesque, or alternatively, very symmetrical, balanced and ordered.

Assisting in the new appearance of the coordinated campus was the rediscovery of Jefferson's design for the University of Virginia that had been forgotten and/or ignored for many years. Beginning in the later 1880s and part of an overall growing interest in the American past and history, a professor at John Hopkins University published a book that spoke admiringly of Jefferson's ideas about the concept of electives and the different disciplines and also his

architectural design, which he praised as the paradigm of the modern university.[22] In the next several years more articles and ultimately books appeared on early American architecture and Jefferson's design gained considerable notice. Also assisting was the fire of October 27, 1895 when the Rotunda burned. The fire and the subsequent rebuilding caught the national spotlight.

McKim, Mead & White of New York, the architects for the rebuilding were the leading architectural firm from the later 1880s to c.1930. Charles McKim had visited the University twice prior to the fire and his design for the new campus of Columbia University in Morningside Heights, New York, that began in 1894+, shows the impact of Jefferson's design with the domed central library and buildings placed around it, creating a series of interrelated spaces. Exactly contemporary was Stanford White's design for a new campus for New York University in the Bronx, which also had a domed library at the head of the campus and buildings in alignment, recalling very much Jefferson's design. These plans were already in construction when the October 1895 fire took place in Charlottesville and after some dithering on the part of the Board of Visitors McKim, Mead & White were selected as the design firm for the rebuilding.

Stanford White directed the design of University of Virginia modifying in certain ways Jefferson's vision such as making the Rotunda Library much larger taking up most of the structure. Jefferson's library was originally designed for about 9,000 books and by the later nineteenth century it was outmoded with the tremendous expansion of printing. He also made a new entrance to the University from the north with the addition to the Rotunda of stairs and terraces and a door.

White's worry about the project is apparent in an account of a conversation he had with a friend: "'I've seen <u>his</u> plans' [White said], and then with great deference: 'They're wonderful and I'm scared to death. I only hope I can do it right.'"[23] Initially he resisted but the Rector of the University and the faculty demanded some new classroom buildings for engineering, the open view Jefferson had created. After some deliberation White agreed and three large buildings mimicking in materials Jefferson's original but with Greek details were built, enclosing the space. White's employment of Greek details rather than Jefferson's Roman and Renaissance inspired indicates he intended to continue the idea of architecture as a teaching tool.

[22] Herbert Baxter Adams, *Thomas Jefferson and the University of Virginia* (Washington, D.C.: Government Printing Office, 1888).

[23] White quoted in Edward Simmons, *From Seven to Seventy* (New York: Harper, 1922), 241.

The enclosed Virginia campus follows another trend that began in the 1880s and continued for many years, the separation of colleges and universities from the surrounding town which had grown up by the placement of walls and gates. At Harvard, Yale, Princeton, Brown and many others the campus which had been open and to the growing surrounding town the difference was clearly demarked. In some ways this followed a trend in America at the time where limits and separation of people and ways of life became more pronounced.

The rediscovered Jefferson plan for the University of Virginia with many modifications became the model for many American institutions of higher learning for the next 30 years. Not that it was copied directly but with modifications and frequently with a large library at the center of the campus and with appropriately detailed buildings helping to define the common area it can be seen in campuses in Minnesota, California, and elsewhere. In some cases such as the Women's campus for Duke University in Durham, North Carolina by Horace Trumbauer with Julian Albee, it appears to be very close to the original.

On a larger scale he campus beautiful model would persist at many institutions up to the 1940s. For instance at the University of Virginia buildings were added but they harmonized in materials with the originals, red brick and white trim, and while larger, they kept a common cornice line of 2 stories. And very important, they were sited so to create quadrangles with common open space in the middle.

The quadrangle or "quad" became a very popular model at many universities. The idea came from Cambridge and Oxford universities in England and took several forms. One as indicated above was red brick in a vaguely Georgian or Colonial revival style, but also it could be medieval. The purposes of the quadrangle was several fold and they could serve as a residential college for a growing student population, or as a specialized college such as at the University of Michigan where in the 1920s a "Law" quad was built, or a the complete institution such as Cope & Stewardson's plan for Washington University in St. Louis.

Ralph Adams Cram of Boston with his partners Bertram Grosvenor Goodhue and Frank Fergusson became the leaders in designing universities in many styles though they preferred the gothic. Cram was an ardent medievalist and deplored the "modern" university wanting to turn the clock back; the university should be "half college and half monastery." [24] Cram and

[24] Ralph Adams Cram, *The Gothic Quest* (New York: Baker & Taylor, 1907) 342

his partners won the competition for the enlarged Military Academy at West Point in 1900 with a medieval picturesque design and went on to design major portions of Princeton University, University of Richmond and others. He could design in other styles and employed the Colonial form at Sweet Briar College which he claimed was more suitable for females and also Virginia. At Rice University in Houston, Texas, Cram wrote about being depressed by the lack of any viable architectural tradition and hence he invented a style he felt appropriate derived from medieval sources around the Mediterranean and Southern France. The overall scheme is more classical but with various quadrangles flanking the central axis. [25]

The Coordinated Campus Today

Higher education in the United States underwent a dramatic transformation after World War II that impacted campus planning and architecture. A huge increase in student enrollment that began with the return of veterans from the war did not cease but continued as more and more students went on to higher education. From a collegiate population in 1947 of about 2 million, the figure for 2013 is estimated at 21.8 million. In 1950 about 20 percent of

[25] Ralph Adams Cram, *My Life in Architecture* (Boston: Little, Brown & Co, 1937), 124, 127.

18 year olds attempting to go on to school now, nearly 60 percent attend. The result of all of this is a vast increase in size of colleges and also their number.

Dealing with this growth and the modern American university campus can be summarized in several ways. One method was suburbanization, or the addition of more buildings on the outskirts or in some cases removed from the central campus. These additions could be designed such as the "North Grounds" at the University of Virginia by Hugh Stubbins and Associate, but in other cases the new structures resemble some of the suburban sprawl around many American cities. Another approach has been totally new universities that are inserted into large cities such as the University of Illinois at Chicago Circle, 1963, which took up many acres near the downtown and major expressways.

New types of facilities came into demand for activities such as sports. Gymnasiums began to appear in the later nineteenth century at American colleges accompanied by areas set aside for spectator sports, but in the 20th and 21st centuries they have multiplied and became major sub=campus areas of stadiums, arenas and workout centers. Parking or the increase of automobiles has been a major concern since all of the earlier and older campuses were designed for foot traffic. Where to put the car is a big problem. Housing has become a real problem with many universities simply surrendering to off-campus rental units. The ideal of comprehensive planning and coordinated architecture have continued but as indicated with major problems.

The roots of Modern architecture in the United States can be traced back to the later nineteenth century but it does not make a major impact until the post World War II years. The earliest examples of "modern" architects designing entire campuses would be Frank Lloyd Wright's Florida Southern College, 1938, Lakeland, Florida and Mies van der Rohe's Illinois Institute of Technology (IIT), 1940, Chicago, Illinois. Wright's scheme was typically idiosyncratic with a series of diagonals, but in many ways his idea of a focal point such as the "water dome" and then a series of pavilions such as the chapel, library, and classrooms all connected by "esplanades" or covered walkways recalls Jefferson's University of Virginia which he had studied.[26] Mies's IIT in spite of its severely minimalist architecture of flat roofs, steel frames and brick and glazed walls was rigidly classical in its layout on the grid.[27] A vari-

[26] Dale Allen Gyure, *Frank Lloyd Wright's Florida Southern College* (Gainesville: University Press of Florida, 2010).

[27] Werner Blaser, *Mies van der Rohe: IIT Campus, Illinois Institute of Technology*, Chicago (Basel, Boston: Birkhäuser, 2002).

ation on Jefferson's Academical Village model can be seen at Paul Rudolph's University of Massachusetts, Dartmouth (originally Southeastern Massachusetts University), 1963 that contains concrete brutalist buildings linked by passages around a central common.

Although modernism as a broad based design approach has been the dominate architectural element still some campuses especially with the advent of postmodernism have attempted to resuscitate the traditional styles. At the University of Virginia architects such as Michael Graves and Robert A. M. Stern have made additions that compliment the old.

As indicated many different and complex problems face the modern American institution of higher learning, but also there are continuities with the past. The ideal of the coordinated university campus and architecture remains and that the buildings and the grounds or the campus should inspire and assist in learning.

Bibliography

For books specifically related to American university architecture and planning.

Adams, Herbert Baxter, *Thomas Jefferson and the University of Virginia* (Washington, D.C.: Government Printing Office, 1888).

Blaser, Werner, *Mies van der Rohe: IIT Campus, Illinois Institute of Technology*, Chicago (Basel, Boston: Birkhäuser, 2002).

Cohen, Michael David, *Reconstructing the Campus: Higher Education and the American Civil War* (Charlottesville: University of Virginia Press, 2012)

Dober, Richard P., *Campus Planning* (New York: Reinhold, 1963).

Gyure, Dale Allen, *Frank Lloyd Wright's Florida Southern college* (Gainesville: University Press of Florida, 2010).

Horowitz, Helen Lefkowitz, *Alma Mater: Design and Experience in the Women's Colleges from Their Nineteenth Century Beginnings to the 1930s* (New York: Knopf, 1985).

Klauder, Charles Z., and Herbert C. Wise, *College Architecture in America and Its Part in the Development of the Campus* (New York: Scribner's, 1929).

Kornwolf, James D., *So Good a Design: the Colonial Campus of the College of William and Mary: its history, background, and legacy* (Williamsburg, Va.: College of William and Mary, Joseph and Margaret Muscarelle Museum of Art, 1989).

Turner, Paul Venable, *Campus, An American Planning Tradition* (New York: Architectural History Foundation and Cambridge: MIT Press, 1984).

Wenger Mark R., "Thomas Jefferson, the College of William and Mary, and the University of Virginia," *Virginia Magazine of History and Biography*, 103 no. 3 (July 1995), 339-374.

Wilson, Richard Guy, ed. *Thomas Jefferson's Academical Village: The Creation of an Architectural Masterpiece*, rev ed. (Charlottesville: University of Virginia Press, 2009).

Wilson, Richard Guy, David J. Neuman and Sara A. Butler, *University of Virginia: The Campus Guide* 2nd ed. (New York: Princeton Architectural Press, 2012).