Drexel University

An Architectural History of the Main Building 1891-1991

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This booklet has been prepared with the support and assistance of the Department of Architecture as a contribution to the celebration of the Centennial of Drexel University.
One hundred years ago, on 17 December 1891, the new building of the Drexel Institute of Art, Science and Industry was dedicated. This event attracted the usual luminaries: Levi Morton, the vice president of the United States, Robert Patton, the governor of Pennsylvania, educators, and religious leaders. More remarkable guests were Andrew Carnegie, "representing the achievements of the manufacturing world, and Thomas A. Edison, "the sovereign genius of the electric world" whose presence indicated the interest of these two great branches of human activity, of which the Drexel Institute is to be a part." After Bishop Henry Potter of New York pronounced the invocation to the dignitaries seated in the building's grand auditorium and to the officials of the school seated on the stage, the Honorable Chauncey D. Dewey gave a lengthy dedicatory address. In it, he related the history of higher education back to the medieval world of Abelard and ended with lavish praise for this new institution. Its students would not become academics, clergies, and lawyers, the products of the ancient universities, but rather they would work in industry and the sciences. Focusing on business and commerce, and including women among its students, this would be a peculiarly American institution, free of social class divisions, rooted in the values of Ralph Waldo Emerson.

The new building was a direct reflection of the intentions of its founder, Anthony J. Drexel (1826-1893). Unlike most American colleges, whose Gothic-detailed buildings on green lawns, framed by ancient trees, recalled the origins of colleges in English religious communities, this was squarely situated on an urban corner, two blocks from the lines of the Pennsylvania Railroad and adjacent to the Allison Car Works. The building's design was different as well: its walls were of a bright buff brick and terra cotta with ornament derived from classical sources, though following no specific European prototype. The two-hundred-foot square building covered an acre. Its masses were disposed as two wings punctuated by regularly spaced windows on either side.
(above) The north side of the Great Court before the A.J. Drexel Memorial was placed on the landing of the grand staircase in 1918. The original buff and deep red decorative stenciling of the vault are visible. (Drexel University Archives) (right) The south side of the Great Court before 1915. The great skylight and leaded glass skylight were removed in the 1930s. (Drexel University Archives)
of a central block, which contained a broad archway. At the peak of the arch was affixed a peculiarly nineteenth-century emblematic nude figure representing "the Genius of Knowledge," which supported a tablet emblazoned with the name of the new institution—not Drexel College but rather Drexel Institute, linking it to the workingmen's educational movement of industrial England and Germany of the late nineteenth century. The inner face of the archway was ornamented with rosettes containing busts that represented the giants of the arts and sciences taught by the Institute. For poetry there was Goethe; Raphael for painting; J. S. Bach for music; Michelangelo for sculpture; and Shakespeare for drama. To these well known giants were added others appropriate to the broader interests of the Institute: for physics, Faraday; for mathematics, Isaac Newton; for natural history, Humboldt; for navigation, Columbus; for architecture, William of Sens, the medieval master-builder of Canterbury Cathedral; and for politics, Thomas Jefferson.

The serene appearance of the exterior belied the splendors within. Beyond the great portal a richly ornamented colonnade entrance hall opened, not into customary dark, narrow corridors, but into a vast light-flooded, multi-story arcade space, like the courtyard of an Italian palazzo, but roofed over by an expansive leaded glass skylight from the center of which hung a splendid chandelier. This great room was light in tone, accented with marble and terra cotta trim in the soft buff tints of the exterior, with antique red painted palmettes and borders in the core of the ceiling. White glazed brick arcades formed the walls of the court, while the floor formed an oriental carpet of tile under foot. On the right a museum, and on the left a library, opened the world of culture and history to the students while directly ahead, an auditorium seating 1,000 made it possible to bring great speakers and artists to the Institute. Broad flights of marble stairs provided access to the corridors that surrounded the court from which classrooms, laboratories, and drawing studios opened in the east and west wings. The result was a new paradigm of the academic building, not the ecclesiastical cloister removed from urban life, but rather the market
square at the crossroads of the town center. Because of this splendid court, Drexel has had life at its core ever since, as the banners and placards attest in its sometimes messy but always vital center.

Though seemingly extravagant in so functional a structure, the Great Court, ornamented with casts of classical statuary, had a noble purpose. Here the building's designers challenged the imagination of the students and faculty and demonstrated that even the modern world of science and technology should not be devoid of aesthetic delight and cultural content. This space, more than any other feature, hinted at the future and perhaps at the most famous utopian image of its time, the great glass-domed interiors of the visionary landmarks of the year 2000 described in Edward Bellamy's *Looking Backward* of 1887. In this utopian novel, Bellamy preached new goals of sexual equality and mutual appreciation of all work—very much the didactic theme of the new Institute.
The architect of this extraordinary building, Joseph M. Wilson (1808–1902), was among the dignitaries on the stage at the dedication. He was a member of the first Board of Managers and had been a prime mover in the shaping of Anthony Drexel’s vision. In fact, almost two years before, early in 1890, Wilson had begun publication of a book-length series of articles entitled “On Schools with particular reference to Trade Schools.” They were based on a European trip in the previous year, which had lasted several months and had taken him to many of the new technical academies of Germany and England. Wilson concluded the series with a bold challenge:

Educational questions are now being discussed everywhere, in all countries, with a vigor as never before. Public interest has been aroused to the importance of the matter and to the necessity of modifications and improvements in the methods of teaching and of subjects taught.

Why cannot such Institutions as the Franklin Institute, the Builders’ Exchange, the Pennsylvania Art Museum, the Philadelphia Exchange for Women’s Work, and others of kindred interest, form themselves into an organization and do work such as being performed by the Clay and Guilds of London Institute and the Department of Science and Art in Great Britain, to advance the cause of trade and technical education? Wilson’s challenge was immediately met not by the assorted Philadelphia institutions but through the generosity of Anthony J. Drexel. For a generation, Drexel had toyed with the idea of founding a women’s college in the Philadelphia suburbs, but the success of Bryn Mawr College made the alternative of a commercial institute for training in the useful arts for men and women more attractive. It is therefore not surprising to note in the first footnote of Wilson’s articles his acknowledgment that his trip had been a fact-finding tour supported and funded by the European branch of the Drexel banking house, Drexel, Harjes and Co. Wilson’s conclusions supported Mr. Drexel’s new direction, which was especially appropriate as the United States began the shift from agriculture and the frontier to industry and urbanism.

Why Anthony Drexel chose Joseph Wilson to make the tour and prepare a report tells much about Wilson and his special relationship with Drexel. For nearly a decade, the Wilson Brothers had served as the
architects for the Drexel family enterprises, beginning in 1884 with the design of the Drexel Bank at Fifth and Chestnut streets. This was followed by its almost immediate enlargement, and their connection continued with commissions for Drexel's children in the vicinity of the family compound at 39th and Walnut streets. Still, it was remarkable that Drexel would choose to be guided on so important a project by an architect and not by an educator or a clergyman. However, Joseph Wilson was more than an engineer-technocrat; rather he was one of the most remarkable men of a remarkable age. When he made his visit to Europe, he was simultaneously serving as the president of the Franklin Institute and the president of the American Society of Civil Engineers while he was also at the height of his dual career as a practicing engineer-architect.

Fewer persons can be said to have been born to his craft; it was Joseph Wilson. Four previous generations of Wilsons had been engineers, reaching back to the eighteenth century in Scotland. After graduating with a degree in civil engineering from Rensselaer Polytechnic Institute, Wilson took two years of post-graduate work in chemistry before joining the Pennsylvania Railroad staff, where he was quickly made Principal Engineer in charge of bridges. In the early 1870s, he entered the competition for the Main Building for the Centennial Exhibition with John McArthur, Jr. Although their vast glass and iron Gothic hall placed third, the engineering rationale of Wilson's design was powerfully apparent. With the Centennial exhibit in danger of foundering on grandiose schemes and inadequate budgets, Wilson and Henry Pettit were given the charge of designing and completing in eighteen months the main exhibit and machinery halls that were to cover nearly fifty acres. This they accomplished on budget and in time for the installation of exhibits on January 1876.

Spurred by this triumph, in 1876 Wilson left the employ of the Pennsylvania Railroad to form a partnership with his brother John and with architect Henry Macomb, under the name of the Wilson
Brothers. Though most of the nineteenth century, American architecture had been shaped by designers looking backward toward the European past while American engineers were spanning chasms, tunneling under rivers, and envisioning new structures that would free buildings from the mass and weight of masonry and permit them to reach toward the heavens. The Wilson Brothers proposed to combine planning, engineering, and architecture in recognition of the changes which had taken place in the business of the country and believing that the time had arrived for combining the professions of engineering and architecture in such a manner that corporations and individuals could avail themselves of the best professional advice without having to maintain an expensive staff. Through this combination is now well established, in the nineteenth century it was virtually unique.

The Wilson Brothers also made significant contributions to the rationalization of building construction. It was they who first supported masonry walls on a steel frame in 1881 for the Broad Street Station and who later added wind bracing to the steel frame of their 1888 addition to the Drexel Bank Building at Fifth Street. The daring of the Wilson Brothers' structural innovations was equalled by the logic of their planning and design. Where late Victorian designers had pushed masonry to its picturesque limits, the Wilson Brothers foresaw that modern linear construction materials were best served by regularity of form and consistency of plan. From this conclusion came the adaptation of the ordered forms, if not necessarily the details, of classicism as the analog to the construction process. Hence the measured and regular character of the Main Building was rooted in the engineer's grid rather than the imported Beaux-Arts classicism that would sweep the country after the 1893 Columbian Exposition in Chicago.
As the formal and aesthetic solution for a plan of a technical institute, one that addressed both the changing technology and character and the mass democracy of the industrializing and urbanizing America of the 1890s, the Wilson Brothers design was noteworthy. The building housed all of the functions of the entire institute under the same roof—from administration to eleven departments that required a gymnasium, workshops, laboratories, a technical museum, a large library, and classrooms. Indeed, with the exception of the dormitories, which are a product of Drexel’s change to a residential campus in the twentieth century, all of the functions now scattered across the entire campus were once housed in the single building which served a community of nearly one thousand students and faculty. New functions have replaced old. Administrative offices have expanded into the library; the president’s and provost’s offices have replaced the museum and lecture hall; and the gymnasium on the fourth floor is now the home of the Department of Architecture.

The fledgling institution in its new home was such an immediate success that it almost immediately required more space. Initially, adjacent houses given to the Institute by its board and the Drexel family were adapted for laboratories and architecture. By 1901, spurred by a splendid gift of paintings from John Lankenau, brother-in-law of the late Anthony J. Drexel, the Wilson Brothers were asked to add a second building, Rangell Hall, to the east of the Main Building. It followed the buff tonality of the original building but with a more robustly Beaux-Arts classical character. Curtis Hall, in the simplified classicism of the 1920s, followed from the office of Edward Simon, a 1900 graduate of the Institute.
Drexel’s strongest supporters could scarcely have envisioned the changes that have occurred in its first century in transportation or technology, as railroads and steamships were supplanted by automobiles, airplanes, and spaceships, and as telephones led to television, and typewriters to modern word processors. In that same century, Philadelphia itself has been transformed from the nation’s principal manufacturing center, served by three great railroads, to a service center and regional financial district. Still, despite the vast changes in society and industry, it is perhaps not a surprise that the Wilson Brothers’ visionary masterpiece remains central to what has become a major university. The regular grid of its structure has proven amenable to many alterations as some departments and schools have expanded while others have moved to their own buildings. More remarkably, the most important features of the Main Building—its handsome facade and its great light-filled, buff-toned court have been preserved; floors were not inserted, nor was the ceiling lowered as so often happened in the efficiency-conscious 1960s when Victorian architecture was most criticized. Indeed, its only losses have occurred not by design but by accident when the leaded glass lay-lights were blown out by an explosion in a nearby building in 1956 and the chandelier was removed during repairs. Unlike so many educational institutions that demolished their earlier buildings or even moved to new campuses, Drexel is fortunate: its landmark original building survives, a continuing delight to its students and the focus of fond memories of its alumni.

There can be no doubt that in the pantheon of Philadelphia’s great nineteenth century academic buildings, including T. I. U. Walter’s Girard College and Frank Furness’s University of Pennsylvania Library, belongs the Wilson Brothers’ Drexel University Main Building.
NOTES

1 The dedication of Drexel Institute was widely publicized with the complete proceedings published as Dedication Ceremonies of the Drexel Institute (Philadelphia: Drexel Institute, 1930). The list of guests was published on pages 10-12. Drexel had been the subject of a number of histories, notably Edward D. McDonald and Edward M. Hinton, Drexel Institute of Technology, 1891-1941: A Memorial History (Philadelphia: Drexel Institute of Technology, 1942); and Michael N. Kostian, A History of Drexel University, 1891-1965 (Philadelphia: Drexel University, 1985).

2 The first of these pieces appeared in Journal of the Franklin Institute 129, no. 2 (February 1890): 81 ff. and continued monthly until 130, no. 4 (October, 1890): pp. 264-265.

3 ibid., pp. 264-5.


5 The Drexel commission included the bank at 5th Street of 1884-85; its massive enlargement, 1887-88; the Drexel Institute, 1889-91, a house for George W. Childs, Drexel at 39th and Locust streets, of 1891, and numerous later additions and alterations including the 1901 Randolph Hall. The first record of the proposed Drexel Institutes appears to have been in The Philadelphia Real Estate Record and Builders’ Guide 6, no. 53 (25 December 1889) which reported that the Wilson Brothers were at work on plans and specifications for the new “Drexel School,” to be built at 39th and Chestnut streets, with work to begin “...in the coming building season.”


9 [Wilson Brothers], A Catalogue..., p. 6.

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