

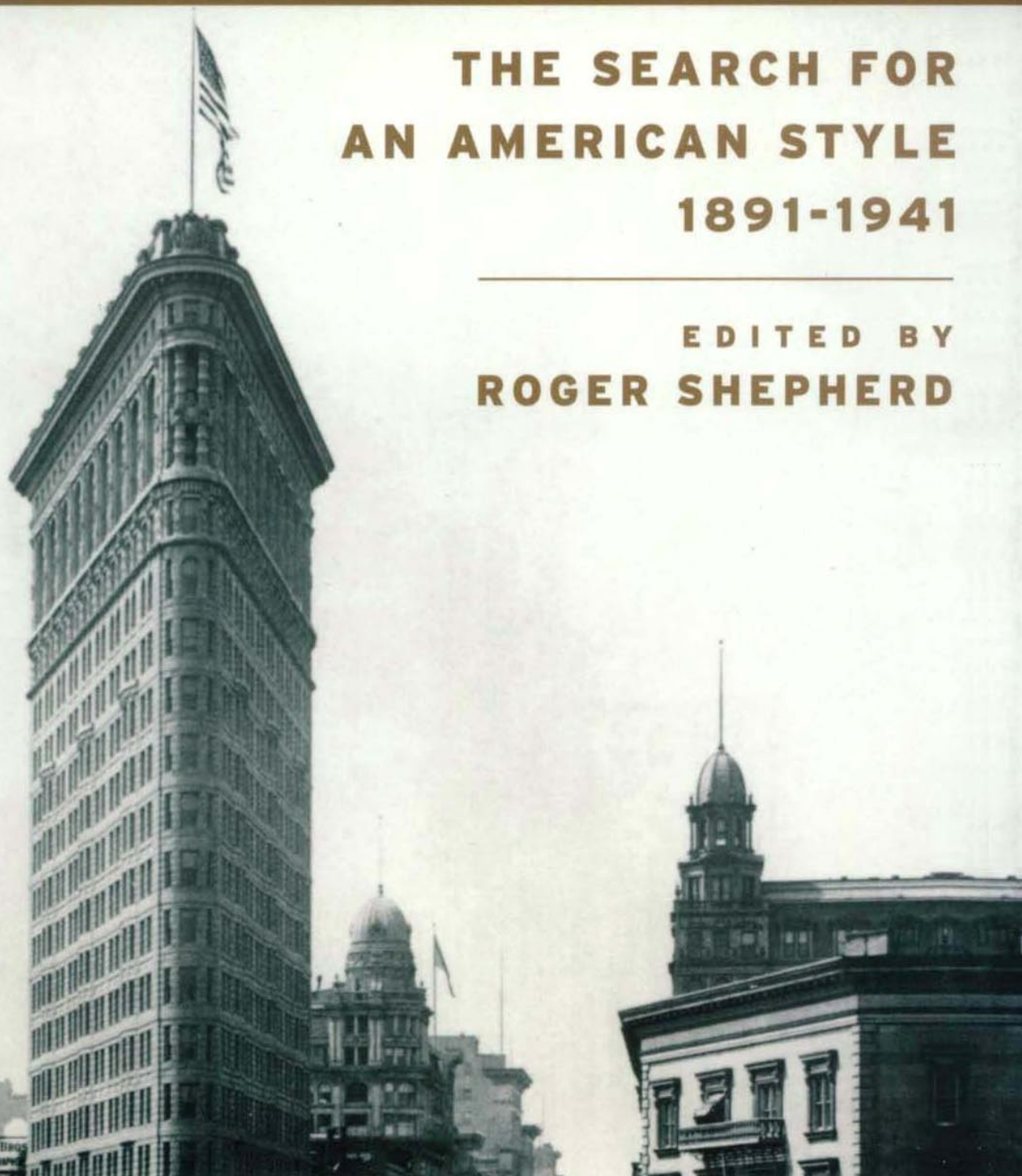
AN ARCHITECTURAL RECORD BOOK

# SKYSCRAPER

**THE SEARCH FOR  
AN AMERICAN STYLE  
1891-1941**

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**EDITED BY  
ROGER SHEPHERD**



*Masonic Temple, Chicago,  
Burnham and Root,  
architects, 1891-2 (demolished).*

At 302 feet, this structure was seven feet shorter than New York's World Building with its lantern, but it boasted the highest occupied floor. The building employed a rigid steel frame with wrought iron windbracing placed diagonally between the structural members above the 10th floor.

The Masonic Temple remained Chicago's tallest building until the 1920's when the city's new zoning laws permitted towers. In 1939, its offices and stores considered old fashioned, the building was demolished.

opposite: To illustrate the "observations and forecasts" in the article opposite, the author chose "a design for a Polytechnic School by J. Beckening Vinckers, a graduate (1923) of the Delft Institute of Engineering Sciences and Architecture....he is now working in the office of William van Alen."



## TWENTY-FIVE YEARS OF AMERICAN ARCHITECTURE

(excerpt)

By A.D.F. Hamlin<sup>1</sup>

★ ★ ★

The most noticeable features of our architectural progress during the last twenty-five years have been the development of steel skeleton construction and the influence of several great exhibitions, especially of that at Chicago in 1893. The steel skeleton was born and first developed in Chicago. This statement is made despite the fact that in 1888 the late L. A. Buffington<sup>2</sup> of Minneapolis patented a system of metallic skeleton construction which embodied many features of the present system. But most of these features were not new; each had been used in varying forms in earlier buildings, and the Buffington column was an unscientific laminated affair of flat plates, wastefully and inefficiently combined. Mr. Buffington failed to induce reputable lawyers to prosecute his suits for infringement against Chicago and New York architects. Whatever may have been the merit of his claims of priority in the conception of the steel skeleton, it was the Chicago architects Jenney and Mundie who first gave the conception practical form and carried it into successful execution: to them belongs the credit for its design in its essential features. Thus it is from the metropolis of the Middle West that the two most potent forces emanated that have transformed modern American architecture.

The steel skeleton was really born in 1889; but the year 1891 saw it accepted as more than a mere experiment, and we may say that from that year dates its definitive adoption in American architecture. It is fair to consider it as the fourth of the great structural advances which have given architecture really new resources. The Roman vault for the first time made vastness of unencumbered space attainable. The Gothic ribbed vault and flying arch and buttress created the masonry skeleton and made possible the majestic loftiness and airy lightness of the medieval cathedral: another new architecture was created. The metallic truss,

developed towards the middle of the last century, permitted a wholly new spaciousness and lightness of construction: our vast exhibition halls, train-houses and armories would have been impossible without it; again a new architecture came into existence, hardly recognized as a new architecture. The steel skeleton, the last of the four developments, has brought into being a new loftiness and lightness of construction; it has freed architecture from the limitations of massive walls which had for ages kept it from soaring otherwise than in the frail and beautiful but practically useless form of the spire. We have not yet solved the problem of the ideal artistic treatment of the sky-scraper, but we have gone a long way towards it; and meanwhile our architecture has been endowed with wholly new resources and possibilities.

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Our skyscraper architecture hardly requires the mention or comment of my pen. It is omnipresent and insistent, the most conspicuous, revolutionary and American architectural product of the last twenty-five years, from Jenney and Mundie's Home Life Building in Chicago and Bradford Gilbert's Tower Building addition in New York to the 750-foot Woolworth and the vast Equitable in New York, and Boston's much-belauded Custom House. It has been more "cussed and discussed" than any other modern type. It has changed the skyline of New York and of every large American city from Seattle to Bangor, from Los Angeles to Galveston. It has produced a new architectural style, irrespective of that of its varied decorative trimmings; and it speaks so loud for itself as to make further words on this page unnecessary.

★ ★ ★

In 1891 there were published in the United States, disregarding minor and ephemeral periodicals, two architectural journals: the weekly *American Architect and Building News* in Boston, and the monthly *Architecture and Building* in New York. In that year the *ARCHITECTURAL RECORD* first



from:

*MODERNISM IN ARCHITECTURE*

Leon V. Solon

Vol. 60, No. 3, September 1926,

pp. 193-201.

TECHNIQUE, IN ALL the arts, might be defined as the formulation of convenient methods for manipulating physical vehicles employed for externalizing an aesthetic content. All those unified directions for artistic impulse which we recognize under stylistic designations are identified with techniques. Each so-called style or type has evolved within a distinct imaginative sphere and is the means wherewith some self-contained artistic purpose is stated. The physical media, even when identical, employed in each type of expression, must consequently be endowed with pertinent significance through the manner of their utilization or, in other words, through the formulation of a distinctive technique. A norm in technique is inconceivable, as irrational as a norm in artistic expression. Artistic objective differs in each stylistic type; hence the difference in the manner in which inherent capacities in medium are developed through technique. It is through technique that vital abstract qualities are realized in effect; techniques are not interchangeable in activities directed to unrelated artistic ▶

July

1916

1 A.D.F. Hamlin (1855-1926) was an architect and Professor of the History of Architecture at Columbia University. From 1903 to 1912 he was associated with Hamlin and Warren on buildings for Robert College, Constantinople. He was the author of a number of books on the history of architecture including a standard university text, *THE HISTORY OF ARCHITECTURE*, 1896.

2 See note \*, page 14.



3 A plate from Henry Adams' ever popular classic *MONT-SAINTE-MICHEL AND CHARTRES*, 1904. Once considered a must read for all architects "touching on the human side of architecture," by the 1920s the book was considered "a creditable kind of ignorance." [56:2 Aug 1924 p. 123]

opposite: By the 1920s *ARCHITECTURAL RECORD* began featuring illustrations on their covers, frequently urban images featuring skyscrapers. This February 1925 cover typically uses a German Expressionist style.

\* The French sculptor Auguste Rodin (1840-1917) was featured in an extensive article *RECORD*. [XVIII:5 (Nov 1905) pp 327-346]

made its appearance, as a quarterly, hailed from the outset as a much-needed addition to our periodical literature, and marked by a seriousness of artistic and literary purpose which has ever since characterized it. Its change in 1903 to monthly issues was a natural result of its high quality, and it has constantly maintained that quality ever since. Meanwhile the *Technology Review* of Boston has entered the field, and that has developed into the excellent *Architectural Review*, filling a field midway between that of the *RECORD* and the other periodicals mentioned. *The Inland Architect* of Chicago long served the interests of the Middle West; the *Western Architect* came later, and in 1903 first appeared *Architecture*, another New York monthly, making a specialty of photographic illustrations. Occupying a field of its own, and standing at a very high level of scholarly, literary and artistic excellence, is the *Journal of the American Institute of Architects*, now in its third year; the latest comer in the field of American periodical literature on architecture. Other additional periodicals there is not now space to mention; they are many, and there are still others which, though not primarily architectural, devote a part of their space to architecture or issue special architectural numbers. All this has served to diffuse an interest in architecture among the public, and to provide the architect with information, instruction and suggestion. This periodical literature, much of it excellent, some of it commonplace, some distinctly inferior, is both a cause and a result of the increased general interest in architecture.

Quite as significant is the increase in books on architecture, of which the output has been enormous of late years. These fall into three classes: technical scientific books, among which the successive editions of Kidder's "Pocketbook" have been conspicuous; popular handbooks on house-design, stable-design, bungalows, house-furnishing, etc.; and books of scholarship, history and criticism, among which Sturgis's *Dictionary*, and *European Architecture*, Cummings' *History of Architecture in Italy*, Moore's *The Character of Renaissance Architecture* and *The Mediaeval*

*Church Architecture of England*, Porter's *Mediaeval Architecture* and *Lombard and Gothic Vaults*, the Sturgis-Frothingham *History of Architecture*, Wallis' *How to Know Architecture*, my *History of Architecture*, Ware's *American Vignola*, Frothingham's *Christian Architecture of Rome*, Adam's *Mont-Saint-Michel and Chartres*,<sup>3</sup> and several books by R. A. Cram may be mentioned among many others, as examples of the wide reach, variety and quality of American scholarship, research and literary skill in this field. They witness to the new position which architecture has reached in the public estimation since 1891. Such books could perhaps have been written before that date; surely but a fraction of them could have been published or could have had any wide sale. Prof. Moore's epoch-making *Development of Gothic Architecture* appeared, it is true, in 1889, but that and W. P. P. Longfellow's *The Arch and Column* were almost the only serious books on architecture by American authors previous to 1891. It augurs hopefully for the future progress of our art that its literature is now firmly established in public favor, and that it has been of such generally high quality.

This brief and hurried survey of a vast subject leaves unsaid much that the writer would have gladly discussed had time and space permitted. The question of style has been left almost untouched. The monuments must speak for themselves; the subject is too big for mere passing mention. The writer hopes that even so inadequate a sketch may inspire its readers with a new respect for the work of our American architects, the veterans and the young men alike; and with a new hope and confidence in the future. Looking back to the architecture of 1865-91, and noting the progress made since then, we have good reason to hope that 1941 will see, throughout our great Republic, an architecture far nobler, purer, more serious and more beautiful than that of to-day, offering to the whole world models of good taste and sound construction, and making our cities and villages fairer and happier places to live in than they are in this year of grace 1916. ■-

objectives.

When some novel view-point commences to actuate artistic expression, it involves the creation of new attributes in medium, and a revision of proportional relations in constituent elements. The movement passes through an experimental stage, during which every available factor is appraised from a new basis in accordance with its capacity to serve the new purpose, and achieve an unprecedented ideal. This applies to changes of direction for impulse in all the creative arts.

The technique of carving in archaic sculpture was regulated to convey the formal content in idea; at a more mature stage of artistic sensibility, it aimed to transmit those individual and characteristic plastic beauties to which the artist re-acted in living models; at still another period, technique was directed to the externalization of purely aesthetic quantities, such as the crystallization of light upon subtleties of plane and form, as in the work of Rodin.\*

A distinct technique was instituted by the Greek potters to express the simple grace of ideal form, the rhythmic balance of mass within a measure of space in a two-dimension species of presentation. In the Middle Ages another technique was developed to meet the dominant leaning towards the precise delineation of form in connection with the decorative massing of sumptuous color

areas. Then, subsequent to the seventeenth century, other techniques have evolved; definitions of contour have given place to conditions of chiaroscuro as a main artistic objective.

The Modernist movement in European architecture has already clearly indicated its ultimate objective, and is employing familiar structural systems with an architectonic significance that is foreign to their traditional import in historic modes. This is wholly in accordance with precedent in stylistic evolution. We therefore find a new technique in the utilization of structural means, novel attributes developing, and a new basis for the aesthetic valuation of elements of effect.

One of the most important and interesting features of the movement is the complete disregard of perfunctory significance habitually attached to specific features; we refer to those conventions in decorative treatment intended to convey imaginary properties, such as strength or elegance. Where we find such symbols operative in effect, they have invariably been borrowed from some structural system in which they actually performed ostensible function's of which such attributes were integral factors. For the moment, we are unable to recall a single instance in original examples of a spontaneous or self-contained stylistic type, in which any important feature in composition justifies its presence by reason of symbolic significance. This could hardly be expected, as in such structural types decoration is in subjective relation to function, whereas in the derivative types of design symbolic significance often takes precedence of the statement of actual function.

The Modernist movement cannot be construed as derivative from whatever angle it is considered, and for that reason we may not expect to find recognition of symbolic significance in any of its structural or decorative features. On the other hand, as normal structural means are employed in execution, we may expect to find features of obvious structural purpose invested with novel decorative properties through the manner in which steel, concrete or other physical media are utilized in design: the evolution of a new structural technique is bound to occur.

The ornamental development of the new.

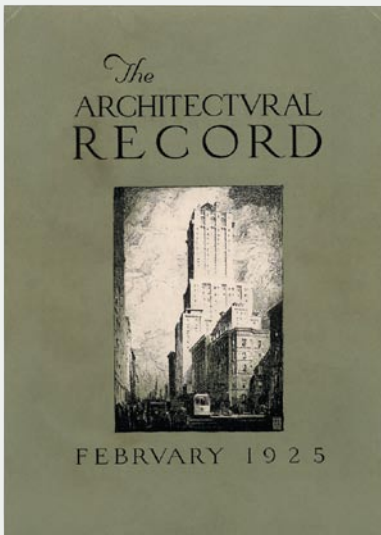
manner will undoubtedly progress in an unconventional but strictly logical manner; logic is so essential a part of the argument which precedes precise calculation in their structural design, that it is mainly responsible for the elimination of symbolic significance. If the relation of ornamentation to structural mass be studied in the various historic' styles, it will generally be found to develop in two main directions, which are typified in the Classic and the Gothic. In the former, the practical purpose of decoration is to accentuate structural articulation and to beautify features which are not performing vital supporting functions. In the Gothic type, ornament performs, a totally different function: the articulation of structural mass does not occupy the dominant position it does in the classic ; embellishments of the surface and elaboration of silhouette are the designer's fundamental considerations.

The fascination of apparently monolithic mass in the Modernist objective makes articulation of the Classic order incongruous, and the dominant part which plain surfaces play with their rectangular silhouettes renders this Gothic principle equally unacceptable. In the Modernist manner we detect a tendency to regard a major structural area as the unit of space to be decorated. This will necessitate a revision of ornamental technique, departing from those conventions previously identified with architectural decoration.

With towering masses demanding an ornamental scale adjusted to large areas and long range effectiveness, high relief as the formula for visibility cannot be resorted to, because of its disadvantageous reaction upon the dominant characteristic sought in structural mass. It will be necessary to devise a technique in ornament which has the capacity for a new decorative emphasis and for long range visibility. This requirement causes us to feel confident that color will be employed. Color will render low relief capable of any exquisite measure of decorative force.

There seems no doubt that polychromy will prove the logical solution of the decorative problem, and the uncompromising premises which must necessarily control the manner of its application will produce a technique without precedent.

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—from:  
**THE SKYSCRAPER IN  
 THE SERVICE OF RELIGION**  
 [from *Notes and Comments*]  
 By Herbert D. Croly  
 Vol. 55, No. 2, February 1924,  
 203-204.

Recently the New York newspapers published the sketch of a combined church and skyscraper which a Methodist congregation proposed to build on upper Broadway from plans by Mr. Donn Barber. The sketch was, of course, only the preliminary suggestion of a design prepared for purposes of publicity, but it was at least to one reader provocative of some far-reaching and novel speculations. Not that there is anything particularly novel and far-reaching about the idea of housing a church in a few floors of a skyscraper erected as an investment. The Christian Scientists have already practiced this method of demonstrating the unreality, of material things. But the proposed skyscraper on Broadway was designed, not as a business but as an ecclesiastical edifice, and that part of it which was not used for divine service is to be devoted to one or another of the many social and educational activities which an enterprising modern clergyman associates with his church. The writer could

not help wondering whether in both these respects Mr. Donn Barber's sketch might not prophesy the advent of a new and extremely promising type of ecclesiastical architecture.

No variety of building ever erected looks less promising as a means of awakening feelings of awe and aspiration with which the architecture of the Christian church is traditionally associated than the rectangular skyscraper built before the Zoning Law went into effect. Its bulk and height might make it imposing, but it was imposing after the manner of a cliff rather than after the manner of a steeple. Its habit of rising straight from the street to a level some hundreds of feet above irritated and fatigued the human eye. The eye demands that when buildings rise as high as hills they shall, like hills, become smaller as they approach their summit. As it happens, however, skyscrapers of this kind, unless you apply the name to modest little twelve or fifteen story buildings, are no longer being erected in New York. The law now requires the upper stories of these towering edifices to occupy an amount of space which diminishes in proportion to their height; and this reform while it was adopted for practical reasons, has, as is

already generally recognized, brought with it striking architectural advantages. It has enabled the skyscraper to attain to beauty. What Mr. Barber's sketch suggests is that among these architectural advantages there looms a possibility of erecting a skyscraper which might express for religious minds aspirations analogous to those which they formerly derived from the towers of a lofty cathedral.

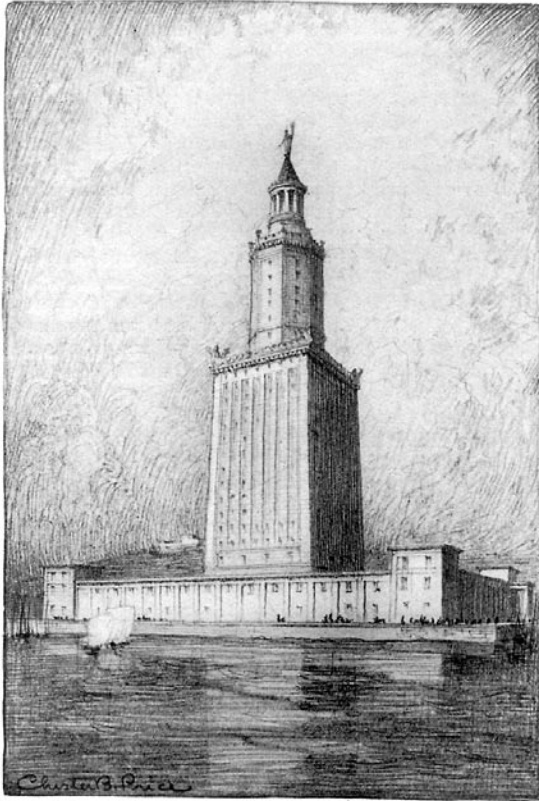
Obviously it would be only too easy to overwork the analogy. If a sky-scraper church corresponding to Mr. Barber's sketch is ever erected, it will possess many architectural values which are wholly different from those of the loftier members of the French cathedrals. Different, but possibly not inferior. These values will be derived from the varying effects of atmosphere and light which such buildings will produce at different times in the day and on different days in the year. They will find themselves entangled in the clouds and in the mysteries of the upper air just as a hill top does. As darkness draws near, they will gradually loom up as sources and centres of light and murmuring sound in a world which from natural causes is perforce frequently dark and hushed. Vague but strong emotions of this kind lend themselves with the utmost good will to symbolic expression in architecture, and whenever skyscraper churches are actually erected there is no reason why they should not receive such expression from the mind of a sensitive and imaginative architect. The designing of a building which scraped the sky for the greater glory of the Christian God would constitute the most unprecedented, inspiring and generous opportunity afforded by modern architecture to create a noble edifice which might enhance the meaning and dignity of contemporary Christianity.



10781-78  
 PARAMOUNT THEATRE BUILDING, NEW YORK



CATHEDRAL OF LEARNING CAMPUS, UNIVERSITY OF PITTSBURGH



from:  
**THE CLASSIC IN THE SKYSCRAPER**  
 [from *Notes and Comments*]  
 By Fiske Kimball  
 Vol. 57, No. 2, February, 1925, pp. 189–190.

The classic style is not merely a matter of certain details, like the Orders, as some people seem to think. It is essentially one of geometrical simplicity and clarity of form. The ancient temple, square or circular, was enclosed by a single unbroken bounding line. The primary effect of the Monument of Lysicrates is due, not to its delicacy of detail, but to its orderly variety of simple centralized masses, square below, circular above.

The return to this elementary uniformity and harmony, rather than the reversion to Renaissance or antique details, was the essential characteristic of the movement led by McKim, Mead and White in the 'eighties. In the Boston Library they used that unbroken, uniform façade which Guadet had been saying would have such a great effect, by contrast to, the Beaux Arts

system of characteristic—emphasis. In the Columbia Library and many other works they revived the centralized scheme of composition.

They and their followers, in the earlier years, applied the principle chiefly in the public and domestic buildings of ordinary height. When they finally came to the high building, about 1908 to 1912, they brought with them the lesson of clarity and order in surface treatment, in fenestration, and in mass. In the Fifth Avenue apartments they returned to unbroken planes and equalized proportions. In the Municipal Building, under different conditions, they at tempted a centralized upbuilding of masses.

When the Zoning Law came, demanding broken masses, the variety of these might readily have taken on a "picturesque" irregularity and a symmetry. It was the force of the classical tradition that, instead, kept them geometrically simple, and subjected them to balance and measure. In the Fisk Building it is a grandiose symmetry, in the Shelton and the Fraternity Clubs it is a centralized grouping of rectangular masses only in one case, of octagonal forms also in the other. To speak of such buildings as different in

"style" is to limit style to the most superficial of details. In the lower stories of the Shelton and of the Park Lane, for instance, the motives and disposition are identical. Though the profiles of capitals and mouldings may be suggested by Thiersch's Restoration of antique forms in one, by mediaeval forms in the other, both buildings are alike classic, in the broad sense, and highly modern.

When we think of a tower we somehow tend to think of a Gothic tower. We forget that there was such a thing as a classic tower—one of the greatest of all time, indeed, in the Pharos. Freed from myth, as we see it in Thiersch's restoration, the Pharos might give us inspiration for our own problems. Above a low surrounding structure (it might stand in a "one-and-one-half times district") towers a tall square shaft, diminishing to an octagon and then to a circle. Impractical? Not more so than the Metropolitan, the Municipal, or the Tribune towers. When shall we learn its lesson of variety in utter simplicity?



above: Foshay Tower, Minneapolis, Wilbur Foshay & Magney & Tusler & Hooper & Janusch, architects, 1929. Wilbur Foshay, a manufacturer of kitchen utensils, designed his own office building based on the Washington Monument and went bankrupt in the process.

opposite, column one, top: "Cathedral of Entertainment"—Paramount Theater Building, New York City, Rapp & Rapp, architects, 1926–27.

opposite, column one, bottom: "Cathedral of Learning"—University of Pittsburgh, Pittsburgh, Charles Z. Klander, architects, 1926–27.

opposite, column two: Chicago Temple Building, Chicago, Holabird & Roche, architects, 1924.

opposite, column three: "Cathedral of Commerce"—Woolworth Building, New York City, Cass Gilbert, architect, 1910–13.

left: Sketch of Thiersch's Restoration of the Pharos at Alexandria.