

Chapter 12: Epilogue—Towers, Tourists, and the Contemplation of Great Spires

By roughly 1900, the embrace of the modern had begun to leave the European Gothic Revival movement behind, bringing to a close the second major historical episode of great spire construction. The hugely ambitious and archaeologically precise spire-building projects of Cologne and Ulm found no direct successors, although the completion of Mechelen's St. Rombout's tower was still contemplated after the turn of the century.¹ Concrete and steel rather than cut stone became the materials of choice for most large-scale building projects, and historical forms generally fell out of favor among architects, especially in the middle decades of the twentieth century. The most prominent twentieth-century additions to the skylines of many European cities were the deliberately futuristic radio transmission towers erected chiefly in the 1960s and 1970s.² In Cologne, for example, the radio tower known as Colonius is the only local structure to exceed the height of the cathedral's openwork spires. Such structures, however, have rarely attracted the degree of admiring attention that great spires have. Great spires are seldom constructed today, but they are often contemplated by observers of all kinds, from tourists to architectural historians.

As the case of Cologne begins to suggest, the spread of modern architecture has not prevented great spires from acting as crucial visual foci of urban life. Even before the Second World War, the twin-spired cathedral of Cologne was clearly the city's greatest and most recognizable monument. The devastation of Cologne in the war made the survival of the cathedral all the more important as a sign of the city's past glory. In this context, the raw fact of the building's grandeur, beauty, and visibility matters more than the details of its creation. Few modern observers, confronted by the cathedral, actively consider the quarrels between the Cologne's citizenry and her archbishops in the Middle Ages, or the complex politics behind the completion of the cathedral in the nineteenth century, although much of this history has been carefully studied by specialists. With the passage of time, the ideological issues at stake in those periods have receded, displaced by a more generalized image of the cathedral as the city's signature monument. The cathedral's characteristic twin-spired profile has become ubiquitous, not only in postcards, gifts, and

¹ Langendonck, "St. Romboutstoren," 11, 29.

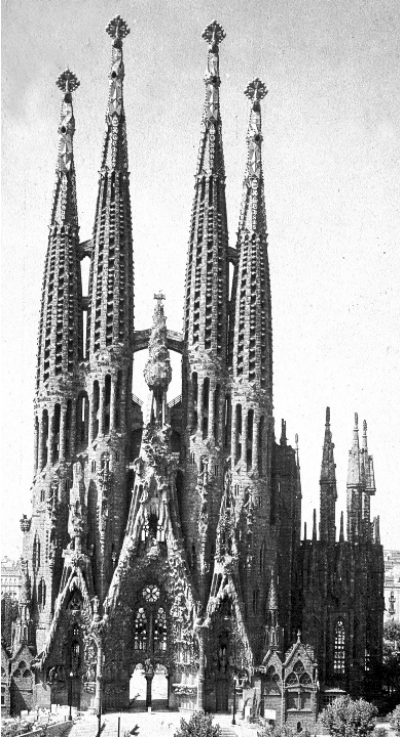
² For a good discussion of these transmission towers, see Heinle and Leonhardt, *Towers*, 222-59; they also briefly discuss the towers designed by Auguste Perret (220-21).

publications intended for tourists, but also in the marketing of local products from newspapers to beer.

Great spires can serve as powerful icons of civic identity even in cities such as Strasbourg that preserve far more of their historic architecture than Cologne. In Strasbourg, just as in Cologne, the local cathedral's spired facade appears prominently on everything from tourist items to beer bottles. From this market-oriented perspective, the fact that the Strasbourg spire is four centuries older than its cousins in Cologne has little relevance. The contrast between the medieval patronage situations in the two cities, therefore, can be easily overlooked by the casual observer.

The Strasbourg and Cologne spires now function similarly in the landscape, defining the images of their home cities for kilometers around, and creating visual foci that invite visitors from near and far to explore the urban spaces at their bases. These urban spaces, inevitably, have rather different characters, not only because Strasbourg's urban fabric has been less affected by war and reconstruction than Cologne's, but also because Strasbourg's cathedral has always been more centrally located than Cologne's, whose siting reflects the establishment of the first local church just within the northern wall of the Roman city. The presence of Cologne Cathedral, moreover, has caused a ripple effect in urban planning, as attested by the construction of the Hohenzollern-Brücke to its east, the main local train station to its north, and, more recently, the Museum Ludwig to its south. In Strasbourg, the survival of the historic urban fabric has prevented such large-scale changes, but the presence of the cathedral has, nevertheless, profoundly affected the character of the surrounding district, which now caters largely to tourists. Both cathedrals, therefore, shape the urban spaces in their immediate environs. Their spires contribute to this shaping process, even as they broadcast the presence of their home cities throughout the surrounding regions.

The history of one rare European spire project that survived the eclipse of the Gothic Revival movement, involving the construction of Antoni Gaudi's Sagrada Familia church in Barcelona, further underlines the importance of such projects in defining local identity. In the decades around 1900, Gaudi progressively abandoned the original and fairly traditional Gothic Revival plans for the church, ultimately arriving at a dramatic scheme that mixed Gothic and Art Nouveau influences into a uniquely compelling vision. Each of the church's three major facades was meant to carry four curious spires shaped rather like ventilated cucumbers



12-1 Barcelona, Sagrada Familia.

(fig. 12-1).³ Another cluster of spires was meant to surmount the church's crossing. Upon Gaudi's death in 1926, only the south transept had been completed, and the church languished as a fragment for the next half century. Work resumed, however, when Barcelona prepared to host the 1992 Olympic games. The work on the Sagrada Familia was not directly relevant to the logistical challenges of hosting the games, but it made Barcelona a more recognizable and marketable venue for them. Barcelona already had many fine monuments, but Gaudi remains Barcelona's signature architect, and the Sagrada Familia project was by far his most ambitious and visible undertaking. Construction of the Sagrada Familia thus serves to generate interest in Barcelona, attracting tourists to the city and raising its profile on the world stage. As this

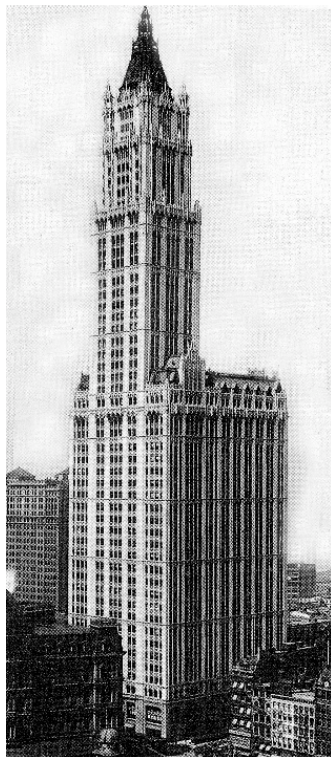
example suggests, the building of great spires even today involves not only the marking of special places, but also their creation.

From this perspective it is perhaps not surprising that the Gothic Revival continued to produce major monuments in the Americas long after the movement had run its course in Europe. In countries whose histories were far shorter than those of European nations, large-scale historicizing buildings could lend an air of cultural depth and rootedness that would otherwise have been lacking. Among the most ambitious products of the Gothic Revival, therefore, were Saint John the Divine in New York City, the National Cathedral in Washington, D.C., and the cathedral of La Plata, Argentina, all of which were under construction for most of the twentieth century. The cathedral of La Plata, constructed between 1893 and 1999, resembles a simplified version of Cologne Cathedral, with twin 110-meter

³ The evocative phrase "ventilated cucumbers" was used by Robert J. Clark in a lecture at Princeton University in March, 1992.

spires crowning its western towers.⁴ Neither of its large American cousins, however, incorporates large spires. Instead, they were both designed with square-topped towers, in keeping with the more English flavor typical of most Gothic Revival architecture in the United States.⁵ Neither, moreover, acts as the dominant visual focus of the surrounding urban landscape. Washington Cathedral, completed in 1990, defers visually to the Washington Monument, despite its large crossing tower and dramatic hilltop location. Saint John the Divine remains effective as a symbol of architectural and cultural sophistication, but it cannot command its urban environment in the same way that Upjohn's spired Trinity Church did when it was new.⁶ In New York, as in many large American cities, the church spire has been replaced on the skyline by the skyscraper, a monument type as characteristic of its era as the Gothic cathedral was of its own.

The relationship between the church spire and the skyscraper attracted the attention of builders and critics already in the earliest years of the skyscraper age. Ralph Adams Cram, the principal designer of Saint John the Divine, objected strenuously in 1899 to the "blocks of dwellings or mercantile buildings that lift absurdly above" the spires of city churches, robbing them of dignity and rendering them "grotesque and laughable."⁷ In those days, few of the towering skyscraper blocks incorporated Gothic articulation; instead, most were conceived as stacks of relatively squat stories, which could be Second Empire, Neo-Romanesque, or vaguely classicizing in style. Cram, as a partisan of both Gothic architecture and supposedly medieval social values, could object to such structures on both formal and moral levels.



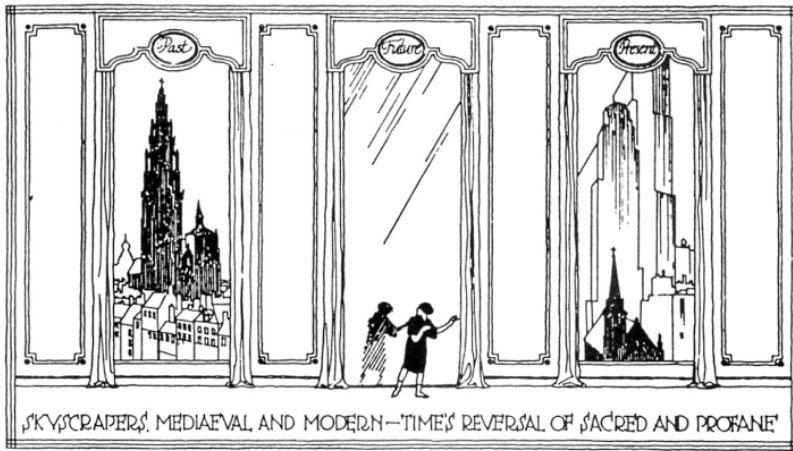
12-2 New York,
Woolworth Building.

⁴ See Pablo de la Riestra, *The Cathedral of La Plata* (Buenos Aires, 2000).

⁵ On Washington, see Richard T. Feller, *For Thy Great Glory* 2nd. ed. (Culpeper, Va., 1979).

⁶ George W. Wickersham II, *The Cathedral Church of Saint John the Divine* (N.P., [1977]).

⁷ Quoted in Leeuwen, *Skyward Trend*, 71-72.



12-3 Claude Bragdon, illustration from *The Frozen Fountain*.

The construction of the Woolworth Building expressed a more positive view of the relationship between skyscraper architecture and Gothic traditions. Its designer, Cass Gilbert, recognized that the verticality of the Gothic style accorded well with the slender proportions of the building he was planning, which became the tallest inhabited structure in the world upon its completion in 1913 (fig. 12-2).⁸ Gilbert shrewdly exploited the possibilities of the Gothic style, using elaborate decorative arches to punctuate the soaring lines of the facade, and even including a statue of himself in the guise of medieval architect, presenting a model of his building to the world. The building was called the "Cathedral of Commerce" not simply on these formal grounds, but also because its patron, the powerful and egotistical business magnate Frank Woolworth, saw commerce as an active spiritual and social good. Commerce and trade, he and his circle felt, could allow men of ability and vision to make their fortunes, rising to the social level they deserved—a high level, in his case.⁹ For such men, capitalism was a secular adjunct to religion, one that could theoretically help America to realize the quasi-sacred principles inherent in its democracy.

Woolworth and his fellows intended no blasphemy in their association of the Woolworth Building with the Gothic tradition, but the substitution of capitalism for religion clearly had the potential to offend, especially after

⁸ See Sarah Bradford Landau *Rise of the New York Skyscraper, 1865-1913* (New Haven, Yale University Press, 1996), esp. ch. 11.

⁹ Leeuwen, *Skyward Trend*, 60-62.

the stock market crash of 1929. The construction of skyscrapers taller than the tallest church spires seemed to signal the elevation of the profane over the sacred, as an illustration from architecture theorist Claude Bragdon's 1932 publication *The Frozen Fountain* demonstrates (fig. 12-3). Bragdon's title alludes to his idea that Art Deco skyscrapers resembled frozen fountains, an elegant metaphor that leaves the specific image of the Gothic cathedral behind.¹⁰

Art Deco designers drew on a wide range of formal sources, including classical and pre-Columbian prototypes, but Gothic buildings provided perhaps the single strongest influence on the articulation of Art Deco skyscrapers. Cram's versatile student Bertram Goodhue, the Finnish-born Eliel Saarinen, and Raymond Hood were among those whose contemplation of Gothic models helped to prepare the way for later Art Deco improvisations.



12-4 Chicago, Tribune Tower.

Hood, for example, won the Chicago Tribune Tower Competition in 1922 with a strongly Gothicizing design, whose octagonal crown impressionistically evokes the Tour de Beurre in Rouen (fig. 12-4).¹¹ In his plans for Rockefeller Center, which he conceived nearly a decade later, the explicitly Gothic ornament has fallen away, but the overall pattern of articulation still recalls that of the Chicago Tribune Tower. The Rockefeller Center complex, with its street-level plazas surrounded by soaring skyscrapers, has been widely lauded as one of the most successful urban spaces in America.¹² The slablike skyscrapers of

¹⁰ Leeuwen, *Skyward Trend*, 125-33.

¹¹ Leeuwen, *Skyward Trend*, 18-19. See also Pauline Saliga, ed., *The Sky's the Limit: A Century of Chicago Skyscrapers* (New York, 1990), 108-111.

¹² See, for example, Paul Goldberger, *The Skyscraper* (New York, 1981), 98-101.



12-5 New York, Chrysler Building.

Rockefeller Center, however, contribute far less to the famous skyline of New York City than two other roughly contemporary skyscrapers of more spirelike form: the Chrysler Building and the Empire State Building.

The history of the Chrysler Building shows that the notion of competitive dialog, which proved so useful in explaining the dynamics of medieval spire construction, applies equally well in the skyscraper age. The automobile baron Walter P. Chrysler and his chosen architect, William Van Alen, wanted their building to rise above the rival Bank of Manhattan Building to become the world's tallest skyscraper. Van Alen therefore repeatedly modified his design, adding stories and stretching the proportions of his tower termination. To insure his victory, he secretly installed a thirty-five-meter stainless steel spire within the upper structure of his tower. As soon as the Bank of Manhattan Building reached its full height, Van Alen deployed his spire, which rose triumphantly out of the summit of the Chrysler Building on a single October day in 1929, driven by power winches (fig. 12-5).¹³ This theatrical gesture pushed the height of the Chrysler building above that of the Bank of Manhattan, and even above that of the Eiffel Tower, which had ruled for the previous three decades as the world's tallest structure.

The Chrysler Building was soon decisively overtopped by the Empire State Building, another skyscraper whose spirelike termination was added for pride rather

¹³ Leeuwen, *Skyward Trend*, 149-51.

than for practical necessity. The principal patrons of the Empire State Building project were Alfred E. Smith, the former governor of New York State, and John J. Raskob, the former chairman of the finance committee at General Motors, a major competitor of the Chrysler Corporation. Raskob knew that Chrysler and Van Alen had been paying attention not only to the Bank of Manhattan project, but also to the preliminary designs for the Empire State Building that were then being developed by the architectural firm of Shreve, Lamb, and Harmon. In these preliminary plans, the Empire State Building was to have had a height of 1000 feet, or 305 meters. With its spire, the Chrysler Building exceeded this height by fifteen meters. Shreve, Lamb, and Harmon responded by adding five floors to the plans for the Empire State Building, but Raskob was determined to surpass the height of the Chrysler Building by more than a few meters. He therefore asked his architects to add a seventy-meter spire to the top of the Empire State Building, with the implausible excuse that this structure could be used as a mooring mast for dirigibles. In the end, the mooring equipment was never installed, but the mast fulfilled its real purpose admirably, establishing the Empire State Building as the world's tallest structure for nearly half a century.¹⁴

As these anecdotes show, the construction of the tallest and most charismatic skyscrapers, like the construction of great spires in the Gothic era, involved prestige and symbolism more than functional necessity. This point deserves emphasis because the origin of the skyscraper has often been explained away as a simple consequence of market forces, on the premise that a tall multi-floor building will have more rentable floor space than a short building on the same site. This argument may go some way to explaining the origin of multi-floor loft buildings, but it cannot adequately explain tall soaring buildings like skyscrapers, in which the technical and logistical challenges of vertical construction and daily operation can rapidly erode the building's net profitability.

The symbolism of great skyscrapers, like that of great Gothic spires, acts on a number of different levels. In a very basic sense, such structures always attest to the ambition of their patrons and designers, whose egos play a crucial role in the urge to create extraordinary monuments. More broadly, landmark buildings advertise the power of the institutions that constructed them. On this level, the contrast between medieval European and modern American patterns of patronage is striking, since corporations have largely taken over the tower-building role that had formerly been

¹⁴ See John Tauranac, *The Empire State Building: The Making of a Landmark* (New York, 1997), esp. 86-98 on Smith and Raskob, and 185-97 on the mooring mast.

dominated by civic and ecclesiastical interests. Whether one saw this as a legitimate passing of the torch, as Woolworth did, or as a worrying conquest of the sacred by the profane, as Bragdon's illustration implied, it suggested the emergence of a new social order that differed from the old not only in its technical means, but also in its values and priorities.

When seen from a distant historical perspective, some of the sociological distinctions between great spires and great skyscrapers begin to blur. The personalities of all but the most colorful patrons and designers are forgotten by most nonhistorians. The particular circumstances that permitted the construction of a landmark structure, moreover, often matter less to subsequent generations than the raw fact of the monument's existence. Visually dominant urban monuments like the Empire State Building and Cologne Cathedral can become recognizable and marketable as icons of civic identity, no matter what ideology their original patrons espoused.

In formal terms, too, the approximate similarities between Gothic spires and modern spired skyscrapers may reveal more than the detailed differences between them. The tapering, soaring form of both types clearly expresses a yearning for the transcendence of earthly limits. Spires and skyscrapers are two of the purest manifestations of the widespread human impulse to build towards the realm of the "most high," with all its connotations of sacredness. In their articulation, as well as in their overall form, Gothic spires and spired skyscrapers typically emphasize active upward striving. Neither the Chrysler Building nor the Empire State Building could be called explicitly Gothic in style, but both include slender vertical mullions, sharp, acute forms, and complex geometries, which together convey an impressionistically Gothic flavor. The upper sections of the Chrysler Building even include pointed windows and gargoyle-like eagle heads, the latter modeled on the hood ornaments of Chrysler automobiles. Skyscraper designers such as Van Alen clearly drew inspiration from Gothic prototypes even when developing their own uniquely modern formal solutions. Not surprisingly, therefore, similar terms and metaphors are often used to describe Gothic structures and Art Deco skyscrapers; the anti-classical notions of organic growth, crystalline structure, and cascading liquid flow are common in evocations of both building types.

From a rigorously scholarly perspective, the casual contemplation of great spires practiced by tourists and skyscraper designers might seem downright facile, but these groups at least recognize that great spires deserve attention. Great spires as yet occupy only a marginal position in most scholarly surveys of Gothic architecture, despite their prominence, formal

sophistication, and obvious expense. As the introduction to this book noted, a variety of conflicting twentieth-century reactions to the legacy of the Gothic Revival movement have conspired to hinder the systematic study of great spires in the modern academy. In France, research continues to focus on church vessels erected prior to the Hundred Years War, much as it did in Viollet-le-Duc's day. This emphasis on areas in which the French architectural achievement remained definitive has, ironically, distracted attention away from the fundamental French contributions to great spire design. In Germany, conversely, twentieth-century scholars reacted against a Gothic Revival movement in which great spires had played a central role. Spires had been celebrated from Goethe's day through the 1890s as characteristic manifestations of German national genius, but nativist scholars in the years around 1900 began to emphasize the study of interior space rather than external form, arguing that hall churches rather than spires were the most uniquely Germanic contributions to Gothic architecture. More recently, the repudiation of nationalistic attitudes after World War II has discouraged German scholars from promoting the spectacular German contributions to spire design in any systematic way. The relative paucity of synthetic spire scholarship in the French and German traditions has deprived the field of leadership, preventing the history of great spires from emerging into prominence as a well-known academic narrative.

Given the importance of great spires as makers and markers of place, it is perhaps unsurprising that they have been discussed mostly in building monographs and similar studies that consider local achievements rather than broad international trends. Because they visually dominate their home cities as iconic forms on the skyline, they tend to be perceived as singular monuments rather than as specimens in a developmental sequence. There is, however, no inherent conflict between these two perspectives. Indeed, a broad view helps to clarify the originality and impact of individual builders' achievements.

This book has been written with the conviction that the history of great Gothic spires is not just an inherently interesting story deserving to be told, but also one that can teach powerful and relevant lessons about the role of monumental architecture in the construction of community. This point emerges most strongly in light of the great spire type's overall developmental history. The earliest antecedents of great spires, ancient near eastern ziggurats, already served to define the spiritual hearts of their communities, the locations where the earthly world could touch the divine. Their construction, and the construction of their home cities, was fundamental to the beginning of civilization itself. Centuries later, Roman

tomb towers would mark the privileged site of the deceased's resting place, establishing a formal and symbolic system that was adopted and expanded by medieval Christians, especially in the design of spirelike reliquaries, tabernacles, and lanterns of the dead. Towered Roman city gates, meanwhile, established an iconography of authority, protection, and enshrinement that went on to influence the design of church facades and towered entrance blocks throughout the Middle Ages. By the fifth century, Christian builders had begun to construct belfry towers, making the church both visible and audible throughout the surrounding territory. These influences were synthesized in the first great spires only at the dawn of the Gothic era, a period that witnessed both rapid formal innovation and urban growth. The twelfth-century spires of the Chartres group, with their complex geometries and soaring profiles, already embodied a characteristically Gothic "aesthetic of becoming."¹⁵ Rising above the streets and markets of their home cities like vertical bridges to the kingdom of God, great spires mark the intersection of the civic and heavenly realms.

Great spires flourished as monuments of local power, but the precise nature of the local power in question varied substantially over the course of the Gothic era. From their origins until roughly the end of the thirteenth century, great spires were commissioned principally by French bishops and their cathedral chapters. Many of these episcopal spire projects were left unfinished at the end of the Middle Ages, because the policies of Louis IX, together with anti-clerical violence in cities such as Chartres and Reims, had already begun to interrupt the competitive dialog of great spire construction by the mid-thirteenth century. Tellingly, however, donations from the Remois citizenry permitted the completion of two elegant spires at the abbey of Saint-Nicaise, the principal architectural rival of Reims Cathedral.

In the later medieval Empire, the contrast between the fates of episcopal and civic spire projects was even more dramatic. The cathedrals of Cologne and Prague were left truncated in the Middle Ages, largely because they represented institutions hostile to civic interests. The greatest spires to be completed in the Gothic era, meanwhile, were those of Freiburg, Vienna, Strasbourg, and Antwerp, all of which benefitted from substantial civic support. Three of these four projects, in fact, involved the adornment of parish churches, while the fourth involved Strasbourg Cathedral, which had effectively become a civic monument by the end of the thirteenth century. Not all large city churches, of course, were so architecturally pretentious. Aristocrats certainly played a crucial role in launching sophisticated spire

¹⁵ Frankl, *Gothic Architecture*, 10-14.

projects, especially in the eastern empire, as at Vienna, Prague, and Meissen. Ultimately, however, the most successful patrons of large-scale spire construction were the wealthy merchant communities of Germany and Brabant. By constructing large and elaborate showpiece spires, these communities visibly proclaimed their power and sophistication as well as their piety.

At the end of the Middle Ages, this synergy between the civic and religious spheres was badly disrupted. Humanist philosophy established man rather than God as the measure of all things. The Reformation and its aftershocks ripped apart the connection between faith and art that had been so essential to the flowering of great spire construction in Germany and Brabant. Even in the Catholic kingdoms of France and Spain, spire construction ground to a halt, in part because the spread of Italianate design made Gothic architecture unfashionable, but also because the growing power of national governments made ostentatious monuments of local identity irrelevant if not suspect. Sprawling palaces for earthly rulers replaced soaring church spires as the most characteristic monuments of the new age.

The impulse to build spires was not fully extinguished by the seismic shifts in European culture at end of the Middle Ages, however. In the early modern era, spires of various sorts enjoyed popularity in regions such as the Netherlands and Colonial America where largely autonomous local communities chose to express their pride and identity through architectural signs of religious transcendence. Pride in local and national achievement also helped to fuel the many ambitious spire construction projects undertaken in the nineteenth century as part of the Gothic Revival movement. Indeed, these projects were meant to enhance the local sense of place and heritage, by filling in the skyline with landmarks that native Gothic builders might have created centuries earlier, if they had only enjoyed more favorable circumstances of patronage. The spires of the Gothic Revival can of course be criticized as inauthentic simulacra, but many of them nevertheless function very effectively in their local contexts, as at Cologne and Ulm; like their authentically medieval cousins, they create visual foci that enrich and enliven the urban landscape. They have therefore become iconic monuments, well known to tourists and valued by locals as signs of civic identity.

In analogous fashion, the most impressive skyscrapers of the modern era have been adopted as symbols of their home cities. Form and scale, it seems, matter more in this adoption process than the date or circumstances of the building's creation. A sufficiently charismatic building, in other

words, can become popular even if it lacks old-fashioned charm, and even if its patrons were egotistical figures such as Conrad von Hochstaden or Frank Woolworth. The aesthetic and social virtues of great artworks, thankfully, cannot be fully negated by the vices of the individuals and institutions that created them. Even in an imperfect world, therefore, artists and builders can hope to make positive contributions by creating monuments of enduring worth. In this respect the spire designers of the Gothic era set a high standard indeed, since they were motivated to create works whose beauty and sophistication would be gratifying to God and impressive to human beholders, from rival designers to the proverbial man on the street. Modern builders interested in creating large-scale works that powerfully affect the urban landscape can, therefore, profitably study the example set by their spire-building predecessors. The spire builders of the Gothic Revival movement, in recreating the architectural forms of the Middle Ages, learned this lesson only in its most superficial sense. As Viollet-le-Duc already recognized, at least in his writings, modern builders can internalize the spirit of their Gothic ancestors more profoundly by designing new and challenging works appropriate to the modern age. The builders of great skyscrapers, in this sense, are the true heirs of the Gothic spire builders.

Unfortunately, the circumstances of architectural patronage in the modern era have tended to impoverish the creative process rather than enriching it. To a large extent, this is simply because the pace of construction and investment has accelerated dramatically since the Middle Ages. Where a Gothic builder might spend his whole life working on a single spire project, a modern architect might expect to invest only a few years in a given skyscraper. Most patrons, similarly, now demand that buildings pay for themselves quickly. Simple, inexpensive, designs have decisive advantages over more complex and challenging ones, at least in this respect. Boring buildings thus tend to proliferate, and they rise so quickly that the communities and neighborhoods affected by their presence rarely have time to take stock of the situation or influence its outcome.

Significantly, it is possible to escape from this kind of lowest-common-denominator logic without returning to the social and religious structures of the past, with their emphasis on creating great works for the glory of God and the aristocracy. The United States, as a modern secular democracy, quickly developed the capacity to put a man on the moon when its primacy and values were threatened by the Soviet Union, even though this spectacular gesture was not guaranteed to yield any tangible or enduringly useful product. In this context, as in the civic spire projects of the Gothic

era, pride motivated the diversion of significant earthly resources into a heavenward thrust. Because buildings endure, though, heroic architectural projects offer advantages that other bold forms of expression do not. Private corporations and developers, therefore, need not view their competitors as cold war rivals to see some merit in constructing architecturally significant buildings of which all involved can be proud.

In crassly economic terms, truly great office buildings tend to reward the optimism of those that built them, at least over the long term. The Empire State Building, for example, endured its time as the "Empty State Building" in the Great Depression before blossoming financially in the postwar period, becoming the most profitable single building in the world, with consistently high occupancies throughout the remainder of the century.¹⁶ Throughout its service life, the building has attracted revenue from the tourists that paid to travel to its famous observation deck. More importantly, the building's presence has helped to make New York the best-known and most recognizable of modern metropolises. To the extent that its iconic profile helps to attract tourists and permanent residents to the city, the Empire State Building has thus contributed both to its own profitability and to the economic vitality of the region as a whole.

In recent years, the example set by the Empire State Building and other iconic American skyscrapers has inspired corporate and governmental patrons in many Asian cities to undertake the construction of impressive skyscrapers of their own. Shanghai, Tokyo, and Hong Kong now bristle with such buildings, and the world's tallest skyscrapers, at least for the moment, are the Petronas Towers of Kuala Lumpur, Malaysia, a city not previously known for its monumental architecture.¹⁷ Great skyscrapers such as these are meant to attract attention and investment to their home cities. They thus express bids for new respect on the world stage, even as they visibly proclaim the substantial economic power that their patrons have already achieved.

The literal rise and fall of the World Trade Center provides a sobering but potentially inspiring gloss on the complex issues of tall building development in the modern world. The unprecedented scale of the World Trade Center, like that of great Gothic spires, far transcended functional necessity. The scope of the project grew in response to the ambition of New York governor Nelson Rockefeller and project director Guy Tozzoli, who asked architect Minoru Yamasaki to stretch the height of the twin

¹⁶ Tauranac, *The Empire State Building*, 338, 365.

¹⁷ See, for example, John Zukowsky and Martha Thorne, eds., *Skyscrapers, the New Millennium* (Chicago, 2000); and David Bennett, *Skyscrapers: Form and Function* (New York, 1995), esp. 80-82.



12-6 New York, World Trade Center.

towers from 90 to 110 stories, so as to create the tallest--and by far the largest--skyscrapers in the world.¹⁸ Yamasaki's buildings threatened to overwhelm the rest of the Manhattan skyline not only because of their scale, but also because of their extremely simple boxy form, which had been determined by the requirements of the lightweight and highly efficient box tube structural system that had been chosen for the project (fig. 12-6). The Gothic flourishes that Yamasaki added to the bases of his towers, although unusual in the reductive context of 1960s Modernism, did little to soften their overall effect. The construction of the World Trade Center, moreover, disrupted the urban fabric of lower Manhattan, erasing the streets and small buildings that had previously given the area its texture. For all these reasons, and because there were concerns about the safety of the new towers in the event of a fire or airliner collision, the project encountered stiff opposition. Once

completed, the towers filled only slowly with tenants, since the 1970s proved to be a poor period for the American economy in general, and for the New York City economy in particular. By the 1990s, however, the World Trade Center had become a familiar and even welcome presence in the New York landscape, attracting investment and interest much like its more consistently beloved uptown neighbor, the Empire State Building.

As subsequent events would show all too clearly, the scale and brashly iconic visibility of the World Trade Center had made the complex into the pre-eminent architectural symbol of the western capitalist order. For

¹⁸ James Glanz and Eric Lipton, "Towering Ambition: The Rise of the World Trade Center," *The New York Times Magazine*, 8 September, 2002, 38-39.

enemies of that order, therefore, the site became a tempting target. The building was bombed by Islamic radicals for the first time in 1993. The importance of tall buildings as symbolic targets was further underlined seven years later, when a similar group was foiled in its attempt to bomb Strasbourg Cathedral. The worst, of course, was yet to come. The tragic destruction of the twin towers on September 11, 2001, horrifically confirmed the fears of those who had earlier worried about the safety of the enormous but diaphanous structures.

It quickly became apparent, even in the atmosphere of sorrow and outrage that followed the attack, that the destruction of the World Trade Center demanded not only emotional, political, and military responses, but an architectural response as well. It has been difficult, however, to determine what that architectural response should be. Engineers pointed out that it was effectively impossible to construct a high-rise building, or indeed any building short of a bunker, that would be invulnerable to terrorist attack. Nevertheless, the early plans for the rebuilding of the site with skyscrapers of merely average height were roundly criticized for their faceless conservatism. Teams of major modern architects therefore literally went back to the drawing board, producing a range of more ambitious design solutions, several of which feature plans for new towers meant to be the world's tallest.¹⁹ At this writing, it remains unclear which of these plans will be chosen, if any. In general terms, though, the public reaction to the various World Trade Center replacement proposals suggests that modern society continues to value tall and boldly recognizable buildings.

Generalization from the case of the World Trade Center is obviously dangerous, given its singular circumstances and profound emotional resonances. Planning for the rebuilding of the World Trade Center site differs from the planning for other large modern building projects for the simple reason that many people care about it. This high level of public interest and vocal feedback prevented the implementation of plans that were deemed pedestrian, opening the way to the construction of something new and remarkable. With luck, the debate about the rebuilding of the World Trade Center will serve to remind citizens of the modern world that tall public buildings can be dramatic, beautiful, and meaningful symbols of modern society, just as great spires are of the medieval society that created them. As modern architects strive to create charismatic works of enduring social value, they can look back for inspiration to the Gothic era, when bold builders dared to construct the skyscrapers of the Heavenly Jerusalem here on earth.

¹⁹ Glanz and Lipton, "Towering Ambition."