

Are skyscrapers modern cathedrals? Viewing the Chrysler Building from Florence Cathedral regarding architectural symbolism and political messages across time.

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Abstract

This paper poses the question of whether skyscrapers are modern cathedrals, functioning as symbols of power and beliefs. Some skyscrapers such as the Chrysler Building, a National Historic Landmark, embody contemporary beliefs. However, existing studies focus on the aesthetics, technicalities and influences of the Chrysler Building only within its own historical context with little reference to architecture or cathedrals in other historic periods. To address this knowledge gap, this thesis compares the Chrysler Building to the iconic Florence Cathedral which represents religious authority and Renaissance spirit, seeking to unveil the political messages of the Chrysler Building and investigate its function as a symbol of power parallel to premodern cathedrals.

Despite the 500-year disparity, the Chrysler Building resonates with the Florence Cathedral in various aspects. This study scrutinizes how the political landscape in the two eras caused similarities and differences in the symbolism of the two buildings. From the background competitions, Florence Cathedral displayed the religious power and civic collaboration of late medieval Florence, while the Chrysler Building represented the 'race to the top' in market rivalry and industrial progress in early 20th century America. Chrysler's crown resembles the Florence Cathedral's huge dome as a pinnacle symbol of reaching the sky. Yet, ornaments reveal the Christian belief in the divine and the modern technological ambitions respectively. Both edifices employed advanced technologies in craft, while the craftsmanship represented medieval collectivism and individuality in the machine age.

Through literature, variety of images from different periods and first-hand drawings, this research consolidates findings from historical and architectural perspectives. In addition, juxtaposing these buildings offers a premodern lens to canonical buildings that highlights symbolic meaning and historical resonance. Eventually, this paper proposes that skyscrapers like the Chrysler Building continue the legacy of cathedrals, in the height and scale, in demonstrating power and values, as a monument of their times.

Keywords:

Chrysler Building, Florence Cathedral, architectural symbolism, power structures, skyscrapers, canonical building

“[...] erect the early skyscrapers, those ‘Cathedrals of Commerce’”

— Batty and Cheshire (2022)¹

Cathedrals function as places of worship for congregations, and as lasting symbols of power. Florence Cathedral (1436) is one of the most iconic and therefore influential churches in the Western world. According to Opera di Santa Maria del Fiore, it symbolizes Christianity and civic pride of the society in the medieval theocratic Republic of Florence, as well as Renaissance culture and, “all Western humanism.”² Over time, societal beliefs have shifted from religious and civic identity to capitalism, science and technology, and values such as freedom and equality. As a result, modern structures embodying the belief of commerce, corporation or capitalism, began to be compared to cathedrals and other religious buildings. In *The Tall Office Building Artistically Considered* (1896), Louis Sullivan described tall office buildings as a distinct architectural type, “a living art,” that serves as an expression of its time, comparable to “the Greek temple, the Gothic cathedral, the medieval fortress.”³ In particular, some skyscrapers incorporate architectural features traditionally found in religious buildings, such as spires, domes, and pyramids.⁴ In 1916 by Brooklyn Congregational minister Samuel Parkes Cadman, who used and popularized the term “cathedral of commerce” to describe the office tower Woolworth Building, the tallest building at the time.⁵

Another notable example would be the Chrysler Building in New York, designed by William van Alen. It was the tallest building (318.9m or 1046 feet) in the world upon its completion in 1930. It is an iconic Art Deco office tower which is also a United States National Historic Landmark. Shortly after completion, *The Architectural Forum* magazine described that the Chrysler Building “does not reflect the past, but is an expression of the intense activity and vibrant life of our day.”⁶ It resonated with another comment by prominent American Beaux-Arts and Gothic Revival architect Kenneth M. Murchison, in magazine *The American Architect* in September 1930,

he [William van Alen] has abandoned all the old tacets and principles; he has originated something startling, something distinctive and something about which discussion will rage for some time to come [...] It teems with the spirit of modernism.⁷

¹ Michael Batty and James Cheshire, “The Era of the Megalopolis: How the World’s Cities Are Merging,” *The Conversation* (November 2022), accessed January 30, 2025, <https://theconversation.com/the-era-of-the-megalopolis-how-the-worlds-cities-are-merging-193424>.

² “Dome,” Duomo di Firenze, accessed February 20, 2025, <https://duomo.firenze.it/en/discover/dome>.

³ Louis Sullivan, *The Tall Office Building Artistically Considered* (1896), retrieved March 10, 2025, https://www2.gwu.edu/~art/Temporary_SL/177/pdfs/Sullivan_Tall.pdf, 345.

⁴ Caroline Mierop, G. Binder, and P. Goldberger, *Skyscrapers: Higher and Higher* (Paris: Norma, 1995).

⁵ “Woolworth Building: Cathedral of Commerce,” *New York Public Library* (April 22, 2013), accessed March 7, 2025, <https://www.nypl.org/blog/2013/04/22/woolworth-building-cathedral-commerce>.

⁶ Eugene Clute, “The Chrysler Building, New York,” *The Architectural Forum*, 53, no. 4 (October 1930): 406, retrieved January 5, 2025, https://archive.org/details/sim_architectural-forum_1930-10_53_4/page/406/mode/2up?view=theater.

⁷ Kenneth M. Murchison, “Chrysler Building as I See It,” *The American Architect* 138, no. 2587 (September 1930): 78, retrieved January 10, 2025, https://archive.org/details/sim_american-architect-and-architecture_1930-09_138_2587/page/78/mode/2up?view=theater.

Apart from acknowledging the representation of modern life, these critiques also regarded the Chrysler Building as a newborn architectural entity detached from history. While later studies scrutinized its technicalities, aesthetics and cultural and political influences on society, they isolated this canonical building within its historical context, overlooking the role of expressing political ideas shared by premodern cathedrals across eras. For instance, David Stravitz's book (2002) presents the photographs of the Chrysler Building during construction, thus revealing the details, industrial advancement, and New York life then.⁸ Similarly, Johann N. Schmidt's study of the Chrysler Building (1995) describes the design process, references of ornaments, and historical narratives during or after its completion.⁹ However, both studies lack a comparative lens that assesses architectural and political symbols of this skyscraper with reference to premodern architecture. They do not delve into how the Chrysler Building functions as a symbol of power parallel to premodern cathedrals.

In an attempt to interrogate the knowledge gap, this study compares the Chrysler Building to the Florence Cathedral to examine the similarities and differences in political powers and architectural symbols between the Art Deco skyscraper and the Renaissance cathedral. Both buildings were born out of competition, one within Florence to seek the solution for constructing the unprecedentedly large dome, and one in New York to become the world's tallest building. Including the background in the comparison could offer insights into the evolving political landscape. Despite their temporal and functional differences, both feature tall structures, Brunelleschi's dome and Chrysler Building's crown, in addition to intricate ornamentations such as interior painting and sculpture. Furthermore, they are known for delicate craftsmanship in the making of architectural symbols, which could reflect and further illustrate the resemblance and variations in their political ideologies.

Considering these two canonical Western buildings have 500-year disparities in architectural styles, historical periods, and technological levels, the structure of this thesis is framed along three questions: (1) What are the political backgrounds during the design of the two buildings? (2) What are the universal architectural political symbols and what do they represent in the two cases? (3) How do the crafts of the key architectural symbols and craftsmanship reflect the varying political ideologies in the two eras? Juxtaposing the modern Chrysler Building and the late medieval-Renaissance Florence Cathedral, this study combines insights from architectural analysis and political interpretation through literature reviews on historical contexts and detailed technical studies, utilizing old images, as well as producing architectural analytical drawings as primary sources.

On the general architectural discourse, this approach interrogates the paradigm shift in evaluating canonical buildings, questioning the principles that define architectural significance. The standards of canonical architecture have been evolving from functionality and rationality to exploring conceptual and formal transformations beyond the modernist period. This paper proposes an alternative

⁸ David Stravitz, *The Chrysler Building: Creating a New York Icon, Day by Day* (New York: Princeton Architectural Press, 2002).

⁹ Johann N. Schmidt, *William Van Alen Das Chrysler Building: Die Inszenierung eines Wolkenkratzers* (Frankfurt am Main: Fischer Taschenbuch Verlag, 1995).

perspective considering the historical political significance and the craftsmanship of architectural symbolism. Through the lens of a premodern cathedral, this study proffers insights into the canonical Chrysler Building's prestige status from a historical perspective. By unravelling the interplay between architectural symbolism, material craftsmanship and techniques, and political ideologies in these two buildings, this thesis aims to decipher the political messages embodied in the Chrysler Building and to what extent it functions as a modern cathedral.

Background competitions about powers

The design and construction process of the Florence Cathedral and the Chrysler Building involved competitions that demonstrated the respective political values in their eras.



Figure 1: *Way of Salvation: Church Militant of Triumphant* (1365) by Andrea di Bonaiuto. Mural in the Spanish Chapel. It envisioned the Florence Cathedral, whose dome was not constructed, with the Pope an emperor in the foreground, Jesus and heaven on top.

In the late medieval era, there was fierce external competition between Florence and other city-states in Tuscany, such as Pisa and Siena, each trying to build larger churches.¹⁰ The Florentines wanted to build the biggest cathedral to meet the religious needs of the growing population and to demonstrate the power of the city, warning other cities not to challenge Florence's status. Before knowing how to construct the dome, the mural *Way of Salvation* (1365) (Fig. 1) in the Spanish Chapel in Florence visualized the ambition of the large octagonal dome of Florence Cathedral. The pope, emperor, and priest in the foreground and the Christian figures above emphasized the cathedral's role as a symbol of religious authority. Indeed, after its completion, Florence Cathedral became the central space for important religious ceremonies and public gatherings (Fig. 2). The

¹⁰ Brunelleschi. *Great Cathedral Mystery*, NOVA, National Geographic (aired February 12, 2014), retrieved January 10, 2025, https://www.youtube.com/watch?v=RUBnNDloGHg&t=2627s&ab_channel=Voluspa%2FAstrid.

project intention of Florence Cathedral demonstrates the power of the city and religious authority.

Figure 2 (left): *A Perspective View of the Cathedral Church of Florence and the Grand Procession of the Host at Florence* (1750), by Giuseppe Zocchi. It depicted the city's procession surrounding Florence Cathedral and the Battistero di San Giovanni

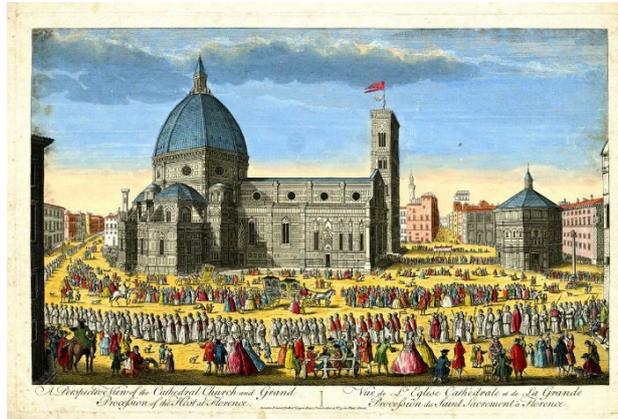


Figure 3 (right): Filippo Brunelleschi's original model submitted to the design competition in Florence.



The construction process reflects civic collaboration. Construction of the Florence Cathedral began in 1296. However, the roof remained incomplete for over a century due to the unprecedented size of the dome, the largest masonry one, which exceeded the technological capabilities of the time. The conventional method of constructing a dome would require excessive timber scaffolding. If the cathedral ended up without a roof, the project would have been a disgrace to Florence in the race with other cities. Therefore, the Opera del Duomo, the governing body of the cathedral, organized an internal competition to seek innovative solutions from local craftsmen, architects, and engineers.¹¹ This internal competition indicated the Renaissance spirit of harnessing human ingenuity and collective wisdom to achieve the seemingly impossible. Competition was an honoured tradition in Florence for pushing architectural excellence.¹² Author of *The Craftsman*, Richard Sennett, considered competition in craftsmanship creates good quality design¹³, and in this case, this internal competition within the city of Florence sought the best solution.¹⁴ Filippo Brunelleschi, a goldsmith with no formal architectural training, won the competition (Fig. 3) with a radical design that required no flying buttresses and minimal timber scaffolding. Yet, the final construction, funded by the government, incorporated valuable elements from other losing entries.¹⁵ This collaborative competition and design process exhibited the civic pride of the Republic of Florence's collectivism. The dome is not only an individual achievement of Brunelleschi's ingenuity, but also a reflection of the collective intelligence and unity of Florentine citizens. It celebrated the civic identity of Florence, a republic that valued shared contributions to common success.

¹¹ Ross King, *Brunelleschi's Dome: The Story of Florence's Great Cathedral* (New York: Vintage Books, 2000), 7.

¹² King, *Brunelleschi's Dome*, 6.

¹³ Richard Sennett, *The Craftsman* (New Haven: Yale University Press, 2008), 250.

¹⁴ Livia Lupi, "Brick and Mortar, Paint and Metal: Architecture and Craft in Renaissance Florence and Beyond," *Journal of the European Architectural History Network* 12, no. 1 (2023), accessed March 3, 2025, <http://journal.eahn.org/article/id/9170/>.

¹⁵ Howard Saalman, *Filippo Brunelleschi, The Cupola of Santa Maria del Fiore* (London: Zwemmer, 1980), 139, 272.

In the 1920s, the United States emerged as the world's economic powerhouse with its dominant industrial power and rapid corporate growth. In contrast to the civic and religious motivations of the Florence Cathedral, the Chrysler Building, began as a real estate development named for Commissioner Walter Chrysler, founder of the Chrysler Corporation. As shown in Figure 4, huge posters for renting offices were posted around the construction site, displaying the inherent "commercial proposition" of the Chrysler Building suggested by Murchison¹⁶. Apart from generating rental income, the building more importantly served as a monumental advertisement for the Chrysler Corporation because

he [Chrysler] knew [...] every building he financed would be identified with the name and image of his company, thus symbolically embodying the corporate identity [...] because they are part of a company's advertising strategy and link its name to something lasting, precious and glamorous.¹⁷

Figure 4: Photo during construction process. Huge posters written "Chrysler Building. Occupancy Spring 1930. Renting office," and "Chrysler Building Now Renting. Floors Offices Stores. Ready early spring 1930" were hung to advertise and attract tenants.



The market-competitive spirit that drove the project went beyond economic gain and participated in New York's vicious "race to the sky" among constructors and developers to build the tallest building. Figure 5 depicts the design stages. In the original design, the Chrysler Building had 67 stories with a dome on top. However, 40 Wall Street, another office tower, joined the competition, and the designs of both buildings changed several times. 40 Wall Street expanded from 47 to 60 to 72 stories with a pyramid at the top, reaching a height of 929 feet (283 m), opened on May 26, 1930. In response, William van Alen and Walter Chrysler raised the building from 67 to 77 stories, changed the top dome to a taller crown, and added a 185-foot (56 m) stainless steel spire (Fig. 5). The spire itself has no actual function except to eventually reach over 1000 feet and claim the title of "tallest building in the world," opened only 1 day later, May 27, 1930. This triumph portrayed the fierce market competition of capitalist ambition, not for communal pride, but for the assertion of individual and corporate industrial dominance.

¹⁶ Murchison, "Chrysler Building as I See It," 24.

¹⁷ Schmidt, *William Van Alen Das Chrysler Building*, 18, 19.

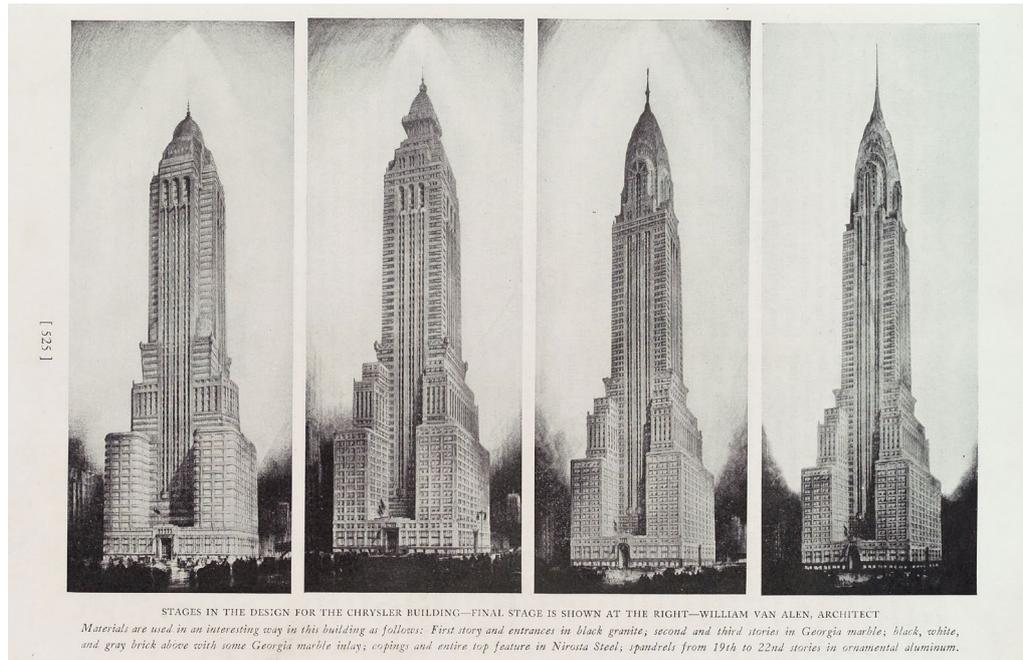


Figure 5: Design stages of the Chrysler Building. The leftmost initial design has a spherical dome on top. It became a crown with arches. A tall spire was added in order to be the tallest building in the world, 36m taller than 40 Wall Street.

Analyzing the competitions behind these two architectures reveals distinct political and cultural values. While both Florence Cathedral and the Chrysler Building responded to external pressures to achieve the greatest scale and ambition, their motivations diverged significantly. The construction of Florence Cathedral was an expression of collective civic pride and spiritual devotion. It was a project that unified the people of Florence, grounded in communal identity and public purpose. Conversely, the Chrysler Building was a product of private enterprise, driven by the pursuit of profit, prestige, and personal legacy. The competitive atmosphere of capitalist New York emphasized individualism, industrial achievement, and the branding power of architecture. The similarity in demonstrating power and ambition and the discrepancies in encapsulated political messages will be further observed in the comparison of architectural symbolism.

Reach for the sky: architectural symbolism

This chapter compares the architectural symbols of Florence Cathedral and the Chrysler Building, to examine the varying political values of their respective eras. The Florence Cathedral has been the largest masonry dome structure in the world and the tallest building in Florence since its completion. Figure 6 is a bird-eye view painting of Florence dated around 1471. In this painting, the artist placed Brunelleschi's dome in the centre to emphasize its status as the cornerstone of the Florentine Republic. The dome which was thought to be impossible to build made its "miraculous appearance"¹⁸ in the city, being bigger than all other buildings in the painting. Today, Florence Cathedral is still the centrepiece of the Italian Ministry of Tourism's cover photo (Fig. 7). After 600 years, it continues to represent the city of Florence to the outside world, demonstrating Florence's religious power and intelligence in history.



Figure 6: Repainted version in 1887 of *La Veduta della Città* by Francesco Rosselli dated around 1471. A bird-eye view painting of the urban layout of Florence with the façade of the Florence Cathedral clearly situated at the center.



Figure 7: Cover photo for the city of Florence on the website of Italy Ministry of Tourism today. The massiveness of the dome is further emphasized as the icon of Florence after 600 years.

¹⁸ King, *Brunelleschi's Dome*, 167.

The Chrysler Building, the tallest building in the world at the time, played a similar role in the New York skyline. Once completed, it stood out as a striking landmark (Fig. 8). It was significantly taller than other towers, and several times larger than typical tenement buildings, with sunlight reflecting off its crown. Analogous to Florence Cathedral, the Chrysler Building quickly became the icon of a city, embodying its identity and projecting it to the world. A New York postcard from the 1930s (Fig. 9) depicted it as a beacon at night, with light radiating from its glistening crown high above. The reflecting sunlight by day and the glowing artificial light at night illuminated every corner of the city. Its presence on the postcard further underscores its cultural and historical significance and reflects the shifting political ideologies. The postcard indicated the industrial shift in American culture from conventional tourist attractions, which typically included religious structures such as churches, palaces during monarchical rule, or museums dedicated to cultural heritage. In this context, the Chrysler Building is comparable to the Eiffel Tower constructed 40 years prior, which symbolized French industrial innovation, or the later Golden Gate Bridge completed in 1937 as an engineering wonder representing San Francisco and California. As a result, this world's first over-1000-foot tower can be regarded as a man-made landmark that showcased America's industrial power.



Figure 8: Photo of New York skyline in 1930s with skyscraper towering over the low-rise tenement buildings in the foreground. The tallest building was the Chrysler Building, composed of a base, a long shaft and a stainless-steel clad crown on top reflecting sunlight.

At the same time, it reflected the rise of corporate culture in which office work extended into the night, echoing the comment by Murchison “it is the epitome of modern business life, it stands for progress in architecture and in modern building methods.”¹⁹ The beacon analogy of the glowing crown remains a consistent

¹⁹ Murchison, “Chrysler Building as I See It,” 78.

symbol today. For instance, American media CNN, used a comparable nighttime image when reporting the Chrysler Building (Fig. 10). Despite being surrounded by more skyscrapers, its crown continues to glow with white light radiating from the triangular windows in the bustling city, where the modern business life it once symbolized became reality.

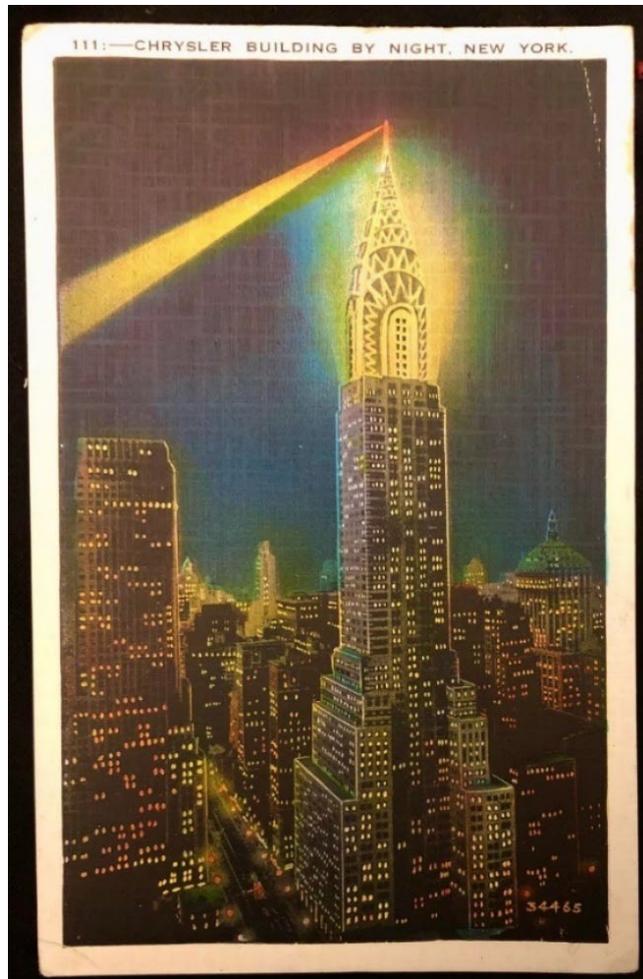


Figure 9: A New York postcard in the 1936 captioned “Chrysler Building by night, New York.” It was depicted as a beacon giving off colorful light beams from its spire.



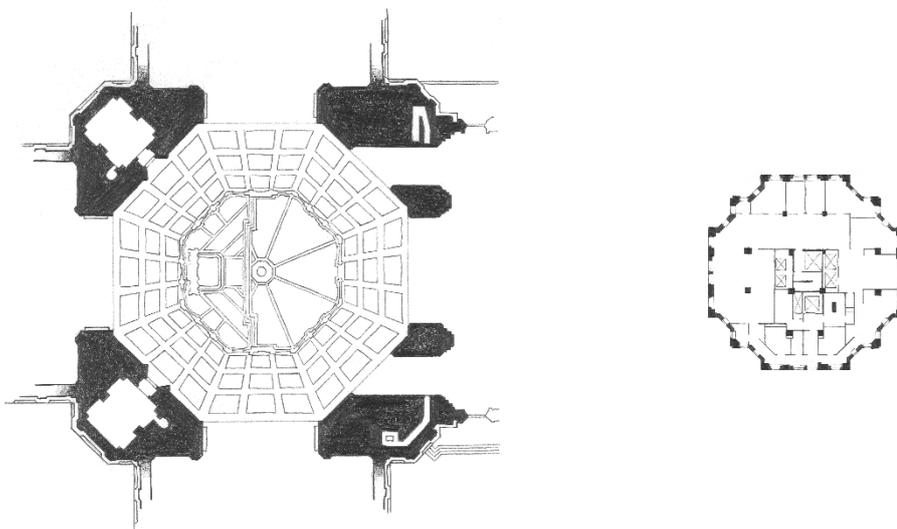
Figure 10: Photo of the Chrysler Building used by American media CNN in 2019 when reporting the sale of this building. The crown continues to glow at night after almost 100 years of completion.



Figure 11 (top): 1:1000 (original scale) drawing of the section of Florence Cathedral (left) and the elevation of the Chrysler Building (right). Juxtaposing the two buildings, it illustrates the similarities of architectural symbols – striking height and pinnacle form of the top feature.

Architecturally, the dome of Florence Cathedral and the crown of the Chrysler Building serve as resonating symbolic pinnacles. Figure 11 presents a drawing juxtaposing the two buildings at the same scale, clearly illustrating that they are the tallest buildings in their respective sites. The dome with a pointy lantern and the crown with the long spire embody the idea of reaching towards the sky. Their substantial height is the key feature that rises above the surrounding cityscape. While the dome is slightly wider and the crown slightly taller, their sizes are comparable, and their structures are symmetrical on plan, with arches on elevation. Notably, the main structures excluding these two key elements are not significantly taller than neighbouring buildings. This suggests a shared architectural intention: adding a prominent element to achieve a tall and visually

Figure 12 (bottom): 1:250 (original scale) partial plans of the space within the dome of Florence Cathedral (left) and the crown of Chrysler Building (right). It illustrates the similar symmetric octagonal layout.



dominant presence in the city. The striking height and the use of pinnacles as architectural symbols manifest, as Schmidt describes, “the age-old dream of getting closer to the stars, as if breaking the boundary between the earthly realm and the heavenly sphere.”²⁰

What is behind the resemblance of symbols from vastly different project intentions? Their ornamentation reveals how different intentions converged and expressed themselves in a like manner. Both architectural features contain internal paintings that reinforce their symbolic meanings. Under the dome of Florence Cathedral, *The Last Judgment* by Giorgio Vasari and Federico Zuccari decorates the ceiling (Fig. 13) as a religious-political statement. The Duke at the time commissioned this painting to promote his image as a Christian ruler and a supporter of Florence religious art, also to show his loyalty to the Pope and the new religious order.²¹ The artwork depicts heavenly figures and humans gazing at them from below, further reinforcing the idea of religious connection to the sky, the divine.

Similarly, within the crown of the Chrysler Building, there was an observatory deck called “Celestial” on the 71st floor, opened between 1931 and 1945, painted with stars, planets, and other celestial objects (Fig. 13). This interior design might be influenced by artist Chesley Bonestell, who worked with William van Alen in façade design in this project.²² Bonestell was known for the depictions of astronomical exploration. He made a painting of the Chrysler Building which looks like the rockets in his other artworks (Fig. 14). The observatory’s interior could thus be seen as an extension of his fascination with space travel. This room therefore became a representation of this building’s ambition to connect humanity to the universe.

Figure 13:
Left: *The Last Judgment* by Giorgio Vasari and Federico Zuccari (1579). It consists of concentric circles with Christ, angels, and heavenly figures at the upper levels, and humans gazing toward the heavens from the hell at lower levels.

Right: Interior of the “Celestial” observatory deck. The lower walls featured a sunburst pattern resembling the crown’s exterior, while the ceiling and upper walls were painted with stars, planets, zodiac signs, and clouds on the dark blue universe.



²⁰ Schmidt, *William Van Alen Das Chrysler Building*, 14.

²¹ Liana De Girolami Cheney, "Giorgio Vasari's Cupola of Santa Maria del Fiore: The Eye of God," *Journal of Cultural and Religious Studies* 9, no. 1 (Wilmington, DE: David Publishing, 2021), 1-12, accessed February 26, 2025, <http://www.davidpublisher.com/Public/uploads/Contribute/604857d5196cc.pdf>.

²² Melvin H. Schuetz, *Chesley Bonestell Chronology* (Parkland, FL: uPublish.com, 1999), accessed February 25, 2025, <http://www.bookpump.com/upb/pdf-b/1128290b.pdf>. <http://www.bookpump.com/upb/pdf-b/1128290b.pdf>.



Figure 14:
Left: Painting of the Chrysler Building
by Chesley Bonestell, undated.

Right: *Explore the moon* by Chesley Bonestell, 1949. It depicted a rocket in a moon mission which is going to return to Earth. Bonestell made a lot of similar paintings.

This comparison reveals the skyscraper's symbolic ambition of humanity reaching towards the outer realm.



Figure 15:
Left: Religious statues of the Madonna with Child (middle), and Apostles on the middle of the façade of Florence Cathedral.

Right: Steel eagle gargoyles on the 61st floor of the façade of the Chrysler Building. Journalist Margaret Bourke-White was taking a photo of New York city from the gargoyles in 1930.

Comparing the ceiling painting of Florence Cathedral's dome and the Chrysler Building's celestial observatory highlights the fundamental ideological shift. While both structures symbolize reaching the sky, the cathedral, constructed based on civic wisdom, reflects a more spiritual aspiration, to metaphorically ascend toward heaven. On the other hand, the Chrysler Building embodies a more tangible pursuit, which emerged in the modern industrial era when space travel was no longer an abstract dream, but a foreseeable reality enabled by skyrocketing technologies, literally and figuratively. The contrast between these two interior paintings underscores the decline of religious authority and the rise of science and industrial power in shaping modern aspirations.

The changes in cultural political powers are further indicated by the sculptural elements. In Figure 15, the façade of Florence Cathedral is decorated with sculptures of biblical figures and popes, reinforcing its religious authority. Meanwhile, the Chrysler Building incorporates steel sculptures, including eagles and Chrysler car hoods, as the symbol of American identity and corporate culture. This shift in sculptural representation highlights the transition from religious dominance to a modern era defined by national identity and capitalism.

This part explores the similarities and differences of architectural symbolism between the Florence Cathedral and the Chrysler Building. Both buildings employed the symbol of striking height which dominates the skyline, and the key features—the cathedral's dome and the Chrysler Building's crown—serve as pinnacles reaching toward the sky. It expresses the ambition of humanity going to the outer realm. Yet, ornamentations of internal paintings and sculptures unveiled the different intentions behind the same symbol. The ideologies shifted from the premodern religious political authority to the modern era's fascination with national technological progress.

Behind the shift of craft and craftsmanship

"Architects, sculptors, painters [...] must all return to the crafts" by Walter Gropius, 1919.²³ In the final part, the political shift would be studied in further detail via a comparison of craft and craftsmanship in the making of the key features.

As portrayed in Figure 16, the innovative structure of Florence Cathedral's dome exemplifies the integration of architectural elements. The design comprises a two-layer dome with stone half-arches and ribs to provide vertical and lateral stability and connect the two masonry layers. In the TV show *Brunelleschi. Great Cathedral Mystery* (2014) by National Geographic, architecture professor Massimo Ricci explored the construction method by physically reproducing the dome on a 1:5 scale.²⁴ The experiment portrayed the self-supporting capacity of the herringbone masonry pattern and the rib structures during construction (Fig. 17), thereby minimizing the use of scaffolding and enabling the dome to be constructed within merely 16 years. Other technical innovations included using ropes to precisely align the bricks and the invention of ox hoists to lift seven tons of material per day. The ingenious design and construction techniques enabled the dome to become Florence's greatest landmark, as a craft of God materialized by men, achieved in times of political conflicts and limited knowledge of natural law.²⁵ The Renaissance spirit that humankind can master to accomplish extraordinary tasks is expressed through this building.

The construction process also reflected civic pride in Florence. Brunelleschi collaborated with artist Lorenzo Ghiberti and other supervisors and consultants within the city including Battista d' Antonio to ensure the project quality.^{26 27 28} Different guilds in the city participated in the project with Florence's best artisans, masons, engineers, stonecutters, blacksmiths, and carpenters, contributing labour and expertise. This collaborative effort reflected the collective civic

²³ Walter Gropius, *Bauhaus Manifesto* (1919), accessed January 10, 2025, <https://bauhausmanifesto.com/>.

²⁴ "Brunelleschi."

²⁵ King, *Brunelleschi's Dome*, 167.

²⁶ Eugenio Battisti, *Filippo Brunelleschi* (London: Phaidon, 2012; first published Milan: Electa, 1976), 330-333.

²⁷ Franco Borsi, "E specialmente nella edificazione della tribuna fummo concorrenti Filippo ed io anni diciotto ad un medesimo salario..." in *Ghiberti e l'architettura* (Florence: Università degli Studi di Firenze, 1978), 3-20.

²⁸ A. Bove, S. B. Bati, S. D. Pasquale, and B. Leggeri, "Questioni marginali concernenti il rapporto Ghiberti-Brunelleschi nella costruzione della cupola di Santa Maria del Fiore," in *Ghiberti e l'architettura* (Florence: Università degli Studi di Firenze, 1978), 21-32.

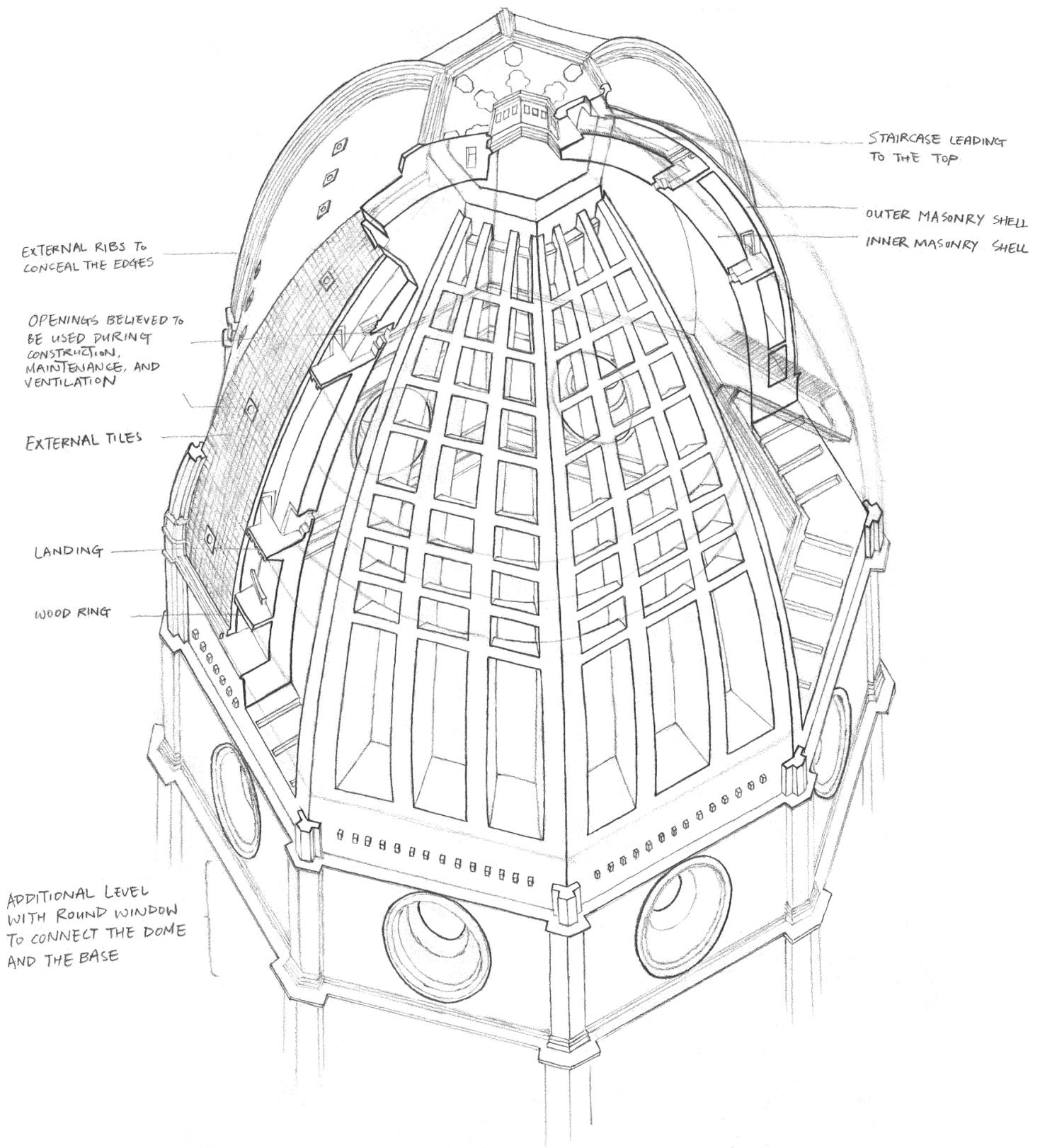


Figure 16: Drawing of the structure of Brunelleschi's dome. It illustrates the double-layer dome with stone ribs and other parts.

“republic” identity of Renaissance Florence. Sennett noted that in medieval guilds, ‘craft’ was not about specific individual creation. Instead, it was more collective and about continued practice. Craft, therefore, creates bonding between craftsmen²⁹ in the collaborative construction and sharing of knowledge. It validates that the craft and craftsmanship of Florence Cathedral played a pivotal role in shaping the city’s identity.

²⁹ Sennett, *The Craftsman*, 66.



Figure 17:
Top: 1:5 dome reproduced by team led by Massimo Ricci. It demonstrated the self-supporting capacity during construction.

Middle: Detailed structure of the double masonry layers, showing the ribs and Herringbone pattern which interlocks the brick in place.

Bottom: Workers experimenting the aligning method using rope which could be used in the past without modern technologies.



Figure 18 (previous page): Photos of the Chrysler Building during different construction phases.

Top left: the base and lower levels

Top right: the shaft

Bottom left: steel skeleton of the crown

Bottom right: installation of Nirosta cladding on the crown

The Chrysler Building, much like Florence Cathedral, employed cutting-edge technologies in its era. Steelframed structures became a distinctive symbol of American modernity during early 20th century, which also influenced the national identity of the United States as a contractor and manufacturer of this latest form and space.³⁰ Figure 18 presents a series of photographs of the Chrysler Building in different phases of construction, which were discovered by entrepreneur and photographer David Stravitz in this building.³¹ They clearly demonstrate the comprehensive use of steel columns and beams from the base to the shaft, the frame of the crown with triangular patterns, as well as scaffolding, cranes, and exterior claddings, which contributed to the height and the renowned Art Deco façade. Interestingly, these photographs of construction scenes (Fig 4, 18, 19, 20) were taken not only as documentation but also as a form of industrial propaganda that adores technological advancements. Floor levels and dates marked in the photographs accentuate industrial strength regarding the speed of construction. The entire construction from the foundation to interior took only one and a half year. In summary, the steel craft of the Chrysler Building displayed the corporate and national industrial progress.

Although this building is a result of industrial advancement, the workers fabricated some important components by hand. The Nirosta stainless steel cladding on the crown used Enduro KA-2 sheets from Germany. The claddings were fabricated within the building by hand on the two upper floors, then precisely installed to accommodate the intricate angles.³² Figure 19 shows the skeleton of the crown and the details of Nirosta steel claddings. They were cut and folded according to their orientations to interlock with the next piece. The steel ornaments were also measured and fabricated on site.³³ Figure 20 shows an assembly scene in construction footage where workers were hammering an eagle sculpture to mount it. As a result, eagles and other steel ornaments are unique. This detailed and improvised handcraft with slight irregularities and discrepancies between each ornament embodies what Sennett called “an emblem of human individuality,”³⁴ expressing the uniqueness in the era when machines can mass-produce perfect replicas. It distinguished Chrysler Corporation as an outstanding brand in New York, revealing the individualism inherent in American capitalism. Intriguingly, Sennett perceived this uniqueness as an opposition to pre-fabrication and mass-production in capitalism and industry.³⁵ This contradiction is very much in line with the intrinsic duality in this Art Deco Chrysler Building, which synthesises historic artistic styles and modernity through advanced engineering and industry.³⁶

³⁰ Jeffrey W. Cody, *Exporting American Architecture, 1870–2000* (London: Routledge, 2003), 27.

³¹ Stravitz, *The Chrysler Building*.

³² "Answers About the Chrysler Building, Part 3," *The New York Times* (December 11, 2009), accessed February 25, 2025, <https://archive.nytimes.com/cityroom.blogs.nytimes.com/2009/12/11/answers-about-the-chrysler-building-part-3/>.

³³ Michael Wyetzner, "Architect Breaks Down Secret Details of the Chrysler Building," *Architectural Digest* (2023), accessed December 5, 2024, https://www.youtube.com/watch?v=Cif0FA1jHpo&ab_channel=ArchitecturalDigest.

³⁴ Sennett, *The Craftsman*, 84.

³⁵ Sennett, 84.

³⁶ Schmidt, *William Van Alen Das Chrysler Building*, 49.



Figure 20: Scene from a construction footage of the Chrysler Building. In this image workers were hammering an eagle ornament into a suitable shape to mount it.

Florence Cathedral and the Chrysler Building exhibit meticulous crafts which represent the technological progression and the accomplishment of humans of their times. However, the underlying political ideologies guiding the craftsmanship diverged significantly. The construction of Florence Cathedral illustrated not only individual ingenuity but also the collective effort by the talents and craftsmen in the city working towards the common goal. This resonates with the internal competition in the political background which was organized to seek the best solutions for the republic. On the contrary, the Chrysler Building expressed more explicitly individualism in the craftsmanship, which aligns with the commercial intention of Chrysler to advertise corporate power.

Closing: beyond the skyline

“From time immemorial, people have invested their towers with iconographic meaning: and from the very start, they have attached both secular and religious, public and private connotations to their ‘skyscrapers.’”³⁷ —Mario Campi in *Skyscrapers: An Architectural Type of Modern Urbanism* (2000)

It is noteworthy that not all skyscrapers achieve the symbolic weight of a cathedral in a city. Nevertheless, the Chrysler Building, with its carefully crafted design and rich architectural symbolism, stands as a modern cathedral—a cathedral not of religious faith, but of industrial progress and capitalism. The Florence Cathedral and the Chrysler Building exemplify how architecture has been designed to articulate political power through striking heights and pinnacles that reach the sky with the help of advancing technologies. However, this study unveils the key

³⁷ Mario Campi, *Skyscrapers: An Architectural Type of Modern Urbanism* (Basel: Birkhäuser, 2000), 7.

differences behind the similar symbols which reflect the political landscape in their eras. The Florence Cathedral is a manifestation of religious authority, humanism, and civic pride, while the Chrysler Building presents the marriage between industrial ambition and the American capitalist ethos of the early 20th century. The craftsmanship exhibited in these structures also mirrors a broader transformation, from the collective efforts of medieval guilds and civic-minded craftsmen to the individualistic aspirations of modern capitalists. These shifts corresponded to the competition dynamics that shaped the projects: one driven by civic collaboration, the other propelled by corporate rivalry.

In 1931, Lewis Mumford, a prominent American architecture critic and an advocate of minimalist and functionalist International Style, denounced the Chrysler Building as an architecture of “inane romanticism, meaningless voluptuousness, void symbolism.”³⁸ His critique reflected the rejection of ornamentation in modernism. Indeed, the well-crafted celebration of industrial power, corporate, and capitalism left ironic as corporate glory crumbled during the Great Depression, which began right before the completion of the Chrysler Building.³⁹ Nonetheless, the Chrysler Building is a monument to modern technologies in architecture, embodying 'power, precision and utility' and the optimistic embrace of the mechanisation of life and industrial beauty in America.⁴⁰ Rather than a failed ambition, the building has stood as a promising beacon depicted in the 1930s postcard during Great Depression in Figure 9, which might have been precisely what the Americans needed: a symbol of hope in a period of economic despair. Like the way it appears as a supporting character in American films (Fig. 21), the Chrysler Building encouraged and witnessed the rise of the country as a global superpower in the subsequent decades.

In this perspective, the metaphysical role of the Chrysler Building in America can be regarded as a contemporary parallel to Florence Cathedral's role in sparking the Renaissance, manifesting the assertion by Schmidt, that the “role that the tower of a cathedral played during epochs of religious dominance was taken over by the skyscraper in secular times.”⁴¹ Just as Florence Cathedral symbolised of the divine aspirations and civic unity of its people, the Chrysler Building encapsulated technological progress, commercial ambition, and national identity in the industrial era. The enduring presence of these two edifices in the respective skylines serves not merely as monuments to historical achievements but also as a testament to the evolution of architecture as a symbol of political power across centuries. They suggested that apart from form and functionality, manifesting important symbolism of their times could be another criterion of canonical buildings, as they are the heritage of the past and guiding lights for the future.⁴²

³⁸ Lewis Mumford, "Notes on Modern Architecture," *The New Republic* 66 (March 18, 1931), 120, retrieved March 10, 2025, <https://www.landmarkwest.org/wp-content/uploads/2019/05/CHRYSLER-BLDG.pdf>.

³⁹ Michael J. Lewis, "Dancing to New Rules, a Rhapsody in Chrome," *New York Times* (2005), retrieved March 12, 2025, <https://www.nytimes.com/2005/05/26/garden/dancing-to-new-rules-a-rhapsody-in-chrome.html>.

⁴⁰ Schmidt, *William Van Alen Das Chrysler Building*, 71.

⁴¹ Schmidt, 14.

⁴² Ruth Verde Zein, "It's Not the Canon, It's How You Use It," *Dearq* 36 (2023), 37–45, accessed November 16, 2024, <https://doi.org/10.18389/dearq36.2023.05>.



Figure 21

Top: Scene from *King Kong* (1933). Chrysler Building in the background while King Kong is fighting the plane.

Middle upper: Scene from *Q – The Winged Serpent* (1982). Monster flying over Chrysler Building.

Middle lower: Scene from *Spider-Man* (2002). Spiderman sitting on an eagle ornament and thinking.

Bottom: Scene from *The Avengers* (2012). Thor gathering lightning from the spire.

Declaration on the use of Artificial intelligence

I declare that I have used Artificial Intelligence (AI) tools ChatGPT and DeepL in this work.

In the research process, it is relatively easy to find sources about specific buildings. However, it is more difficult to have a general overview of certain topics or backgrounds when I want to gather different scholars' views. I am clear that the citing merely from the search in AI is unreliable, therefore I used ChatGPT in looking for general knowledge backgrounds in a critical way. For example, I asked for famous architects' views on skyscrapers and shifting standards of canonical buildings. It suggested some quotes from publications such as *The Tall Office Building Artistically Considered* (1896) by Louis Sullivan. Then I looked for the original versions in libraries or online archives to verify whether that person actually wrote or said something, to ensure the integrity of sources. (I found the e-book of *The Tall Office* from The George Washington Library) Most of the time the AI suggested books or articles exist, but the actual wordings or meanings are different or there is a mismatch between some publications. Getting the names of some relevant publications without believing the content by AI can be useful to guide my research.

In writing, I organized my paper structure with points first, then I wrote the first draft, not in a meticulous way but at least connecting all the points and arguments. I asked ChatGPT when I did not know how to connect two sentences or write them in a good way. For example, on page 13, an original sentence is "Comparing to the decoration of Florence Cathedral's dome, the celestial observatory in the Chrysler Building reflected a more tangible desire of reaching the sky in this modern machine era where going into space is no longer an unimaginable dream, but a reachable goal based on rocketing technologies, figuratively and literally." which is less straightforward. ChatGPT gave me "In contrast, the Chrysler Building embodies a more tangible, scientific pursuit, emerging in an era when space travel was no longer an abstract dream but an imminent reality enabled by technological advancements." In the end, I rewrote it into "On the other hand, the Chrysler Building embodies a more tangible pursuit, which emerged in the modern industrial era when space travel was no longer an abstract dream, but a foreseeable reality enabled by skyrocketing technologies, literally and figuratively."

ChatGPT was also used to generate citations. I would input the publication name, author, publisher, and year. Then it would help me do the formatting. Sometimes it is in wrong format I still had to revise.

DeepL and Grammarly were used only for improving the language and proofreading at the end of writing. I scrutinized every sentence in the rewritten text and partially adopted or modified them one by one myself for submission.

All critical analysis and arguments presented in this work are produced by me. I am aware that I bear full responsibility for the academic integrity of this paper.

Reflection on the thesis course

Hi Eireen. This is one of the best courses I have had so far in TU Delft. I worked in research before and submitted a journal paper therefore I learned some basics in academic writing. Then I went to practice for a year and memories about the academia faded a bit. I want to be a professor in the future, both teaching and research. I would probably do my PhD after some years in practice when I have widened my knowledge base.

Regarding the course, I was not very clear about what canonical buildings were in the beginning. I saw the profile written something about material research (which is also my interest), therefore I picked your class. Also, it is great to have a smaller class size which means we end our lessons earlier. Throughout the course, we have read a lot about architecture theories (which are less taught in Hong Kong) and it is nice to delve into more philosophical/ theoretical discussions. Towards the later part, the research part also recalled and enriched my academic experience. Some lessons about writing are slightly boring because in Hong Kong we are quite familiar with writing a few thousand words of essays during bachelors. The interaction sessions in lessons are good, when I criticize others' work, I also reflect on my own.

I also like my thesis. I started the research from the craft perspective and I found out much more at the end. It expanded into history and changes in ideologies towards tall buildings as human society evolved. Hong Kong has a lot of skyscrapers. We are so used to their existence and view them as normal commercial growth and needs, while some are urban-historic landmarks, e.g. HSBC tower by Foster. But I never viewed them from the historical symbolic perspective – what those skyscrapers mean to humanity. The thesis gave me additional insights into why people are so amazed by Hong Kong's building height and skyline. I also picked the two Western cases because I want to explore more Western architectural theories. Normally I would rather rest than read unless required by courses. The research pushed me to explore medieval-Renaissance history, American growth, the desire to go up, contemporary ornamentations, the meaning of craft... All in all, my knowledge has expanded a lot. Thank you so much and all the best in coming research and teaching!

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