FINANCING ARCHITECTURE:

HOW THE URBAN FABRIC OF MANHATTAN HAS BEEN SHAPED BY MONEY

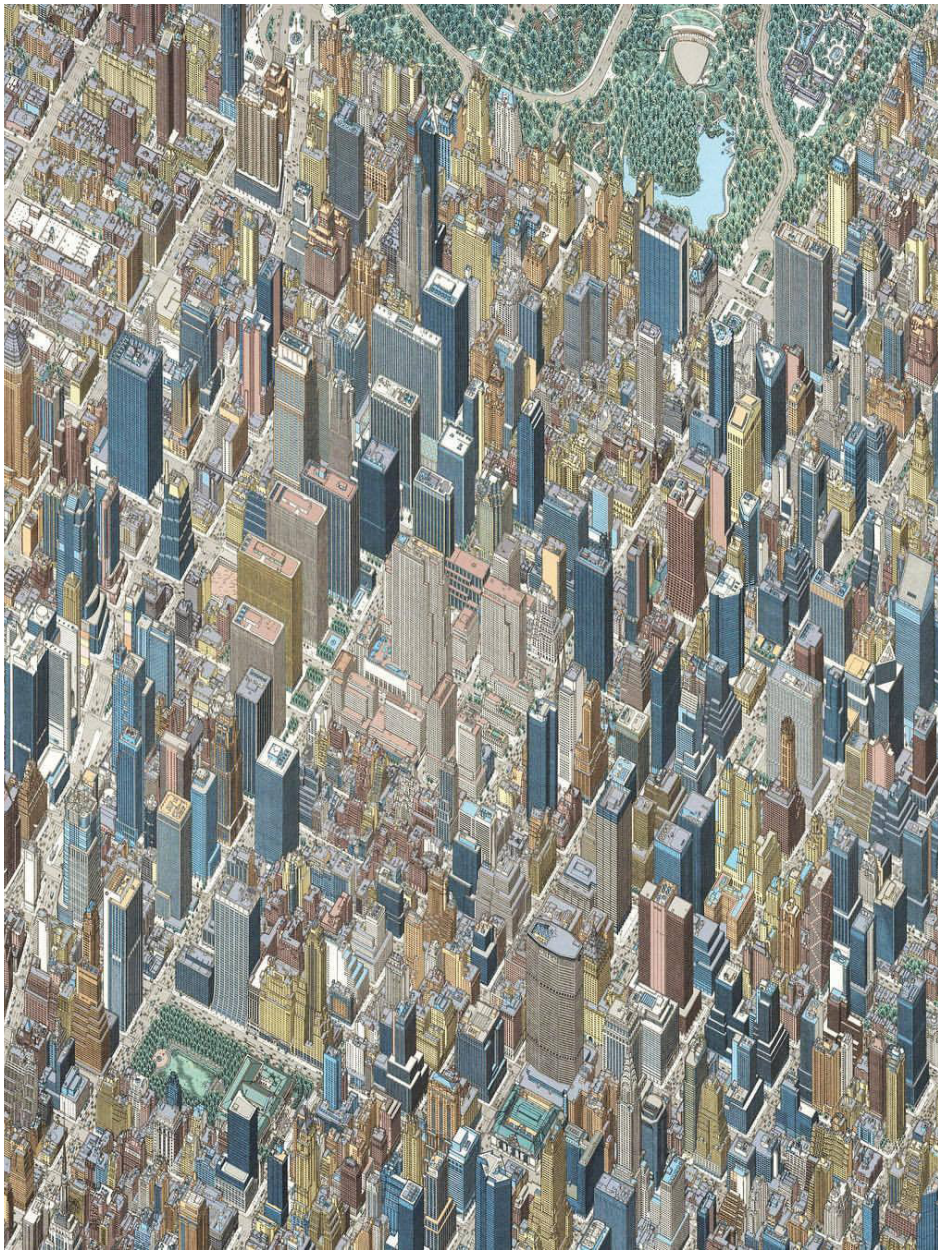

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Table of contents

Abstract

Financing Architecture: How The Urban Fabric of Manhattan Has Been Shaped by Money investigates the urban fabric of Manhattan, from single building case studies to larger scale urban planning developments, through the lens of money. The thesis introduces Manhattan's grid layout, a result of the Commissioner's Plan of 1811, its purpose being that of establishing the historical framework as well as actual urban design framework in which the rest of the analyzed buildings sit in. Moving on from the city-wide scale, the scope of the thesis narrows down to the neighborhood scale, exploring how developments such as the Grand Central Terminal are the result of newfound forces driving the design of architecture in modern times and how these same developments have effects which ripple around their surroundings. A transition is then made towards the study of skyscrapers, detailing how zoning laws have impacted their design and why those same laws were put in place. Finally, the thesis reaches its apex by tackling the symbolism of the 432 Park Avenue needle skyscraper, a building which plays a more important role in the trading market, rather than in the sheltering sphere, something which signals an entirely new way of understanding this type of expensive architecture. Ultimately, by constantly shifting the scale of focus, as well as addressing architectural projects of varying typologies and urban functions, this thesis hopes to emphasize that Manhattan is a product of a design motivated by finances, a far cry from more historically established cities such as London or Paris.

Introduction

Growing up with American films, cartoons, and video games, New York City – at least the digital and artistic interpretation of it – has always been present in some capacity in my developing child mind. It stood in a great contrast to the physical reality I found myself in, that of a European capital city. Contrasting with the decrepit plaster of the grey dust clad concrete communist social housing towers peppered throughout Bucharest, New York City, Manhattan especially, gained a sort of mythical status to me: the skyscrapers of architectural styles I was not even aware of and their gravity defying heights became the stuff of fairy tale. In 2009, I was lucky enough to have the opportunity to visit the US and the moment I walked out of the airport taxi and arched my neck back to gaze upon the gigantic buildings of Manhattan was as magical as I had imagined it would be all those preceding 11 years.

While it may seem academically inappropriate to debut a Master of Science thesis with a short personal anecdote, I believe that linking the paper's subject to my childhood experience underlines the fact that the study of Manhattan through this thesis has a very personal relevance for myself. Manhattan has been my first encounter with architecture and urbanism and considering my architectural education of the past 4 years, I find myself intellectually capable of dissecting its subject from an academical point of view. To put it a more metaphorical way, this thesis is the perfect opportunity for me to pay tribute to one of the great cities of our world, a city which, through its iconic architecture and dynamic urban qualities, has (perhaps unconsciously) played a great part in helping me choose this field as my profession and way of expressing myself. The thesis, in a way, makes for a full circle. As such, this thesis aims to study Manhattan, one of the five boroughs of which New York City is composed.

But what is it that actually sparked this interest in writing a thesis about Manhattan? What is it worth exploring about this metropolis? Initially, the topic of the thesis was related to skyscrapers and the question of where they are headed as a form of architectural typology in the context of Manhattan. While trying to refine the research question I have arrived at the conclusion that perhaps it would be best not to have skyscrapers as the main subject of this thesis, but rather use them as a tool to explore the urbanism changes that have impacted Manhattan over the years. Furthermore, the principal realization was that my interest was rather directed towards Manhattan as a whole, the skyscrapers being merely one of the elements that made this borough of New York City an engaging and worthy

case study. The reason for this shift in focus lies in the urban design complexities and the architectural traits that come with them that characterize Manhattan. Although the city in question is only a couple of centuries old and its grid organized streets make it urban configuration extremely simple in comparison to London or Paris, I believe that there is still much that an analysis of this city has to offer in regard to what one can observe and realize about the way architecture and cities evolve throughout time. With that in mind, “change”, “mutation”, and “evolution” are the three key words that have dictated the research behind this thesis and its purpose. Manhattan, much like every global city, can be perceived as a living organism of sorts, an urban organism in a constant state of change dictated by the various factors which populate it: skyscrapers, public spaces, zoning codes etc. What also adds to the intrigue behind this subject is Manhattan’s age. Chapter 10 of “The World’s Cities: Contrasting Regional, National, and Global Perspectives” makes an intriguing point about the relatively young age of New York, Chicago, and Los Angeles. Whereas the non-American mentioned cities (such as London, Paris, Amsterdam, or Tokyo) have a richer history and denser architectural heritage, thus their layered nature making them inherently difficult to read and understand from different perspectives, New York, Chicago and Los Angeles are in a way much more simple: “each of which was built on a tabula rasa of terrain” and “the physical development of each is only a century or two old, having been formed almost exclusively within the so-called modern period of mercantile/industrial capitalism” (Abu-Lughod: 131). This is a crucial idea to understanding the motivation behind choosing this thesis’s idea as an urban and architectural analysis of Manhattan would offer a viewpoint into what design principles and factors are important for the modern man. Unlike its European counterparts, New York has not been developed over centuries. London has had the chance to organically develop over centuries, whereas New York, on the other hand, has a rather more artificial quality to it, thousands of years of knowledge regarding the built environment suddenly being applied on its occupied piece of land.

In the early stages of research, when gathering sources and trying to find out which ideas are worth pursuing, the following theme occured: money. I came to the realization that Manhattan, and by extension New York City, is not the result of the same forces that built earlier, more historically, culturally and architecturally established cities such as European capitals. Rather, the main driving force behind the development of Manhattan is financially driven. As such, this thesis aims to explore this idea, this relationship between Manhattan and money, by undergoing various building case studies, as well as analyzing some of the most important urban developments that have shaped this borough of New York City.

Regarding its outline, the thesis is structured through the following chapters:

1. Manhattan’s Grid:
The chapter details how the 1811 Commissioner’s Plan set the urban layout of the city, the urban design features of the city today and how they compare to its 1920s features, basically the urban history of the city in broad strokes.

2. Grand Central Terminal, the High Line, and the Hudson Yards: how buildings activate the urban fabric

Based on the New York chapter from "Real Urbanism. Decisive Interventions" which tackles the history of the Grand Central Terminal and its relationships to its surroundings, this thesis chapter is directed towards recent urban interventions such as the Highline and the Hudson Yards development as well as other historically relevant cases such as the aforementioned Grand Central scheme.

3. Zoning: how laws carve Manhattan's canyon of skyscrapers: The initial topic of the thesis, Manhattan's skyscrapers act as its architectural nucleus. Highly relevant to the paper's argument is the 1916 zoning law as it is firm proof of not only how Manhattan has been molded according to laws but also proof of how those lose came to be because of the greed associated with money.

4. 432 Park Avenue and the idea of physical transcendence:

The book "Icebergs, Zombies, and the Ultra Thin" by Matthew Soules makes a very interesting argument about 432 Park Avenue and how, through its monolithic aesthetic and the emptiness of its apartments, has become a mere tool of finance capitalism and that it is a symbol of physical transcendence. Building on this argument, this chapter could explore how the state of contemporary architecture and the economy are reflected in Manhattan today and what this bodes for its future.

Figure I (page 2)**:** One Vanderbilt and surrounding brick buildings
Figure II (page 4)**:** Manhattan skyline
Figure III (below)**:** Central Park

Chapter 1

Manhattan's Grid

The most appropriate way of opening this research paper would be to set the historical background on which the subject falls: Manhattan, the most famous and thought provoking of the five boroughs that make up New York City. One of the defining features of it (and perhaps its most decisive one with regards to the development of its urban fabric) is the rectangular grid which dictates the way the urban fabric of Manhattan is organized.

1.1 COLONIAL ORIGINS

As previously mentioned, New York City does not benefit from the rich architectural and historical pasts that characterize its European counterparts such as London or Paris. This actually works in favor for this thesis as not only is the historical scope of it significantly narrower than it would have been in the case of those other cities, but also brings forth the idea of how an, for the lack of a better word, "artificial" urban entity such as Manhattan has been developed. Considering the relatively young age of the US, a country built from the ground up by colonies barely over half a century ago, its cities are the product of European urban planners. The grid can be traced to the 16th century when the Spanish started colonializing the Americas. In 1573, the "Ordinances for the Discovery, the Population, and the Pacification of the Indies" (commonly known as the Laws of the Indies) was issued by the Spanish crown and it included advice regarding colonization, including, of course, town planning. Crucially, it dictated that cities shall be based on square blocks with streets at right angles (Abbott, 2020: 9). Two centuries later, New York was only a small city with a population of 25.000 located in the lower tip of Manhattan. During its 150-year existence, it had grown incrementally much like European urban entities. However, by the start of the 19th century, its population had quadrupled. Carl Abbott (2020: 11) remarks that "Landowners and merchants wanted to make continued growth and real estate development easy", underlining the need for the city's expansion. Consequently, in 1807 the New York state legislature authorized three commissioners to come up with a new urban scheme that came to be subsequently known as the famous Commissioner's Plan of 1811. Its most defining feature, of course, is the right-angled grid, a complete rejection of the "intricated Baroque street layouts" (Abbott, 2020: 11).

1.2 A NEW SET OF RULES

The following quote (2019: 222) extracted from Wilfried van Winden's chapter from "Real Urbanism: Decisive Interventions" touches upon the grid's essence:


Scale of One Mile

> However, it is not the neighbourhood, the square, the monument or the park but the street and circulation that are the decisive urban instruments in the Commissioner's Plan. The organization of plots on a traffic network was the regulating factor for the growth of the city.

I believe that van Winden offers fundamental insight into the values embedded into Manhattan's grid. The purpose of the Commissioner's Plan is not to celebrate any points of architectural or cultural significance much like medieval cities, cities whose vastly intricate network of streets and squares were designed around focal points such as churches, piazzas, or any other building or public space of importance. Rather, the buildings cherished by European cities and lifted on metaphorical pedestals by virtue of their urban fabrics' arrangements are mere objects that populate the rectangular grid that dominates Manhattan. "The great virtue of a street grid is transparency. It is easy to lay out with the most rudimentary surveying skills and easy to navigate — no GPS needed as long as you can count." notes Abbott (2020: 13). The Manhattan grid could be thought of as the result of a pragmatic way of planning, as opposed to a result of an imagery dominated way of planning. Circulation, motion, and flow are key elements that lay at the foundation of the grid as its commissioner's envisioned the vast land inhabited by Manhattan as a city that relies on the dynamism of its inhabitants and their endeavors as Manhattan's current hectic life confirms. By virtue of its rectangular plan, it is a simple design that features 12 North-South avenues perpendicularly placed on 155 West-East oriented streets. As a result of that, spatial orientation is quite simple. On a more lighthearted note, the straight forwardness of the grid is evident in many American TV shows or films of the cop or crime genre, when police officers chasing criminals clearly communicate to each other where the chasee is headed and how to reach him. That is not to say that the entirety of Manhattan is based on the grid. As previously mentioned, the borough incrementally grew from the South end of the island (where the financial sector is located), marking a more disjointed area of the island. In addition to such areas as the financial sector or West Village, Broadway facilitates cross-town traffic by cutting against the grid in the Midtown section.

However, key to understanding what lies at the core of the grid, one would need to underline the follow-up to the aforementioned quote by Abbott: "It makes the transfer of real estate simple because every parcel can be identified by what in effect are Yes coordinates, avoiding arhaic 'metes and bounds' property descriptions based on lines drawn from one landmark to the next." (2020: 13). The pragmatic quality of the grid extends beyond the dimension of circulation and traffic, bringing forth the idea that what also lies at the core of the grid and by extension the whole development of Manhattan around it is money. One can say that Manhattan is, after all, the product of capitalism and proof of what money can do in terms of architecture and urban planning. The subsequent chapters of this thesis shall pick up on this idea and improve upon it.

Transitioning into a more subjective territory, the following quote is from Rem Koolhaas's seminal "Delirious New York" book (1994: 20):

> The Grid is, above all, a conceptual speculation. In spite of its apparent neutrality, it implies an intellectual program for the island: in its indifference to topography, to what exists, it claims the superiority of mental construction over reality. The plotting of its streets and blocks announces that the subjugation, if not obliteration, of nature is its true ambition. All blocks are the same; their equivalence invalidates, at once, all the systems of articulation and differentiation that have guided the design of traditional cities. The Grid makes the history of architecture and all previous lessons of urbanism irrelevant. It forces Manhattan's builders to develop a new system of formal values, to invent strategies for the distinction if one block from another.

Koolhaas's view on what the grid means for Manhattan borders on the cynical. He underlines the artificial nature of the grid, essentially labeling it as a forced urban intervention on the island due to its disregard for its natural topography. The extent of this intervention on the island is confirmed by Juan Busquets as part of his Harvard Graduate School of Design research project "Manhattan: Rectangular Grid for Ordering an Island", particularly noting that the process of establishing the rectangular grid implied "operations of leveling the ground, both through land subtraction and land addition", adding that "subsequent phases of development included operations of land reclamation along the water edges, thus allowing the grid to further extend towards the rivers" (2017: 13). The idea postulated by Koolhaas that the grid essentially subjugates and undermines all the principles and lessons derived from the history of architecture and urbanism shows a very good understanding of what Manhattan actually represents: a tabula rasa of sorts. With that in mind, one can reasonably say that Manhattan is the urban planning embodiment of what the relatively newly formed (at the time) United States of America stood for: a rejection of its European past, an opportunity to begin anew.

Building on this, Alan Balfour goes to articulate what this seemingly cold, faceless, rectangular grid means in his “New York” book (2001: 11):

> Place yourself in the minds of those commissioners advocating in public a plan without charm, without centre, without bias. In this, and consciously so, it is the antithesis of the European city: the city as a field of free enterprise and speculation within reason versus the city of power centres and vested interests. The European city reinforcing and flattering the powers of Church and Crown, structured to demonstrate hierarchies of power; structured to resist change. The new American city ordered to allow continual change in a structure of constant order, a neutral field for the public pursuit of commercial enterprise; structured to constrain all ambition in a frame of reason.

Manhattan’s grid is thus meant as a celebration of the United States’ newfound independence and its democratic way of operating. Out with the urban layout typical of an European city where the streets are placed in a hierarchical relation to buildings that signify the power of the state and that of the church and in with the level playing field symbolized by the egalitarian rectangular plots. Unbound from its historical monarchic ties, America is free to manifest its own destiny and the creation of Manhattan as an urban entity is a testament to that in two ways. One, it is a showcase of man’s might over nature as all the hills, lands, and swamps that populated the island in its original form have been forcefully discarded in favor of an abstraction, the rectangular grid. And two, the same rectangular grid, by virtue of its apparent egalitarian trait, is the complete opposite of the hierarchical European city plan and thus the result of forces different than the ones imposed by the state or the church. Its defining force? Money. Based on the historical framework established by this chapter, the purpose of the following ones is to analyze how exactly Manhattan is a city that is a product of and driven by money.

1.3 AN EXCEPTION TO THE RULE

In spite of the capitalist-oriented forces that have shaped and molded the island’s urban fabric and architectural character across its history, there are certain elements of Manhattan which are proof of the contrary. During the 19th century, large number of immigrants started coming in, thus exponentially raising the population numbers, while people started living in increasingly crowded and unhealthy environments. The 1811 did contain a number of small open spaces but not to the degree that would improve the city life of Manhattan given the new population conditions. As this paragraph aims to prove, Manhattan’s development wasn’t motivated exclusively by financial stimulus. Philanthropists and city leaders opted to build a park that would improve the citizen’s lives and make the city a world-class destination, thus purchasing a significant number of plots (59th to 106th streets and Fifth to Eight Avenues). The first portion of the planned massive green space opened in 1858 with the rest of the remaining space being built across the next 15 years, ultimately leading to the world-renowned Central Park (Central Park Conservancy, 2017: online). Thus, the very existence of Central Park, one made possible by the demolishing of 192 plots,

imbues Manhattan's urban fabric with a degree of complexity: a 843-acre green space which sits among a sea of skyscrapers.

Figure 1.1 (page 8)**:** 1811 Commissioner's Plan map

Figure 1.2 (page 10)**:** 19th Century Manhattan

Figure 1.3 (below)**:** Central Park and the Manhattan grid

Chapter 2

Grand Central Terminal, the High Line, and the Hudson Yards: how buildings activate the urban fabric

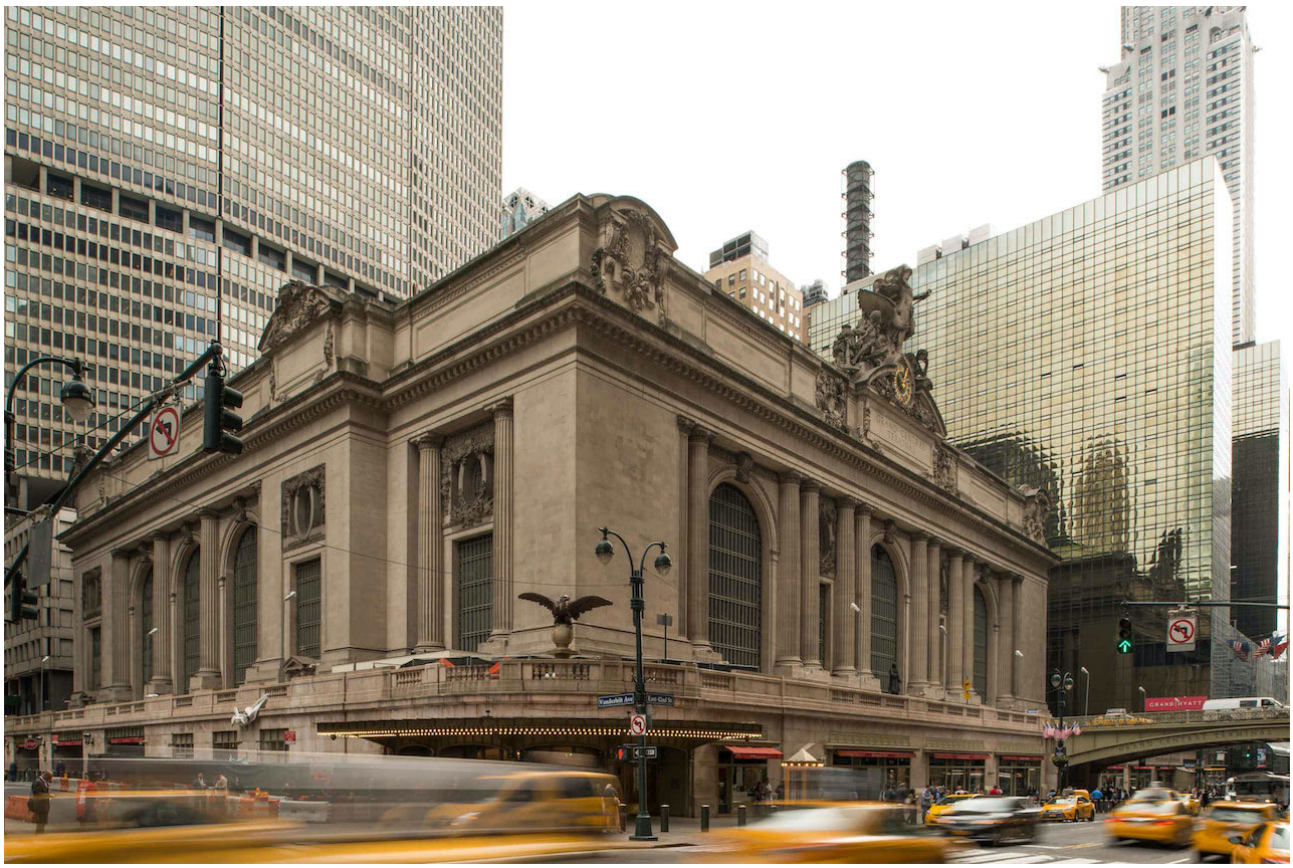
This chapter aims to add to the thesis's framework by scaling down from the borough-wide view to that of the district. By analyzing three key architectural schemes, the purpose of this part of the thesis is to highlight how one scheme's design can have a ripple effect on its surroundings. Thus, the main idea would be that Manhattan is shaped by the architectural developments peppered throughout its urban fabric.

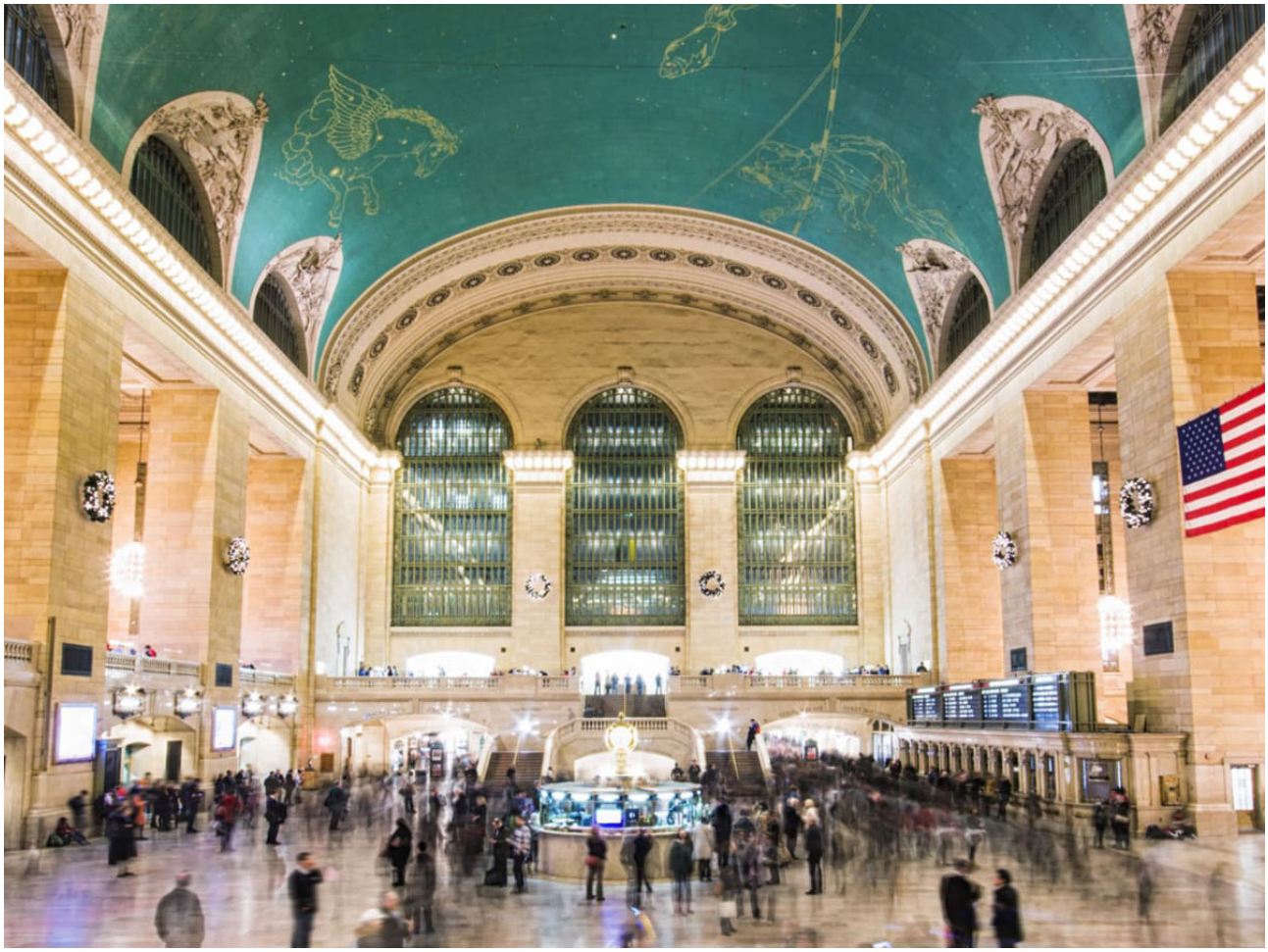
2.1 GRAND CENTRAL TERMINAL

The most relevant literature that has driven the writing behind this chapter is Wilfried van Winden's segment about Grand Central Terminal from the "Real Urbanism: Decisive Interventions" book. The following extract (2019: 223) shall set the tone for the remainder of this analysis of the Grand Central Terminal:

> Whereas in many cities such a location is reserved for a palace, a church or the city hall, in this case it was given to a train station in a grid where the avenues were characterised by an open and well-nigh endless perspective. It was the only building in New York with an axial location on the scale of the city. Grand Central Depot thereby became not so much a symbol of power (in which case it would have been that of Vanderbilt himself) but of the connection between Manhattan and the rest of North America, with travel as the inexorable link to distant horizons beyond which freedom beckoned. It was a palace for the passenger, a temple of new transport, of the moving masses and of progress.

One word provides the theoretical link between the previous chapter's focus on Manhattan's grid and Grand Central Terminal: "circulation". The reason behind the existence and placement of Grand Central Terminal in such a central position of the grid reinforces the idea of the previous chapter: that Manhattan is the result of a new set of urban planning rules and the new cultural values opposing the established European ones. Grand Central Terminal is not a cathedral in the traditional religious edifice sense but given the traits and interests of this "brave new world" represented by Manhattan, not to mention its central positioning, they imbue it with a sense of grandeur often associated with the religious structures.





On a less theoretical note, van Winden goes on saying that in the twenty years that followed the opening of the terminal (Grand Central being completed in 1913), there was a certain stimulation of building construction that led to a significant development of the area (2019: 233). Among the 28 buildings that rose in the vicinity of the station are eight hotels, nine apartment complexes and eleven office buildings, plus additional shops, bars, and restaurants. Moreover, Grand Central also stimulated the planning and construction of Chrysler Building (1930) and Rockefeller Center (1933).

Grand Central Terminal acted as a gate to Manhattan in two ways. Firstly, it hosted the flow of millions of visitors to the city, thus acting as a key element in public transportation and the tourism industry. Secondly, Grand Central became a metaphorical gate to the development of Manhattan's Art Deco architecture as its presence spawned the creation of other NYC landmarks, which in turn, drove Manhattan tourism even higher.

2.2 THE HIGH LINE

An elevated public space project done by Diller Scofidio + Renfro, the High Line has become across its 13-year timeline one of the standout tourist attractions of Manhattan and also an icon of American landscape design. As per the architects' website description of the project, the Highline is a 1.5–mile long public park built on an abandoned elevated railroad stretching from the Meatpacking District to the Hudson Rail Yards. The following description of the project (from the architects' website) reads like poetry:

> Inspired by the melancholic, unruly beauty of this postindustrial ruin, where nature has reclaimed a once vital piece of urban infrastructure, the new park interprets its inheritance. It translates the biodiversity that took root after it fell into ruin in a string of site–specific urban micro-climates along the stretch of railway that include sunny, shady, wet, dry, windy, and sheltered spaces.

Indeed, the idea of nature reclaiming "a once vital piece of urban infrastructure" is a powerful theme, one that sets the High Line apart from other urbanistic or landscape developments in Manhattan. While the scope of this thesis does not include a top-to-bottom analysis of the High Line's architectural features and their merits, for the sake of this chapter's argument it would be worth starting from the pavement detail. As is evident in the showcased pictures, the pavement consists of precast concrete planks with open joints that house greenery akin to how wild grass grows through concrete (a metaphor used by the architects' website). This surprisingly metaphorical concrete detail symbolizes the essence of the High Line and perhaps even of Manhattan to a certain extent: continual growth. In spite of the decrepit conditions (or perhaps thanks to them), an abandoned rail line had enough potential to be reconverted into a highly populated tourist attraction and a symbol of sorts of the renewal, regeneration, and reinvention that Manhattan is capable of.

That is not to say that the High Line is without its detractors. The purpose of this chapter is, after all,

Figure 2.1 (page 14, top)**:** Grand Central Terminal, exterior
Figure 2.2 (page 14, botoom)**:** Grand Central Terminal, interior
Figure 2.3 (above)**:** High Line
Figure 2.4 (page 18)**:** the Vessel and the Hudson Yards

to capture the impact of the selected projects on their surroundings, seeing how the urban fabric has reacted to their implementations. In a Curbed website article, Kim Velsey (2021: online) argues that the High Line has stimulated a starchitect boom around it. With buildings adjacent to the rail line having been by architects such as Renzo Piano, Shigeru Ban, Bjarke Ingles, Studio Gang, and Zaha Hadid, one cannot argue with the star power imbued into the buildings' designs. While taken individually, the architecture is as stunning as one would expect from the leading practices of the globe. But when taken together as a whole? "Cacophony" might be the best word. As noted by the author of the article, the buildings represent the struggle of each architect outdoing the one before him, leading to a "object building" type of architecture: a design dictated by the need to draw as much attention as possible in a bid to outshine its neighbors. The area covered by the High Line acts as a microcosm of Manhattan, where each building is vying to outdo its neighbors, an idea that will be further explored in the next chapter. As per architect Grant Marani (cited by Velsey, 2021: online), the problem with these developments is that they do not consider the existing qualities of the neighborhood, essentially working on a blank canvas. Quite a stark contrast to the High Line itself.

Architectural problems aside, the High Line also

signifies another aspect of the Manhattan urban fabric: money. With great starchitects must also come great financial value. When West Village gained three Richard Meier buildings that sold for big prices to celebrities, developers realized they can charge more for starchitect designed structures (Velsey, 2021: online). Thus, a trend began. The sites surrounding the High Line were sold for insane prices, which forced the developers to figure out a way to justify their values. Enter starchitects: prices tripled. While one could reasonably assume that once a starchitect has been hired, a good design is to be expected, due to zoning laws, matters got a bit complicated. As the designing capabilities of the architects were limited by the rigid zoning restrictions of said area, the only remaining opportunity of making their buildings stand out was the façade, thus leading to the age-old architectural problem of the decorated shed.

2.3 HUDSON YARDS

The link between the High Line and the new Hudson Yards development goes beyond the physical, as the previous case study stretches across Manhattan to the case study in question. What bounds them is their tendency towards "billionaire architecture". This new $25 billion development, built on top of Penn Station's working railroad tracks, is home to a series of "trophy architecture" structures designed by all-star teams of architects, much like the buildings following the High Line's path throughout Manhattan. Interestingly enough, as previously mentioned, there is even a physical link between Hudson Yards and the High Line, as the elevated pedestrian path stretches from its Southern entrance near Whitney Museum to its Northern end adjacent to the development in question.

Considering this similarity between the two case studies, that of containing or being associated with starchitects' projects, what purpose does an analysis of the Hudson Yards serve in the scope of this paper's argument? Unlike, the High Line and the apartment blocks attracted to it, the Hudson Yards is quite removed from the urban fabric of Manhattan, so much so that it operates as a city within a city. Truthfully, the term "city" implies a certain logic and clear functional purpose regarding spatial organization, something which Hudson Yards lacks. Perhaps, it is more like an abstract art collection within a city. Its glass-clad skyscrapers, mall, and the public installation that is the Vessel, are all of awe-inspiring dimensions, making the Hudson Yards a collection of gargantuan objects.

This newly constructed fragment of Manhattan acts as another example of how the urban fabric has been mutated according to financial factors. However, in contrast to the other two examples of this chapter, rather than acting as a cataclysm for the development of its surrounding area, Hudson Yards manifests itself inwards.


SEPHORA
12
11
10
9
8
7
6
5
4
3
2
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Chapter 3

Zoning: how laws carve Manhattan's canyon of skyscrapers

The following chapter shall be structured around the important zoning laws of the past century, indicating how certain skyscrapers that populate Manhattan reflect their financial context.

3.1 HUMBLE BEGINNINGS

The history of Manhattan skyscrapers stretches back to the end of the 19th Century, a time when Chicago was considered the world capital of such buildings, having popularized them due to the use of steel structures.

Before the needle megastructure skyscrapers of contemporary Manhattan architecture, the New York City borough was first host to humbler, significantly less tall, yet highly more ornate buildings such as 41 Park Row, at the time of its 1889 opening being known as The New York Times Building. Known to be the first building constructed for the use of a New York newspaper (Dunlap, 2001: online), this building is reminiscent of the first era of tall buildings. Its façade featured multiple architectural styles (indicative of the times), a feature of design that will gradually diminish towards more minimalist, Modernist-oriented elevations. Moreover, with a floor count of 16 that in comparison to behemoths such as 432 Park Avenue seems minuscule, the New York Times Building stands as an example of the more modest forms that skyscrapers adopted at the beginning of their tenure as architectural typologies.

3.2 EXCESSES AND THE 1916 ZONING RESOLUTION

A key development in the mutation of Manhattan skyscrapers is the 1916 Zoning Resolution, which created the "distinctive ziggurat towers from the 1920s and 1930s" (Abbott, 2020: 95) which were representative of the iconic Art Deco style.

What lead to the implementation of this monumental zoning regulation was a laissez-faire attitude regarding skyscraper design and plot regulations that ultimately culminated in density problems among others. Due to the land limitations imposed by water proximity in Lower Manhattan, as well as the "vitality of its commercial environment", there was a significant pressure to build as high as possible (Willis, 1995: 34). In his "Form Follows Finance" book, Willis goes on to delineate the factors behind the city's skyscrapers' form: "high demand for commercial space, lack of regulation of

Figure 3.1 (previous page)**:** Rockefeller Center
Figure 3.2 (right)**:** 41 Park Row
Figure 3.3 (next page, left)**:** Equitable Building
Figure 3.4 (next page, right)**:** Chrysler Building

building height", and the urban layout of the island (1995: 36). He goes on to mention Wall Street (part of the historical Lower Manhattan) as an area with thousands of small plots, their dimensions forcing the developers to build very tall structures. As such, the skyscrapers of that era (end of 19th century, beginning of the 20th) are the result of a very specific money driven type of design: in order to maximize the value of each acquired small piece of land in Manhattan, the sky was literally the limit for the developers. Besides the profit maximization reason, two other factors also contributed to the vertical stretching of these skyscrapers. The first one was the demand for office space, as the business sector was booming (1995: 41). The second one, more crucially, was advertisement, as companies were all striving to impose an image of affluence via ever so high buildings.

An analysis of the Equitable Building would be crucial to further delineating the importance of the 1916 zoning law as well as the relationship between Manhattan and money. Besides it being used as a tool of advertisement due to its typology's sheer inherent size, the skyscraper also proved to be a more than useful tool for speculation. As Willis notes "The Equitable was not a corporate headquarters, but a savvy speculative project, a model of modernity calculated to return five percent on the owner's investment" (1995: 45). This goes to show that in the context of Manhattan, skyscrapers exceed their purpose as mere shelter, or objects of architecture, rather delving into the world of finance, becoming objects of speculation, an idea

which will be further elaborated in the subsequent fourth chapter of this paper. Back to the relationship between the Equitable Building and the 1916 zoning law, its main architectural feature is the symptom of an urban problem that has started to reach its apex. The massing of it resembles an extrusion of the letter “H”, which imbues the building with gargantuan proportions, which in turn have made the structure quite problematic. It cut off scenery views and its shadow was imprinted on areas as far as four blocks away.

While the building’s construction started after the 1916 law was in the draft stage, the Equitable Building has become closely associated with this resolution, as its gargantuan extruded shape has been associated with the greed and bad development tendencies that have sparked the concept behind the law. The word “greed” is key to understanding the development of that new type of architecture. Taking into account the lack of building height regulations, as well as the business and finance motivated developments of Manhattan, the negative impact of skyscrapers such as the Equitable Building on their urban fabric was entirely predictable. As such, besides regulating land-use, the 1916 law imposed height restrictions aimed at protecting the air and light quality of the skyscrapers as well as the streets. Without going into details regarding the new imposed rules of skyscraper design, the law essentially dictated two things: one, that beyond a certain height a building “must be stepped back as it rose in accordance with a fixed angle drawn from the center of the street” and two,

that only over a maximum quarter of the site could a tower of unlimited height be erected (Willis, 1995: 67). To illustrate how the new law impacted size and density, the Equitables's FAR (floor to area ratio) was 30, while the 1916 resolution imposed a ratio limit of 12.

As mentioned at the beginning of the subchapter, the height and land-use regulations dictated by the 1916 law led to the design of some of Manhattan's most iconic skyscrapers. A great example of that would be the Chrysler Building, representative of the Art Deco category. A far cry from the Equitable, William van Alen's design for the Chrysler Building features an elegant silhouette (indicative of the "setback style" that resulted from the 1916 law), that is ornated with metal-clad gargoyles and topped out by its iconic sharp spire crown. Circling back to the relationship to money, the Chrysler Building also started as a speculative project, with it being taken over by Walter P. Chrysler in 1927 (Balfour, 2001: 24).

3.3 INTRODUCTION OF PLAZAS

While the 1916 zoning law impacted the way skyscrapers were designed, which in turn impacted density, congestion, and sunlight exposure, its requirements were only directed towards the architecture of the buildings themselves. Later on in 1961, a crucial development took place as the 1916 ordinance suffered its first major revision. Firstly, it eliminated the unrestricted height on one quarter of the plot, introducing a basic FAR of 15. However, that FAR could be stretched to 18 if the development also included a public plaza or arcade. Consequently, this new incentive was intended to create more open space in the streets (Willis, 1995: 140, 141), thus enhancing the quality of Manhattan's urban fabric.

This revision is important in the sense that it marks the city planner's awareness of the skyscraper's impact on their landscape. The increase in density that naturally comes with high buildings leads to congestion and detracts from the streets' qualities and urban effectiveness. Moreover, by imposing this public space at the bottom of skyscrapers of a certain FAR, in a way, the law forces these gigantic structures to become a more ingrained part of their urban fabric. Rather than Manhattan being populated by a sea of extruded blocks, this imposed offset from the street via a plaza not only attempts to manage the city's building density but also provides them a more active role in their surroundings, them providing New Yorkers new public places to meet.

To illustrate the skyscraper's evolution from 1916 to 1961, whereas Art Deco was emblematic of the first zoning law, Modernism was the manifestation of its revision. As noted by Willis (1995: 141), the new FAR formula made the sheer-wall towers more profitable than the setback ones, thus marking the transition from the distinctive pyramid like silhouettes of the 1920s and 1930s towers to the box-like massings dictated by Modernist principles, nowhere else better embodied than in the case of Mies van der Rohe's Seagram Building.

Figure 3.5: Seagram Building

Chapter 4

432 Park Avenue and the idea of physical transcendence

Through the analysis of the 432 Park Avenue skyscraper, the following paragraphs offer a view into what may become of Manhattan's skyscrapers and urban landscape in its near future. Instrumental in this was the lecture of Matthew Soules's book "Icebergs, Zombies, and the Ultra Thin", particularly its seventh chapter.

4.1 THE ABSTRACT MONOLITH

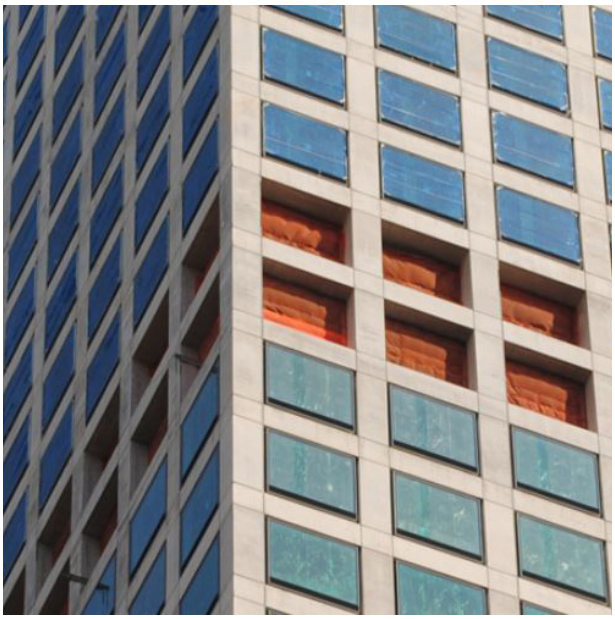
The book's seventh chapter, "Constant Object", acts as an analysis of the 432 Park Avenue skyscraper, designed by Rafael Viñoly's firm, and how it is a symbol of finance capitalism. Soules writes that the transition from an industrial, physical goods-oriented type of capitalist system to one of finance, a capitalist system that transcends the tangible object, can be felt in the context of New York's architecture with Viñoly's tower acting as the perfect embodiment of this paradigm shift. The reason for this is that the tower, a housing project containing condominiums valued at millions of US dollars (the entirety of the properties housed by the slender skyscraper being estimated at 2 billion dollars) is mostly empty. Thus, the real architecture of the building is not the one encompassing the actual apartments populated by actual built furniture nor, most importantly, inhabited by its owners. Rather, the real architecture is that of the digital, the non-existent, as it is merely being represented by its high-quality computer renders done with the purpose of marketing the building. Akin to finance capitalism, the building transcends the physical world. Now, that is only from a programmatic point of view. From a more architectonic perspective, the building itself looks like a monolithic object, the author going on to draw comparisons to the black cuboid monolith worshipped by a tribe of hominids in Stanley Kubrick's seminal "2001: A Space Odyssey" film. The following architectural perspective of the building shall justify the comparison with Kubrick's monolith. Standing at 426 meters with a dizzying 1:15 slenderness ratio, Rafael Viñoly's tower is essentially an extrusion of its unchanging 28.5 x 28.5 m^2 square plan. The façade reflects the design's dependency on the square as each of its four elevations feature 6 square windows on every floor (with the exception of intermittent square recesses in place of the windows which expose the building's core). Interestingly, the implication of this minimalist design (including the lack of a tower base) is that the skyscraper can be flipped upside down or rotated on its vertical axis and it would still look the same. If one were to make an abstraction of its context, the skyscraper's design could be lauded

for its simplicity and perhaps even the elegance that comes with it. But one cannot make that abstraction when it comes to an architectural project as buildings are not mere objects, tokens, nor art pieces. Rather, they are interventions on established landscapes and in this case, the 432 Park Avenue sits among a sea of Manhattan skyscrapers. For that reason, its comparison to its "neighbors", as well as its overall meaning in its urban landscape is unavoidable.

To understand the phenomenon which 432 Park Avenue is a part of one needs to be familiar with the concept of zombie urbanism. As noted by Soules (2021: 56), New York State Senator Liz Krueger recalled regarding this matter:

> I met with a developer who is building one of those billionaire buildings on Fifty-Seventh Street, and he told me, "Don't worry, you won't need any more services, because the buyers won't be sending their kids to school here, there won't be traffic."

A project of the magnitude of a 57th Street skyscraper not having any impact on a city's infrastructure and urban fabric? One would need to frame the development of skyscrapers in the context of a capitalist economy to understand how 432 Park Avenue came to be. As previously noted, skyscraper design made sense from a financial point of view as multiple floors are replicated on top of one single acquired plot, thus maximizing the plot's value. Consequently, the towers could host a big number of people which made them suitable shelter for the corporate workplace, which extended into residential shelter as well. That, however, was a manifestation of industrial capitalism. As the 1980s saw an era of deregulation, privatization, and market liberalization, finance capitalism became the primary Western economic mode, which displaced "the human body and physical habitation as the central and unquestioned concerns of architecture" as per Soules. Thus, the tower suddenly became unoccupied (Soules, 2021: 173). Skyscrapers, as evidenced in the case of this chapter's eponymous



tower, have become mere tools in the commodity game which dictates finance capitalism. This leads to zombie urbanism, meaning the construction of housing units that are ultimately left empty. The following extract from Soules's book (2021: 56) perfectly encapsulates the essence of this:

> The vacancies of zombie urbanism are not the result of an overt system failure, deficiency, or calamity, as in the postindustrial Ruhr Valley or in post-Katrina New Orleans, but rather a vacancy of success. This vacancy emerges not from oversupply or low demand, or in relation to a declining job market, but instead tends to exist within the context of both strong demand and economic growth. Buildings sell out, developers make profits, governments collect fees, and property values often continue to escalate, yet things remain not quite alive.

Rafael Viñoly's 432 Park Avenue stands as a perfect example of how capitalism is reflected through Manhattan's skyscrapers. It is the epitome of luxury and contemporary skyscraper design, with its condominium's being valued at millions of dollars, yet its defining trait is the term "under-occupied", which is a consequence of another term associated with it: "value". This is not a building which plays an active role in the life of Manhattan's urban fabric. Unlike the Downtown Athletic Club, it is not a place for people to engage in leisure activities. Unlike office buildings, it is not a place where people work and unlike Rockefeller Centre, it is not a place where people meet. It is as if it does not even exist in the physical world, its only purpose and function being that of acting as a trading commodity.

4.2 SAN CATALDO CEMETERY

A thought-provoking comparison to the tower would be to Aldo Rossi's San Cataldo cemetery scheme. The purpose of this chapter was to bring forth this "emptiness" trend, both in terms of building occupancy, as well as in more social, cultural, and even architectural terms, that is associated with 432 Park Avenue. What this bodes for the development of Manhattan as an urban entity, shall be analyzed in further detail in the subsequent chapter. However, as part of this chapter's scope, it seems fitting to highlight the similarities between Rafael Viñoly's skyscraper and Aldo Rossi's scheme. Their similarities extend beyond their usage of the square as an architectural motif, as both act as shelter for no living beings so to say. Furthermore, one could even say that 432 Park Avenue, akin to its cemetery homologous, is also a so-called "city of the dead", although the reason for this, as previously explained, is a rather cynical one. The image of an empty Manhattan during the 2020 pandemic lockdown springs to mind. As it can be observed on page 30, the image of empty streets that were once filled with the chaos associated with millions of people all going in different directions at fast pace is quite emblematic for the future represented by buildings such as 432 Park Avenue. Could it be that what was once and still continues to be a haven for tourists, aspiring artists, finance traders and whatnot, might actually turn into a large-scale cemetery akin to the one envisioned by Aldo Rossi? Admittingly, it is a scenario bordering on the sci-fi but at the heart of it, if the current trend of empty needle skyscrapers were to continue and to extend on every plot and inch of Manhattan, it does not sound that far-fetched as initially thought of.

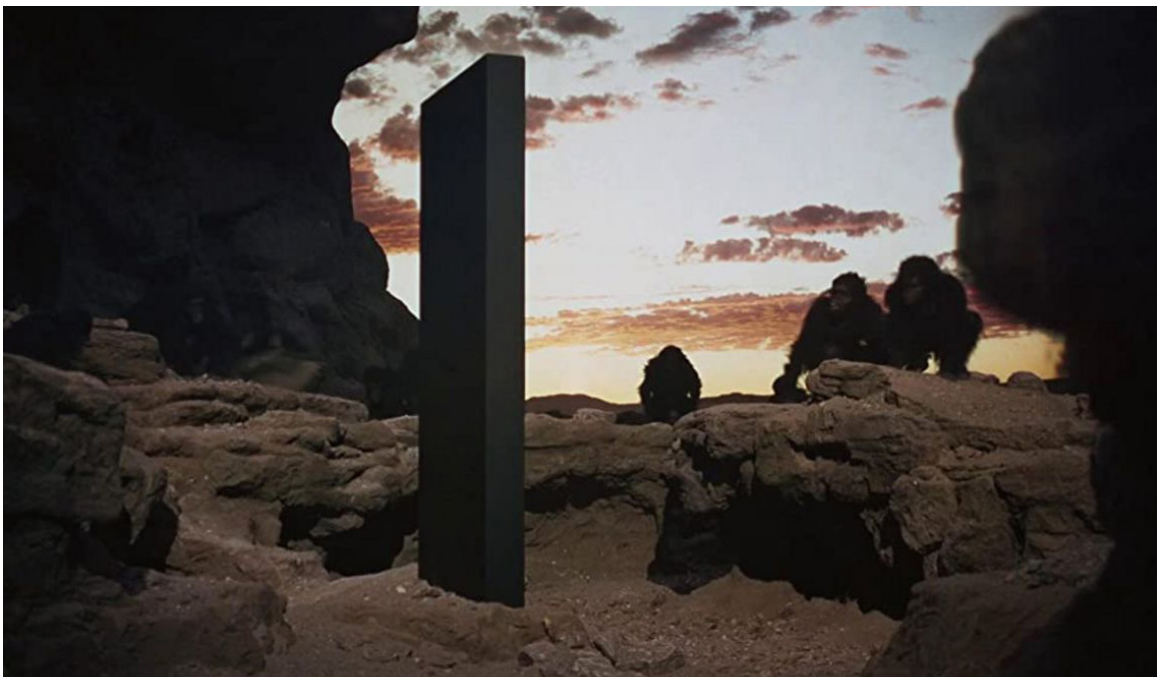


Figure 4.1 (page 26)**:** 432 Park Avenue

Figure 4.2 (page 27, left)**:** 432 Park Avenue, interior render

Figure 4.3 (page 27, right)**:** 432 Park Avenue, in construction

Figure 4.4 (previous page, top)**:** 2001: A Space Odyssey

Figure 4.5 (previous page, bottom)**:** San Cataldo Cemetery

Figure 4.6 (top)**:** Manhattan streets during 2020 Covid-19 lockdown

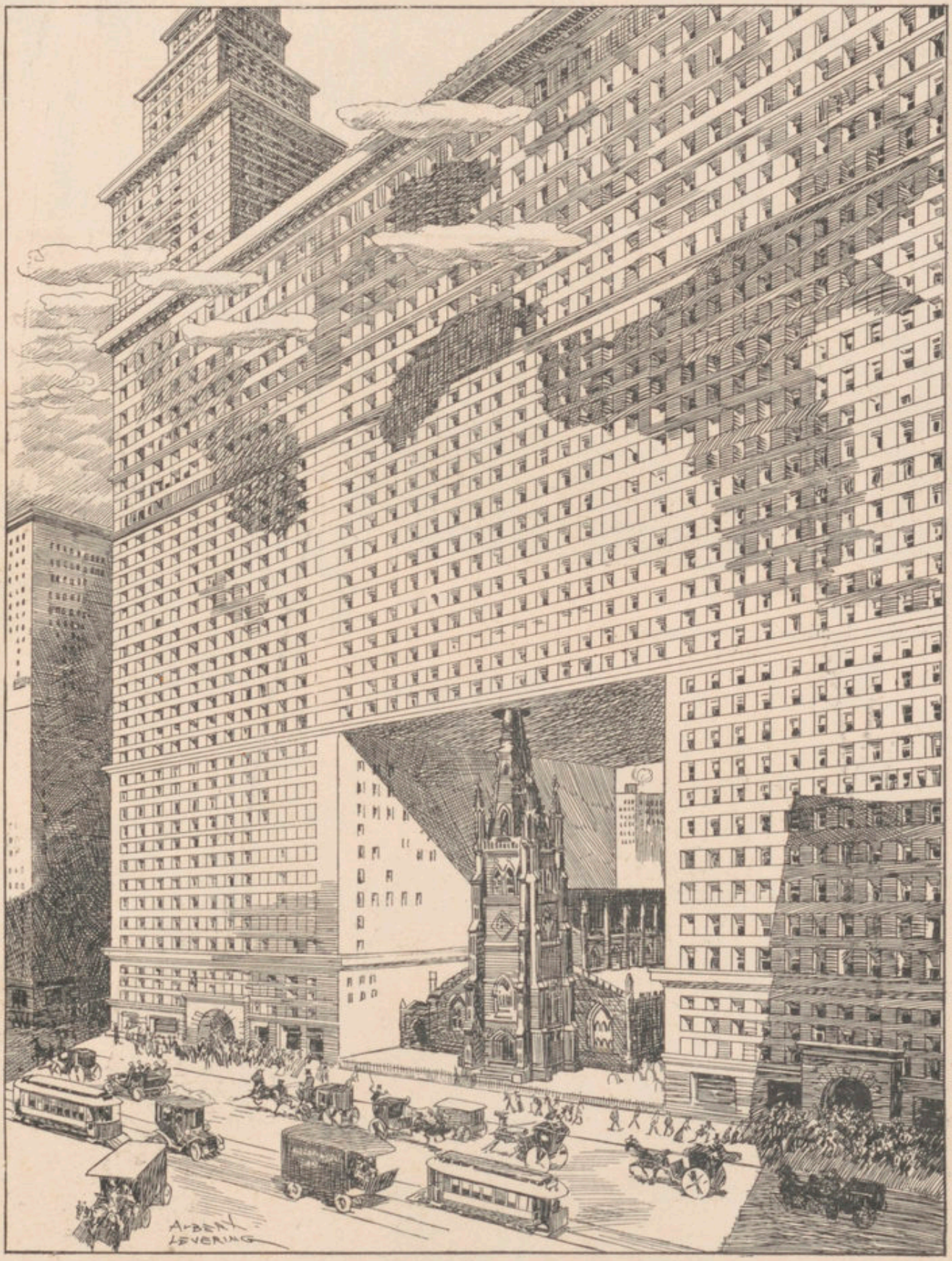
Conclusion: past and future possibilities

As a final remark of this academic investigation, it would be fitting to transition from the analysis of what was and still is to what could have been or is to come. After all, Manhattan is home to thousands of unrealized projects, ranging from urban studies such as the Lower Manhattan Plan (by Carol Willis, Paul Willen, and James Rossant) to the ambitious Lower Manhattan Expressway Project (Paul Rudolph) to the misguided Television City (developed by real estate mogul - among other things - Donald Trump). While they all are engaging case studies in themselves and would greatly enhance the paper's argument (especially Trump's proposal), instead of focusing on these projects, the argument of the following paragraphs shall be constructed around a simple drawing.

The opposite page perspective drawing "The Future of Trinity Church" (a satire of sorts) perfectly encapsulates Manhattan's relationship with money. It highlights the two titular concerns of this chapter. Firstly, past possibilities: rejected, discarded architectural or urbanistic proposals that could have significantly altered Manhattan's state. Secondly, future possibilities. The Trinity Church perspective drawing, while obvious that its proposal has not been built as the church does not have a skyscraper partially suspended above it like a bridge, does point to an aggressive way of designing, where heritage architecture such as religious edifices are almost literally buried beneath corporate office skyscrapers or even worse, as 432 Park Avenue suggests, empty residential needle towers.

Furthermore, the Trinity Church drawing is a perfect metaphor for the way that Manhattan is a microcosm of American culture. Circling back to the paper's first chapter, the church is no longer a symbol of power, nor of importance for the new type of society which inhibits the new cities of the US. It is worth noting that in the drawing, the presence of the church, hence the decision not to demolish it altogether, signifies capitalism's superior status, the skyscraper standing directly above the church, as if to signify its dominance.

To conclude, Manhattan has proven to be a fruitful case study of how money acts as an influencing factor of architecture. Starting from the rectangular plot dictated by the urban grid and switching its scope to architectural projects such as 432 Park Avenue, the thesis tackled enough significant case studies so as to underline the strong relationship between Manhattan and money, ultimately bringing forth the idea of a new type of urbanism. Thus, the thesis proves that factors of financial importance have been one of the primary forces that have driven the mutation of Manhattan's urban fabric all throughout its short history.



THE FUTURE OF TRINITY CHURCH.

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