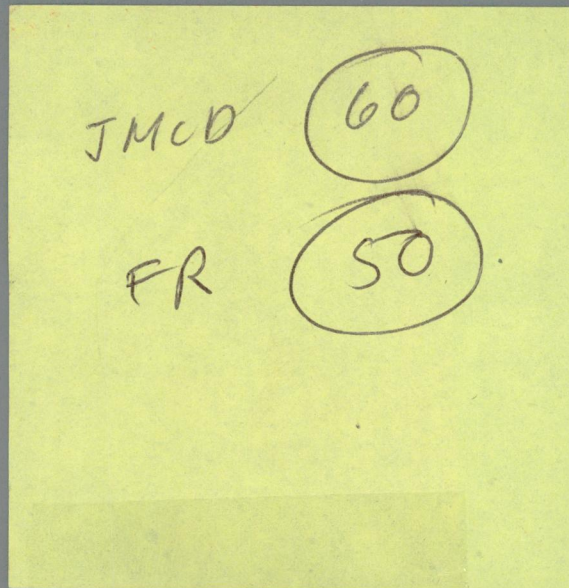


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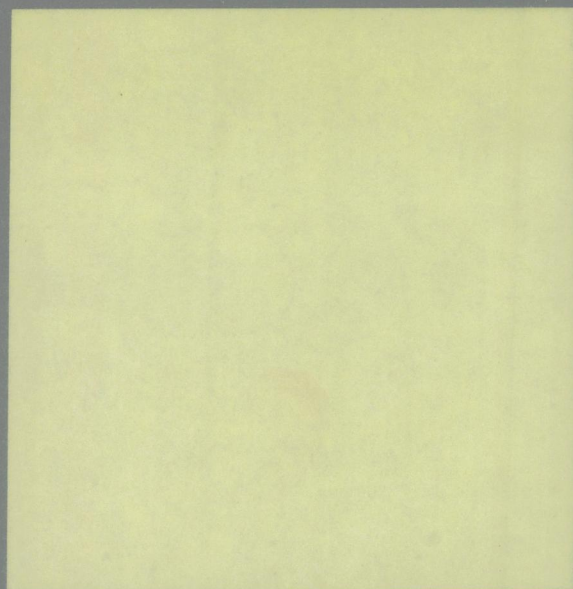
New York Skyscrapers of the 1920s and 30s



by
Susan Patterson
Submitted to the Faculty of History of Art and Design and Complementary Studies in Candidacy
for the Degree of BDes 1993.

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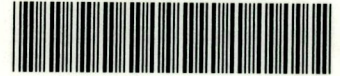
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Introduction

In the 1920s and 30s American technology was more advanced than European technology, particularly in relation to architecture and interior design. Elevators, central heating and waste disposal, all American inventions, contributed to technological advances worldwide. In theory, America, of this era was a ripe ground for an architectural breakthrough. Not just because of its technological advancements but also because American cities by their very youth had a lack of historical content which made them much more lenient to new architectural forms. This does not negate the fact that the skyscraper was a form developed out of necessity but does lend itself to the question, Why? When the necessity is gone does this form remain one of the primary architectural shapes of the twentieth century.

One explanation could be that for the first time in this century an architectural form was created that was solely the product of this century and not some re-rendered form from a previous one. The skyscraper is a virgin form with no historical precedents and as such is a form on which our own social order and aspiration can be seen stamped indelibly on the facade. The early years of the skyscraper is the best time to deal with these theories, and also with the contribution of skyscrapers to the rise of modernism in America: a modernism that was and is intrinsic to the very direction taken by the 20th Century. There are many reasons why the 1920s and 30s have always been considered the golden age of Skyscraper design, reasons that vary from social to economic in nature. The basic impetus to the architectural richness of this era was the confidence that permeated the very fabric of these decades, a confidence which in turn promoted the drive that characterised the architecture and the technical innovations of the in-between war years. This confidence arose from a mixture of economic growth, and on the part of America, a cultural growth that stemmed from the re-evaluation of European superiority.

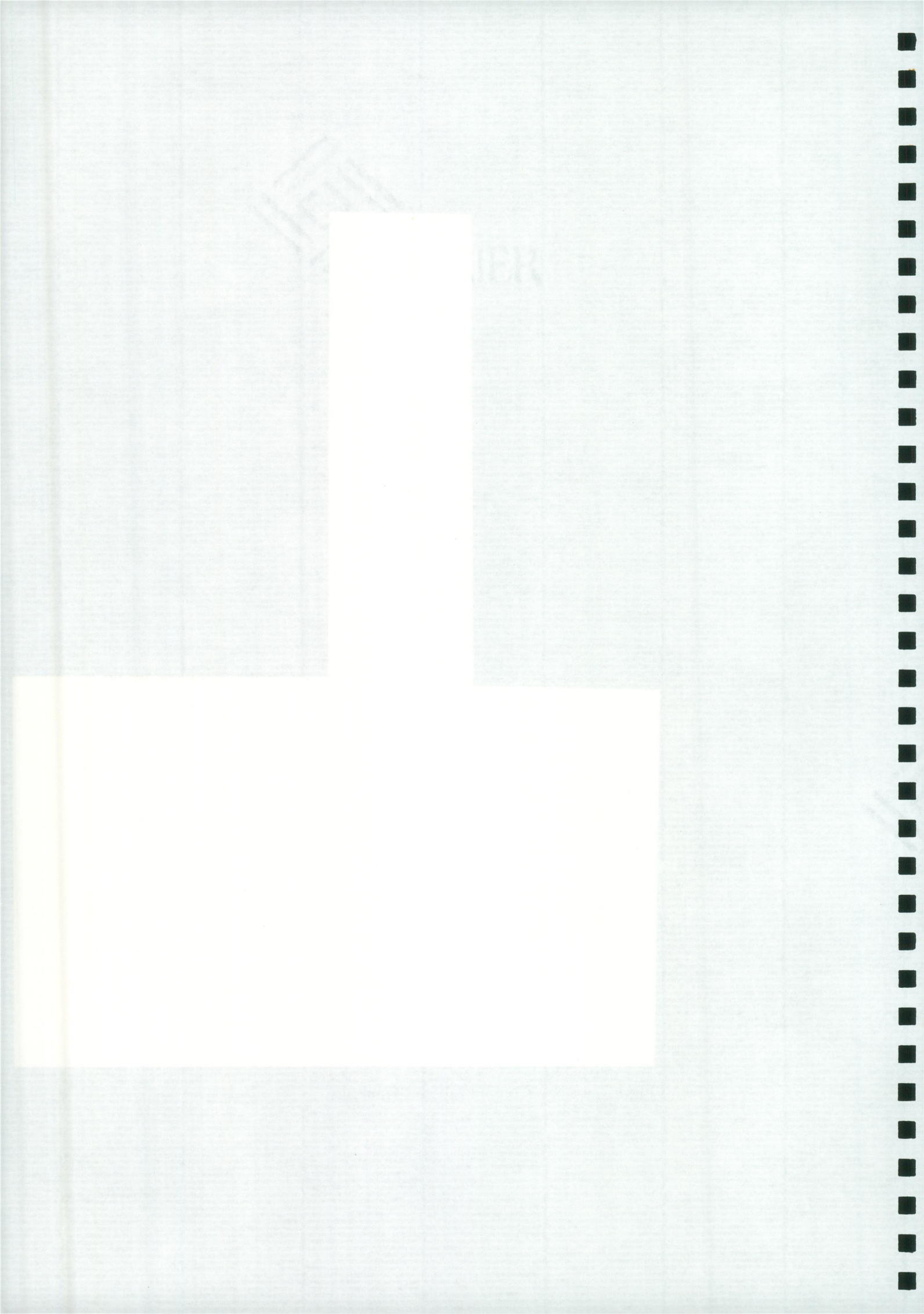
This confidence in the power of architecture in the form of skyscrapers has in recent years come in for a reprisal. . This decade is also particularly apt for historical reasons. It is now almost a century since the skyscraper form was invented. In 1890 it had taken almost 40 years for technological inventions to find an architectural propose. Inventions such as the passenger elevator, reinforced concrete and steel frames to name but a few. In the 1990s a similar situation is evident as technology from the 50s and 60s (aerodynamics etc.) have only now begun to be explored to there full potential.

Skyscrapers have never really and could never really go out of fashion, in this century of spiralling real estate costs; the economic necessity of the vertical has always dictated the use of this form. However, in the last couple of decades there has been a lot of architectural criticism aimed at skyscrapers. One of the reasons, it can be argued, was and still is the unfortunate association of skyscrapers with the "High Rise" complexes of the 60s and 70s. The High Rise was seen as a dehumanizing structure, contributing towards feelings of alienation that were often expressed by the inhabitants of these complexes, these properties then became transferred on to the skyscraper form. This association led to a dirge of skyscrapers which have tried to avoid architectural criticism, and in a form that is at once monumental and symbolic, confidence in the form is the basic requirement. This century has also seen the advent of a form of skyscraper that has been called "Groundscrapers", as the name suggests these buildings did not go up very high, but did swallow acres of valuable real estate. This form of skyscraper which became very popular during the 80s was particularly suited to the more classical architecture of European cities. London in particular saw many examples including the Morgan bank at Whitefriars and yet another bank at 55 Bishopsgate. These Groundscrapers are often reminiscent of great European palaces compared with the "Cathedrals of Commerce" built in the beginning of the century by Gilbert and Hood. There seems almost to be a relationship between the ideology and the architecture of large financial institutions.

During the 1980s one of the main exponents of the groundscraper was Sir Norman Foster. Foster who is English has emerged as one of the most confident and competent architects on such large scale projects. A number of recent designs by this architect has reflected the revival of interest in the skyscraper form as opposed to Foster's more usual "Groundscraper". A skyscraper planned for Frankfurt's "Commerzbank" (Fig.1) includes architectural details such as curving sides which are to be scooped out at intervals to include enclosed "Skylobbies". France also is to receive its own skyscraper, the highest in Europe designed by the french architect Jean Nouvel. He is considered something of a maverick in architectural circles. The building named "Tour Sans Fins" (tower without ends) at La Defense in Paris, has caused great interest in the design community. It is to be a slender tube dark at the base, narrowing and getting lighter in colour till it disappears into the clouds as transparent glass. A giant pendulum, hydraulically dampened has been designed by the Ove Arup Partnership to stop it swaying to much. Another project



Fig.1 Fosters "Commerzabank" Frankfurt



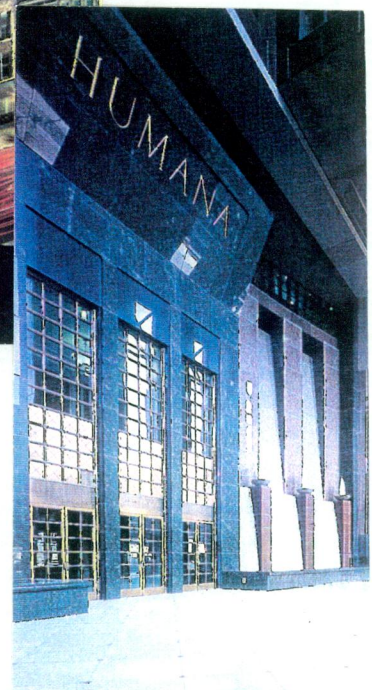
which has caused interest is "Century Tower" by Sir Norman Foster, commissioned by a giant Japanese firm of developers. Its planned height would be 2756 feet- in comparison the Empire State is only 1250 feet and the worlds tallest building the Sear's tower in Chicago is a mere 1500 feet.

The "Century Tower" is only a project which in architectural terms means that it is unlikely to be built. However the interest that such a project generates indicates the state of current technology and also the direction of future trends in large scale building. This recent increase in interest in the skyscraper form is causing the re-evaluation of the uses of historicism that abounded in the 1980s with post-modernism . As with any movement the advent of post-modernism highlighted some lack in the psyche of the public. The post-modern movement addressed the need in people for ornament and historical reference to provide a feeling of continuity and identity. Post-Modernism dealt with the alienation caused by Modernism and the machine aesthetic. Variety and signs of individualism were a reaction against the abstract geometry and severe rectilinear forms of Modernism. In the Post-Modern movement designs of such architects as Micheal Graves (Fig.2, 3 & 4), Charles Moore and Philip Johnston succeeded in combining cultural and historical architectural symbols and created what was almost an instantly recognisable visible language. In the 1990s we see in the designs of Foster and Nouvel (compared with the post-modern buildings shown below) not a reaction against Post-Modernism but a natural progression against the reaction of Modernism itself. In incorporating both Modernism and Post-Modernism a new stronger and freer architectural idiom is created and one that will hopefully combine the best of both.



Fig.2 Michael Graves "Humana Building"

Fig.4 Detail "Humana Building"



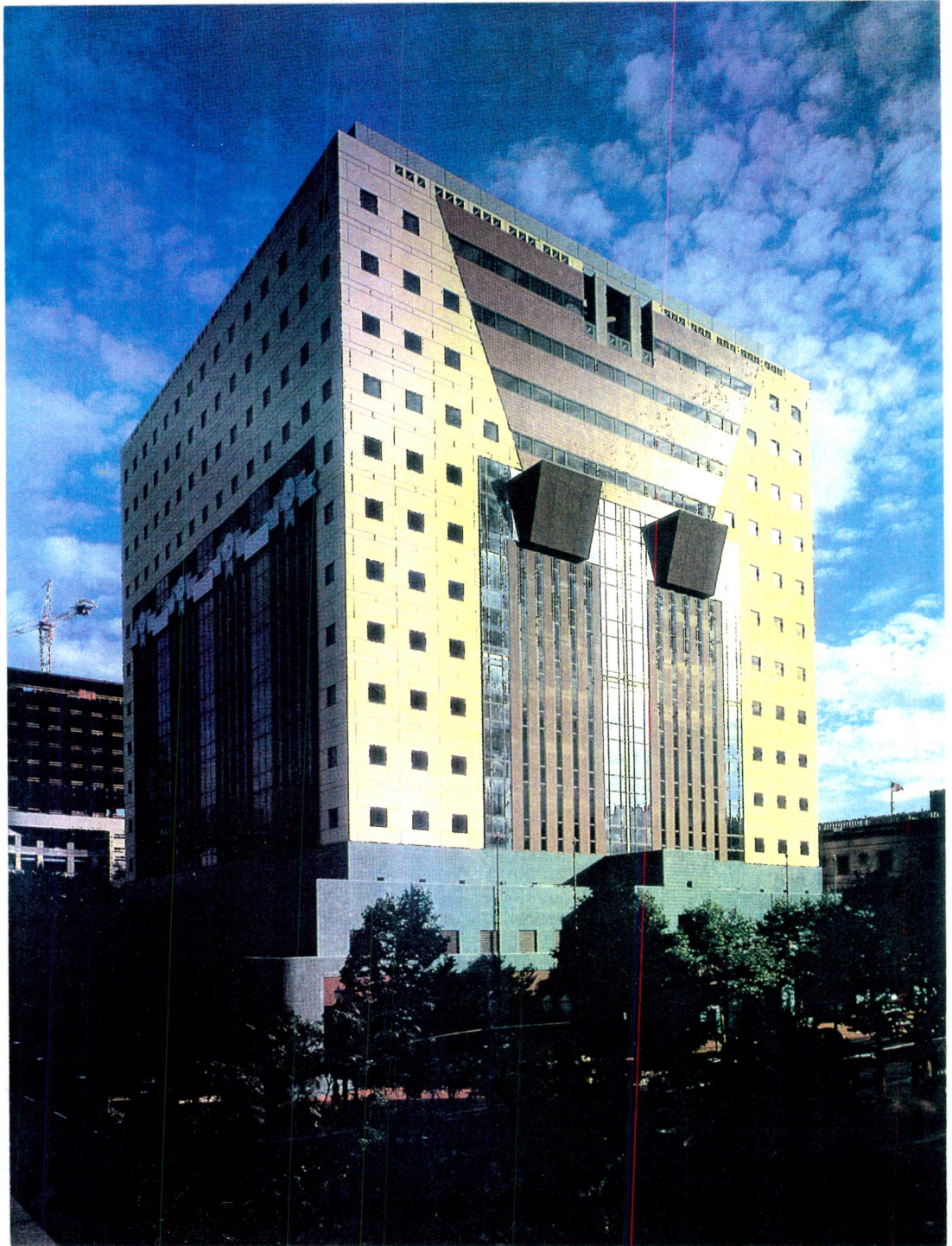


Fig.3 Michael Graves " Public Services Building, Portland"



Chapter by chapter breakdown

In Chapter One I will be dealing with the advent of the skyscraper Form. And also with its preoccupation with applied historicism, in designers search for a new style I will discuss the rise of modernism in Europe. And the Three main styles of Art Deco, Art Moderne and Bauhaus.

In Chapter Two from dealing with the source of skyscraper ornamentation. I will deal with the two main events in shaping the architectural form of the building, the 1916 zoning laws to the 1922 Chicago Tribune Competition.

In Chapter Three contemporary reaction will be taken into account and the critics of the form including Frank Lloyd Wright among others. I will also discuss way the form held a special place in the hearts of the nation.

In Chapter Four the buildings will be dealt with, the two main examples being the Empire State and the Chrysler. There ornamentation and there architectural form will be explored. And also how they reflected there respective decades.

In Chapter Five the effect the skyscraper had on the decorative arts will be assessed as in the States at this time architecture was ahead of the decorative arts by 7 or 8 years. I will talk about Paul T. Frankl and Donald Deskey two important and prolific designers at this time. In discussing architecture and the decorative arts the designs of the lobbies of the Chrysler and the Empire State will be analysed.

In my final chapter the role of skyscrapers in being the architecture of the future and there contribution to the propagation of the myth of an "Urban Utopia" will be dealt with. Ending this will be my conclusion.

CHAPTER ONE

SKYSCRAPERS A BACKGROUND

THE BEGINNING

The old adage that necessity is the mother of invention particularly suits the advent of the skyscraper. In 1871, a fire that ripped through the heart of Chicago's financial district destroying over half the properties resulted in breakthroughs in both architecture and engineering. Technological innovations such as weight bearing steel frames for construction, the passenger elevator and reinforced concrete all led to new possibilities in height. Thus the "drive to rebuild Chicago" resulted in the invention of a new architectural form, the skyscraper.

At this time architects in America were still exploring the idea of historicism. Thus in the early days of skyscrapers we see a compendium of historical styles and period details such as Palladian-Georgian and Tudor-Gothic etc. As early as 1896 the great architect and theorist on the skyscraper Louis Sullivan in his essay "The tall office building artistically considered", outlines what was to be a continuing debate over the use of historical ornamentation in such an unhistorical form. Sullivan claimed that these new types of buildings required a new type of architectural expression i.e. decoration. This call was to be echoed for the next 50 years. (Unfortunately it would take that long till a new modern decorative style arose in the States). In 1925 R.W.Sexton traced the problem from the beginning....

For fifty years from its earliest conception to most recent times, one might well say that the American skyscraper was not American at all. For ornamental details, architects and designers of skyscrapers seemed content to adopt (as we say to avoid plagiarism but we mean actually to apply) form and motifs of old European styles and periods without regard to materials or structure to say nothing of habits and customs, climate or tradition. In spite of certain features which would seem to stamp it purely American the skyscraper adorned and embellished with ornament of European origin, lost whatever individuality it possessed and in our big cities Classic, Renaissance, Italian and even Adam skyscrapers vied with one another for prominence. (Duncan, 1986 ,p16)

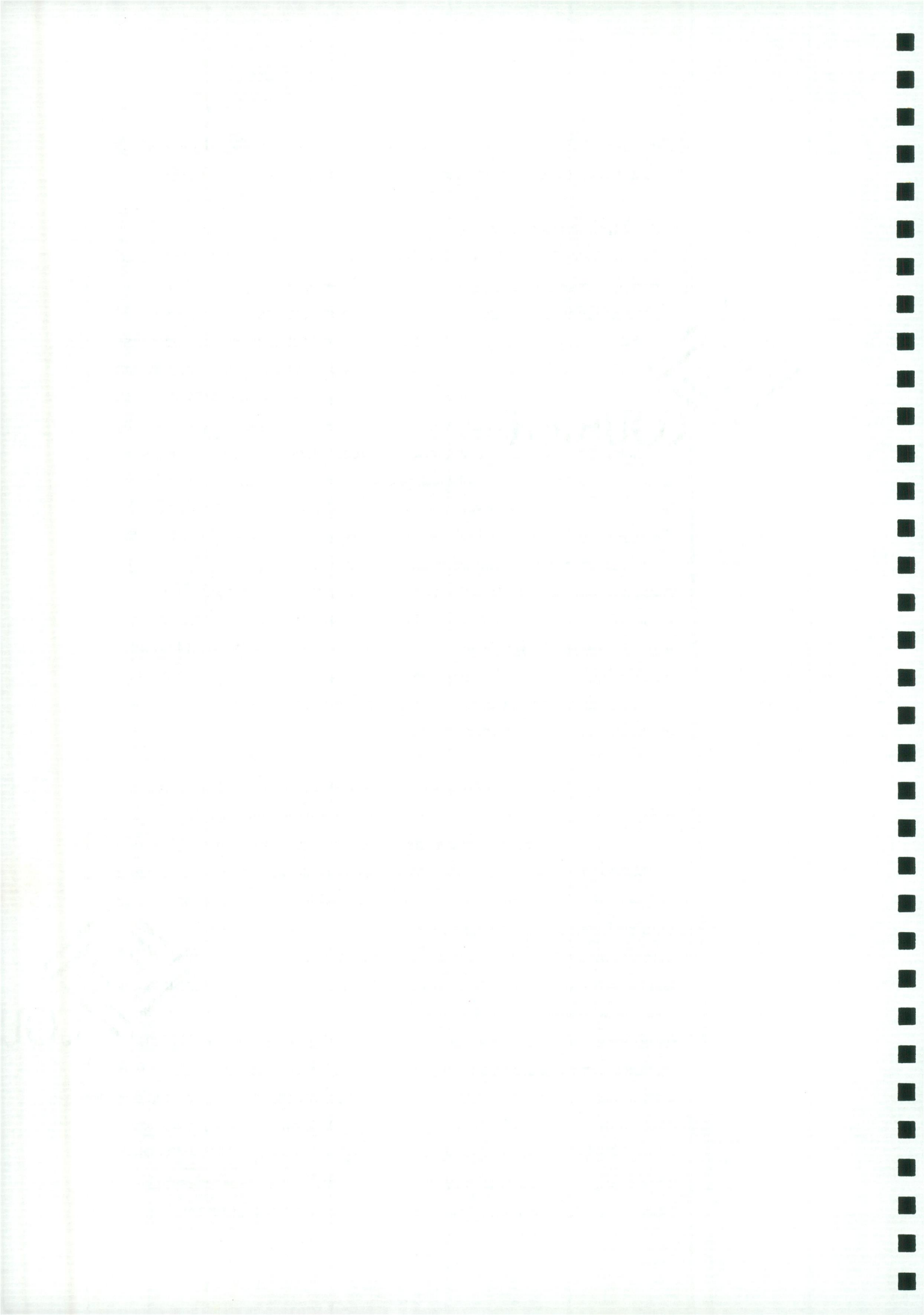
In adapting European details to a structural mass of the 20th Century progress in discovering of the possibilities of this new form was halted. Ironically in realising this and in looking around for a 'modern' style to take

the place of European historicism, American architects found themselves looking back to Europe, the very source of their problem for the solution.

MODERNISM IN EUROPE

In 1925 when the Paris Exposition was being planned the United States turned down an invitation to exhibit its modern decorative and industrial art on the grounds that it had no worth exhibiting. This of course galvanised American designers to go to Europe to see the Exposition and the "New Style" that was shown there. Europe at this time was a vast breeding ground of conflicting styles. Le Corbusier and Gropius existed alongside Machintosh and Hoffman, the botanical forms of Emile Galle' at one extreme and the geometric abstraction of Cubism at the other, attested to this confusion of styles. These unrelated and often opposing styles have been placed under the heading Art Deco - a term not coined itself until 1968 in the title of a book by Bevis Hillier. The style which can be mainly associated with the title of the book is a style which can be called High Art Deco. First exhibited in the Exposition in Paris in 1925 it was a style originally created by designers for the wealthy. The richest materials, the most exotic woods, the rarest coverings were its criteria. Its bases was a strange mixture of historicism and popular machine age imagery. Radio waves, starbursts and lighting bolts combined with ancient Egyptian (relating to the opening of king Tutankhamen's tomb in 1922) and Mayan imagery.

Though High Art Deco was the first to be transported and to flourish the other strains of modernism that existed in Europe at the time also played a part in the ornamentation that was to decorate American skyscrapers. The two strains that were on par with High Art Deco in their influence were the style of modernism as espoused by the Bauhaus and which later became associated with the internationalists and a style that was more an evolution of High Deco than a completely separate entity called Art Moderne. The modernism of the Bauhaus was based on the credo that the materials, manufacture and the function were interrelated and inseparable. This aesthetic was very puritan in its outlook, and as such took longer to gain a foothold in the arts and crafts inspired society of Europe in the early twentieth Century. Art Moderne was a style that existed between this puritan aesthetic of the Bauhaus, on the one hand, and the more opulent classicism of High Deco on the other. It was a style that was inspired by the Pavillion de L'Espirt Nouveau and the Tourism Tower (Fig.5) exhibits in the 1925 Exposition and is distinguished from High Deco by a more machine inspired abstraction (an abstraction that was to



resurface in America in the 1930s in a style called Streamlining). Deco, Moderne and the Bauhaus were three very different forms of modernism but each were to have there own major influence in the spheres of architecture and decorative arts in America.

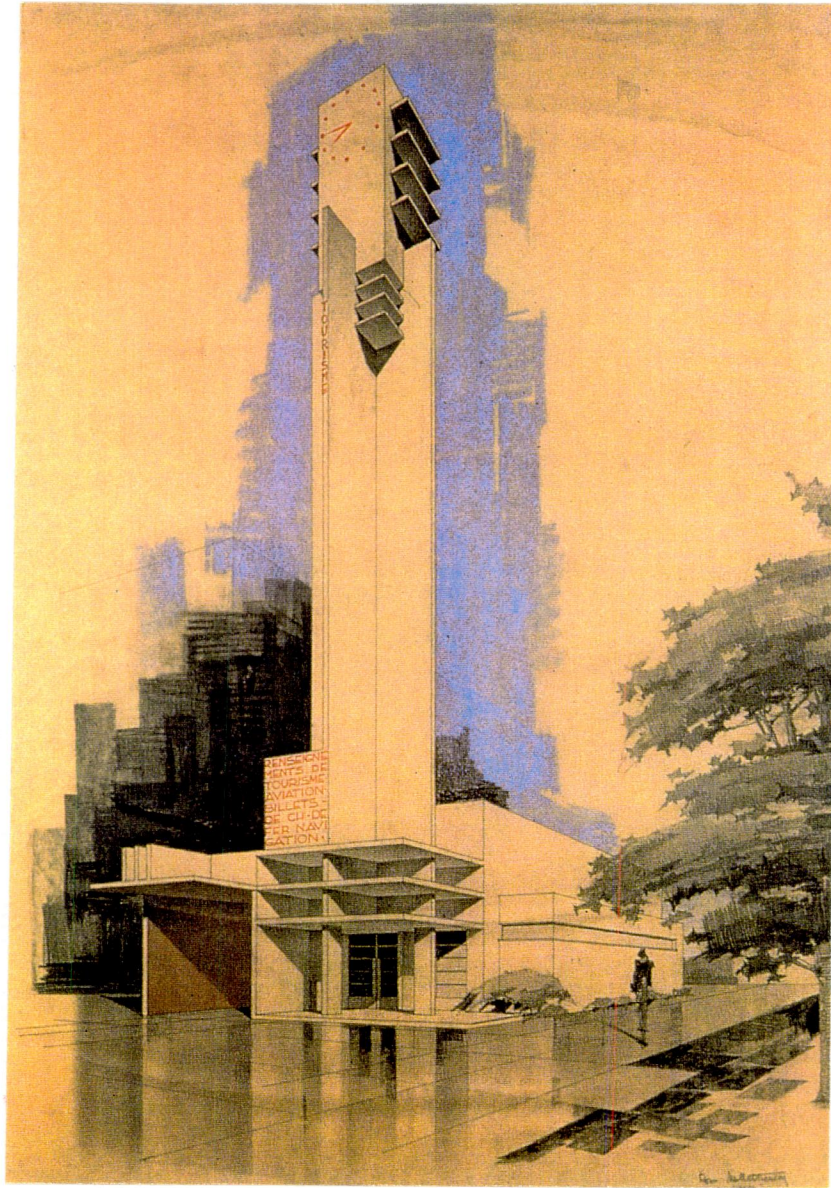


Fig.5 Pavillon du Tourisme by Robert Mallet



CHAPTER TWO

AMERICAN INFLUENCES ARCHITECTURALLY AND OTHERWISE ON THE SKYSCRAPER FORM.

The rise of modernism in Europe and the arrival and popular support of the various strains in America (the first of these being Art Deco) greatly affected the decorative ornamentation of skyscrapers. However the actual architectural mass of the tall office building were mainly effected by two events that occurred not in Europe but in America itself. The first, was the 1916 zoning laws of New York the second, the Chicago Tribune Competition of 1922. In order of importance I would place the Competition first because it transformed the 1916 zoning laws from being academic to being a physical manifestation of the new modernist form of skyscraper. The Competition is also important because it became a focus in the debate between modernism and historicism. What had, for the previous 50 years, been the cause of heated debate in the architectural community now became obvious to the general populace. That for America architecture to come of age it had to cast of the shackles of European historicism.

THE COMPETITION

The Chicago Tribune was one of those great American papers much like the one portrayed in Orsan Wells "Citizen Kane" -a paper inexorably linked to the destiny of the city to which it owned its existence. It was started in 1847 when Chicago was a mere frontier town of 16,00. By 1922 it had been in existence 75 years and its owners, understandably proud of this fact, came upon the idea of a competition to celebrate this Diamond Jubilee. The paper, as all are, being primarily a financial institution had of course a practical need for the competition - there was to be a new headquarters built anyway and a competition would attract the best talent and give widest coverage. Its location was to be Michican Avenue, the site of a new printing plant. The plant had been designed as a purely functional machine for the swift and efficient production of the paper and as such had not been of any architectural interest to its owners. It was to be the tower designed to stand between this plant and the main Avenue which was to reflect the prestige of the paper, provide inspiration to its workers and to serve as a role model for newspapers to come.

Such optimistic objectives were of course crouched in equally optimistic language. The brief was to create and "to secure for Chicago the most beautiful office building in the world" its prime motive apparently "the enhancement of civic beauty". Such wording may appear trite today. But such was the power

of the idealism that seemed to be embedded in the brief that there was great excitement in the architectural community. Louis Sullivan who was closely associated with the competition describes the power of such a call for beauty in an editorial.

The craving for beauty thus set forth by the Tribune is imbued with romance with that high romance which is essential, that vital impulse that adheres to all great works of man in all planes and all times, that vibrates in his loftiest thoughts his heroic deeds and in his otherwise inexplicable sacrifices.
(Tigerman 1989, p7)

THE ENTRIES

By December 1st 1922 the final date two hundred and four designs had been received and 23 foreign countries were represented, an incredible amount even by today's standards. In controlling the actual format of the competition the Tribune was guided by the AIA, the American Institute of Architects. The ballots were secret and entries were by number only. The first ballot had taken place and 1st, 2nd and 3rd had been decided on, then on the morning of the 29th a consignment arrived from Europe that had been held up in customs. The entry that the consignment produced, in the words of the chairman of the jury Alfred Grager was, "of such unusual beauty and shown such a remarkable understanding of the requirements of an American office building as to compel its being awarded second place." (Tigerman, 1989, p4)

This design No.187 was to have the most far reaching influence of all the competition entries. The design being all the more unique because it came not from the acknowledged leaders in European design but from Finland. Its designer Eliel Saarinen was of course to go on to be one of the great leaders of modernism (Cranbrook school etc.) in America. It was the popularity and overwhelming support of his design that led him to emigrate to the states. In trying to understand the uniqueness of Saarinen's building an example of some of the entries will help, all the entries illustrated were ones considered good enough for commendation. American architects' preoccupation with historicism is instantly recognisable. Buildings with Greek (Fig.6), Egyptian (Fig.7) and even Islamic (Fig.8) antecedents were entered, compared with Eliel Saarinen's entry they seem unimaginative and also plagiaristic in their 'adaptations'.

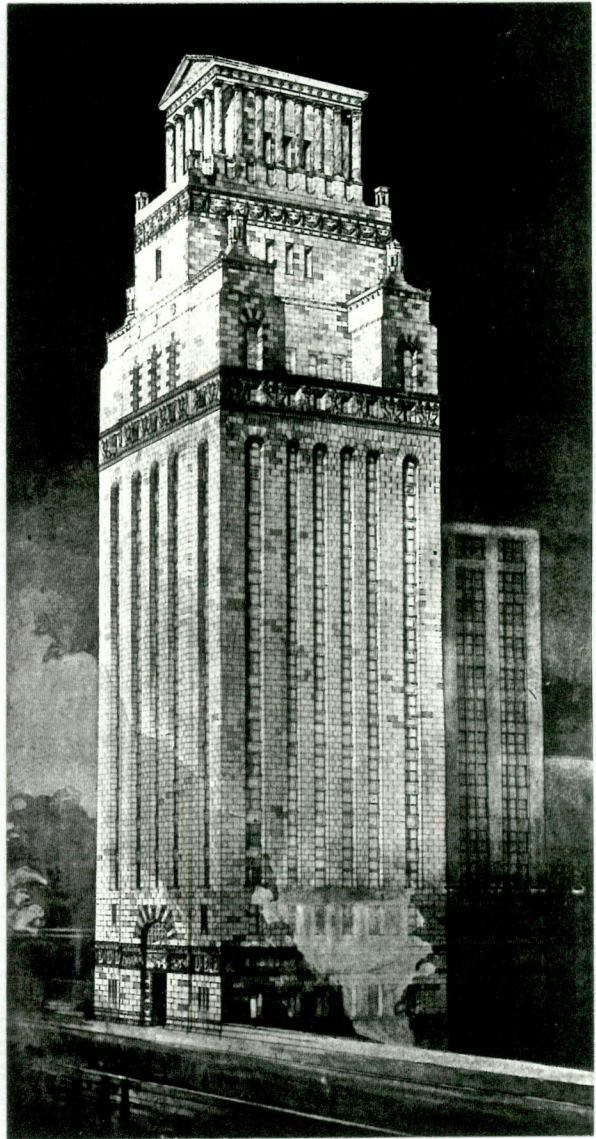


Fig.6 John Wynkoop

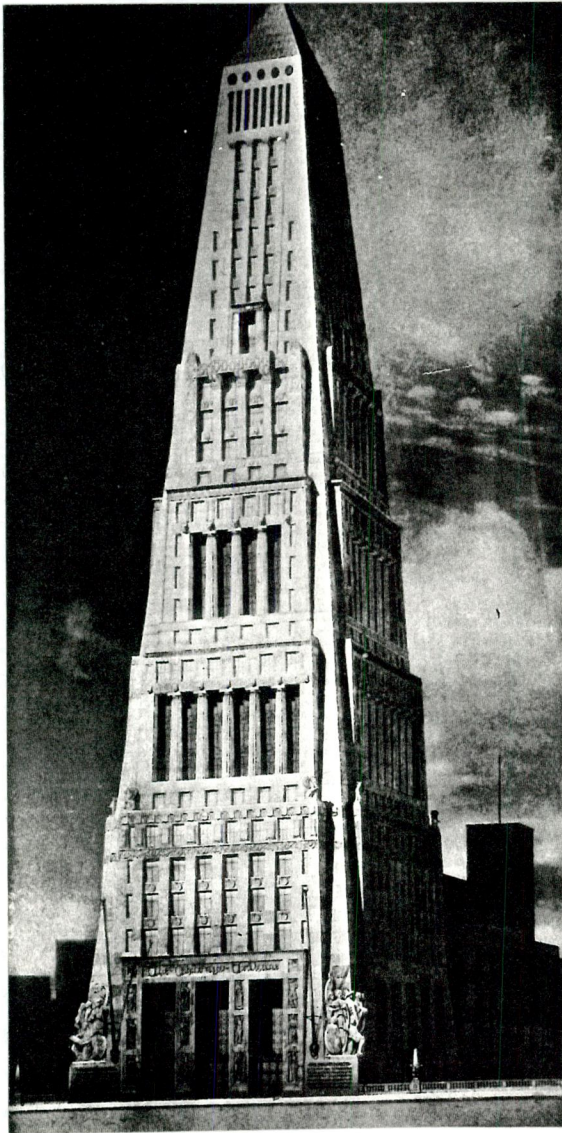


Fig.7 Alfred Fellheimer & Steward Wagner

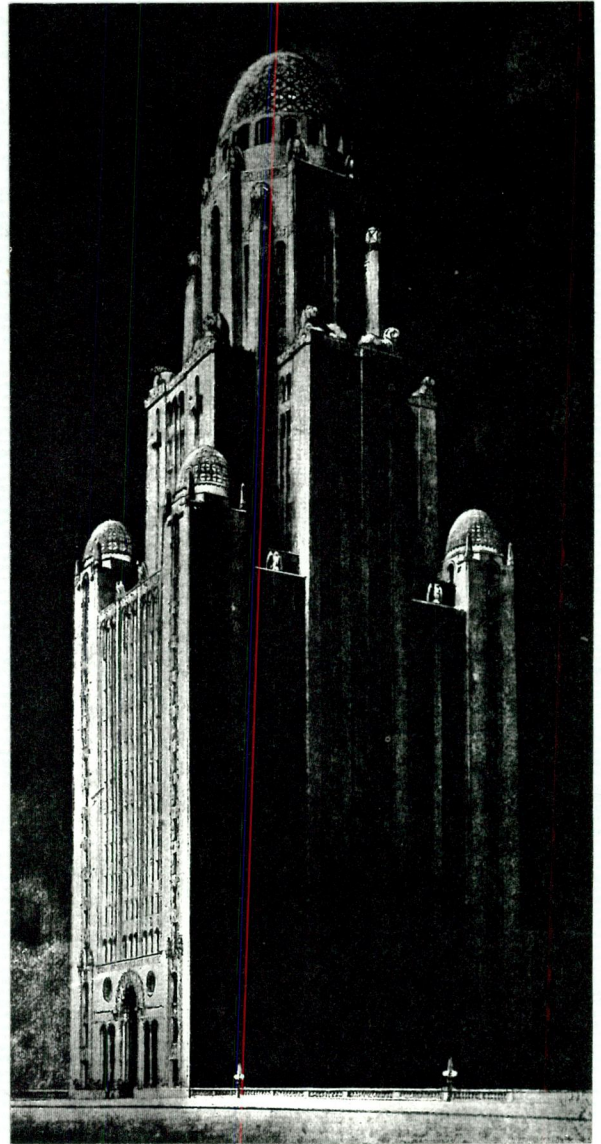
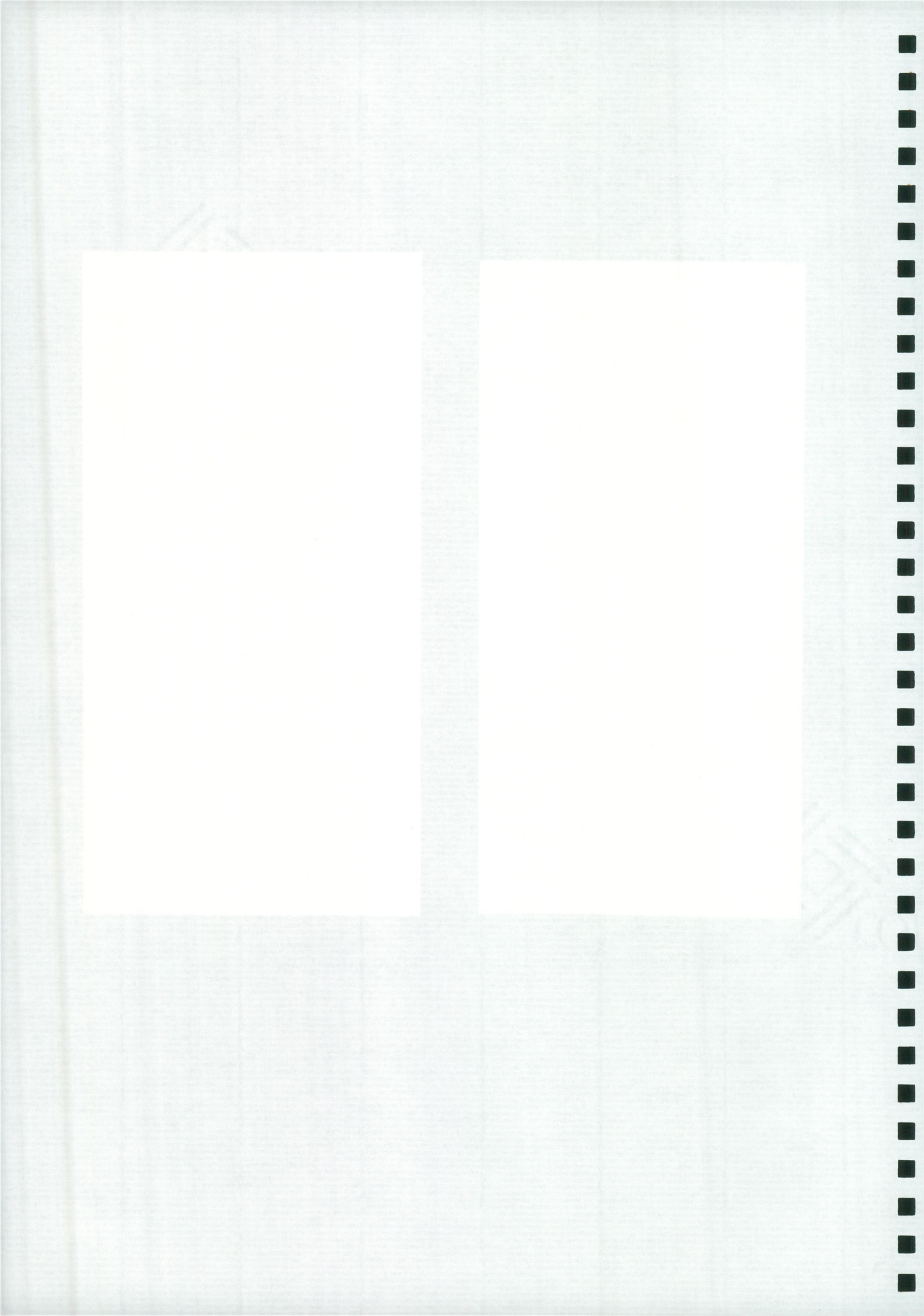


Fig.8 Alfred Morton Githens



THE WINNER

Eliel Saarinen's design was given first place in the eyes of both the architectural community and the popular press. The actual first prize was awarded to a New York team, John M. Howells and Raymond M. Hood, one of the 10 firms asked particularly to participate. The design as shown in (Fig.9) evoked the past in a design reminiscent of a giant gothic cathedral complete with pinnacles and ornamental flying buttresses. In trying to understand the reasoning behind this design being chosen as winner, one has to go back to the wording of the competition itself. This was to design the most beautiful office building in the world. To be the most beautiful, it had to surpass what was already considered the most beautiful, Cass Gilbert's 10 year old Woolworth tower -the original "Cathedral of Commerce". Hoods' design while not being a straight forward copy of the Woolworth tower sometimes crossed over the line in its interpretation of the same Gothic spirit.

The reaction to Sarrine's design (Fig.10) in both the popular and professional press can be summed up in an article by Louis Sullivan. Sharing as he did the outrage that a design that was thought to be both styleless and instrumental in freeing architects from the obligatory historic solutions was reneged to second place. And that the design that won was merely a rehashment of an old formula that had worked the first time round.

The second and first prize stand before us side by side . One glance of the entries and instant judgment comes that judgment that flashes from inner experience in recognition of a master piece. The second prize is placed first where it belongs by virtue of its beautifully controlled and virile power. The first prize is demoted to the level of those works evolved of dying ideas. (Schleier,1986,p73)

THE BAUHAUS REACTION

As mentioned before the Bauhaus and its rather puritan outlook, took longer to gain a foothold in the crafts inspired society of Europe. In America it faced the same situation (even though in terms of industrialisation America was years ahead of Europe). The competition became a reflection of this battle between modernism and historicism. To the Bauhaus the competition caused great excitement. The modernist theories of functionalism seemed perfectly suited to the skyscraper and in the competition they saw the perfect vehicle for the propagation of their theories. However

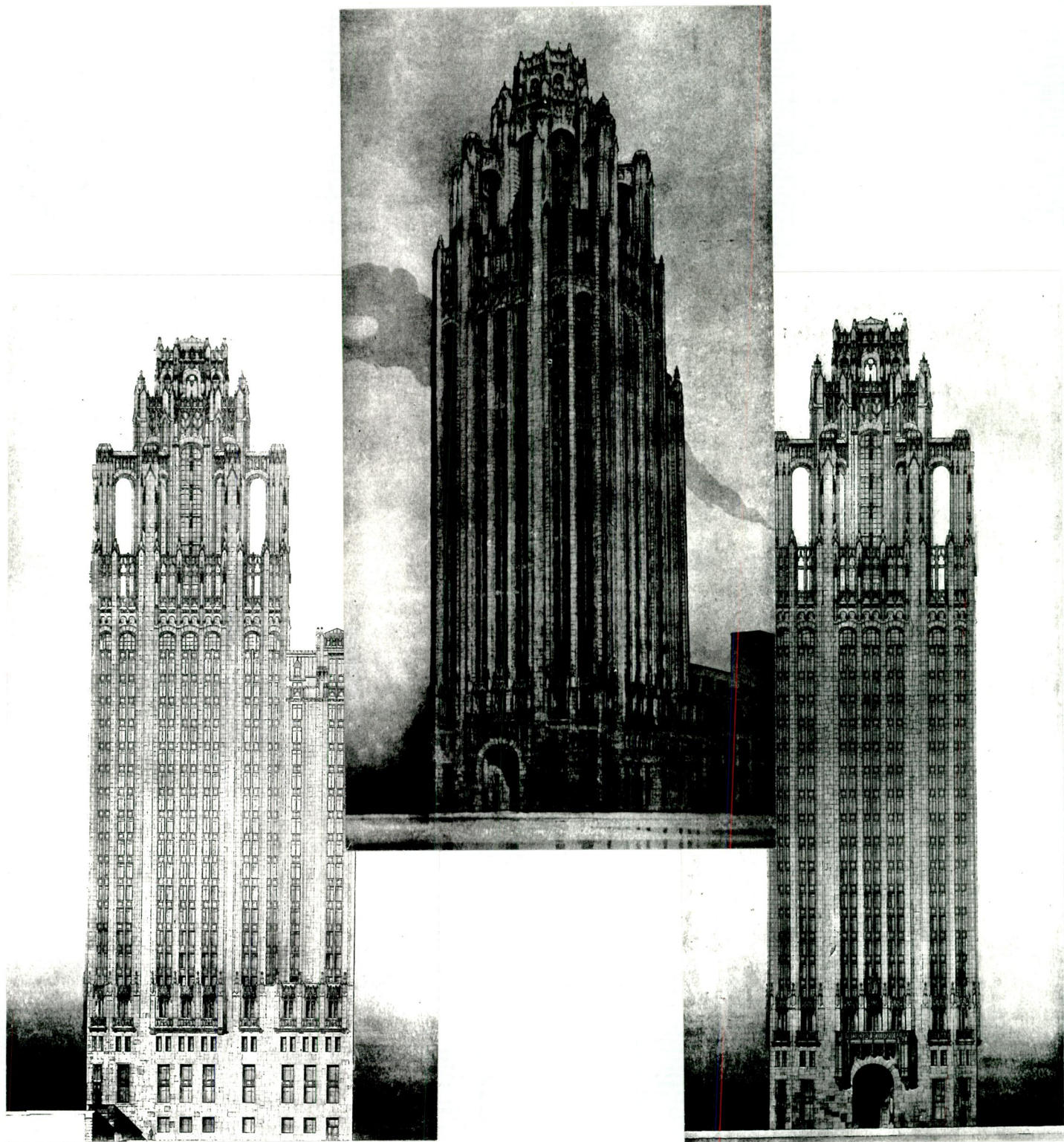
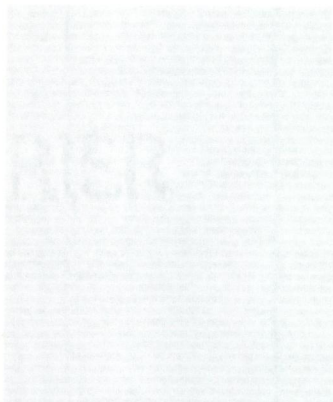


Fig.9 John M. Howells & Raymond Hood competition winning entry



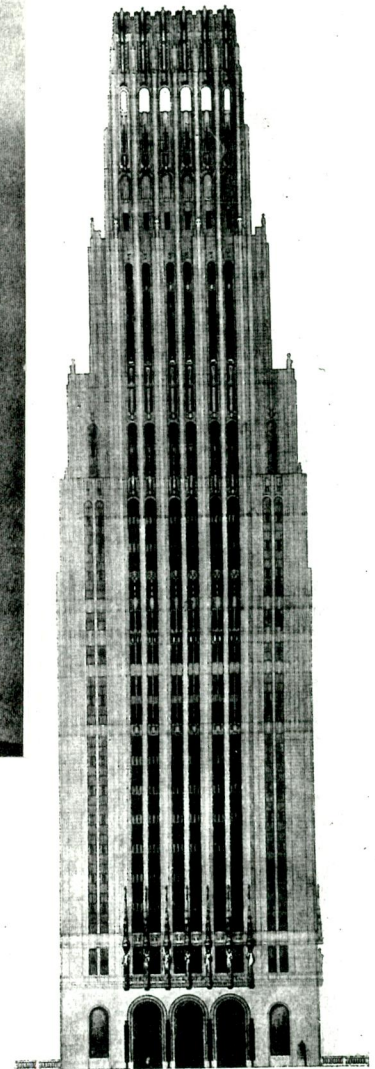


Fig.10 Eliel Saarinen Tribune Tower

projects by Walter Gropius and Adolf Meyer and Max and Burno Taut (Fig.11 &12) received neither the acclaim nor recognition expected. In looking back from the knowledge of the results it is obvious the mistake made by the Bauhaus contingency. In regarding the skyscraper form as modern and futuristic they believed that so to did the competition look toward the future when in reality it only looked to the contemporary standards of beauty -illustrated in the winning design. In being so arbitrary in its decisions the competition helped clarify the notion that applied historicism was no longer acceptable and that modernism was the way forward in both style and form.

1916 ZONING LAWS

Saarinen's design was uniquely fitting to America of the 1920s due to the other event that was instrumental in shaping the very form of Skyscraper - the 1916 zoning laws. The aims of these laws were to ensure adequate light and air for the cities working inhabitants, the laws determined the basic shape of all future buildings. The law allowed broadly for a structure to rise straight up from the street level only to a height determined by the width of the street on which it faced. Beyond that height it had to slant backwards and hold to a line drawn from the centre of the street. The result being a pyramid shape imposed on top of a cube and as pyramids have not been the norm in building standards for quite a while a series of stepped setbacks became the norm.

HUGH FERRIS

Soon after the law came into being Hugh Ferriss a famous professional renderer at the time in collaboration with the architect Harvey Wiley did a 4 stage visualisation of the evolution of a building under these laws (Fig.13). In Ferris's evaluation of the laws he realised the profound impact they would have on the structure of all future buildings:-

The city building up to the present day has been a box with a two dimensional facade attached to its side this law demolishes the box and produces the pyramid which must be sculpted in three dimensions. (Ferris,1928,p46)

Another architect of the day C.Grant La Farge also criticised the monoliths of the past and the narrow streets which were a by product of such building forms, like Ferris he to foresaw the effects of the laws. That from now on

Fig.11 Gropius & Meyer Entry to Tribune Competition

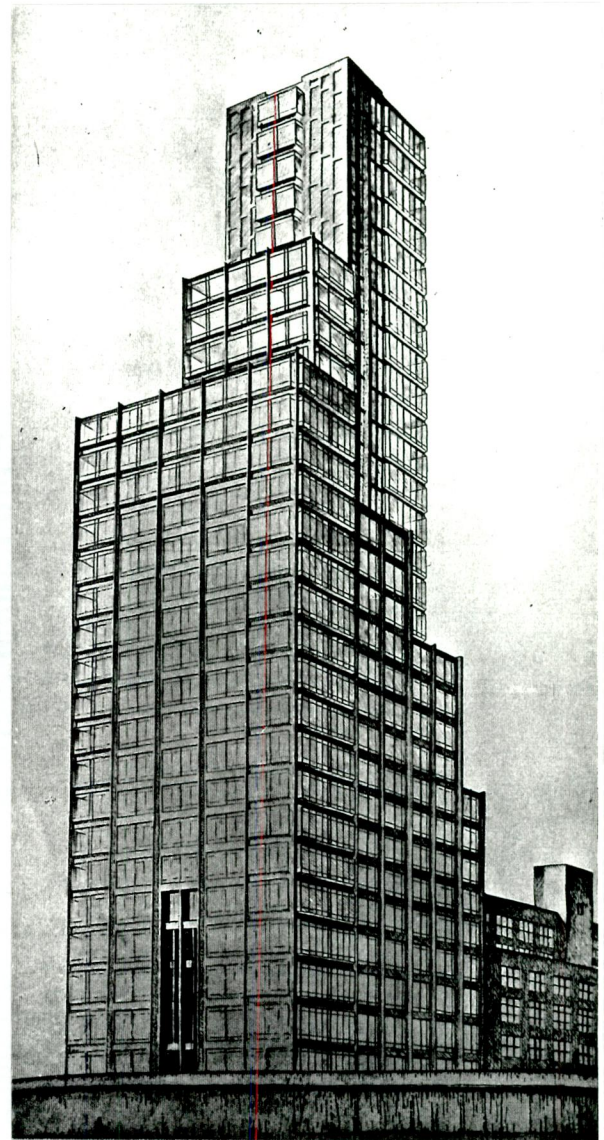
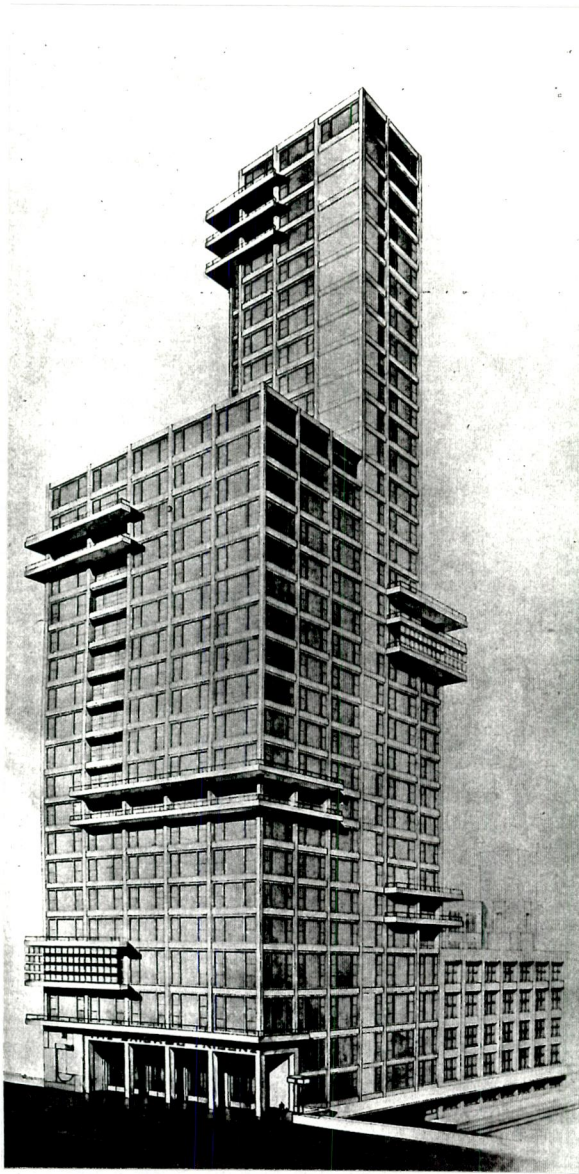
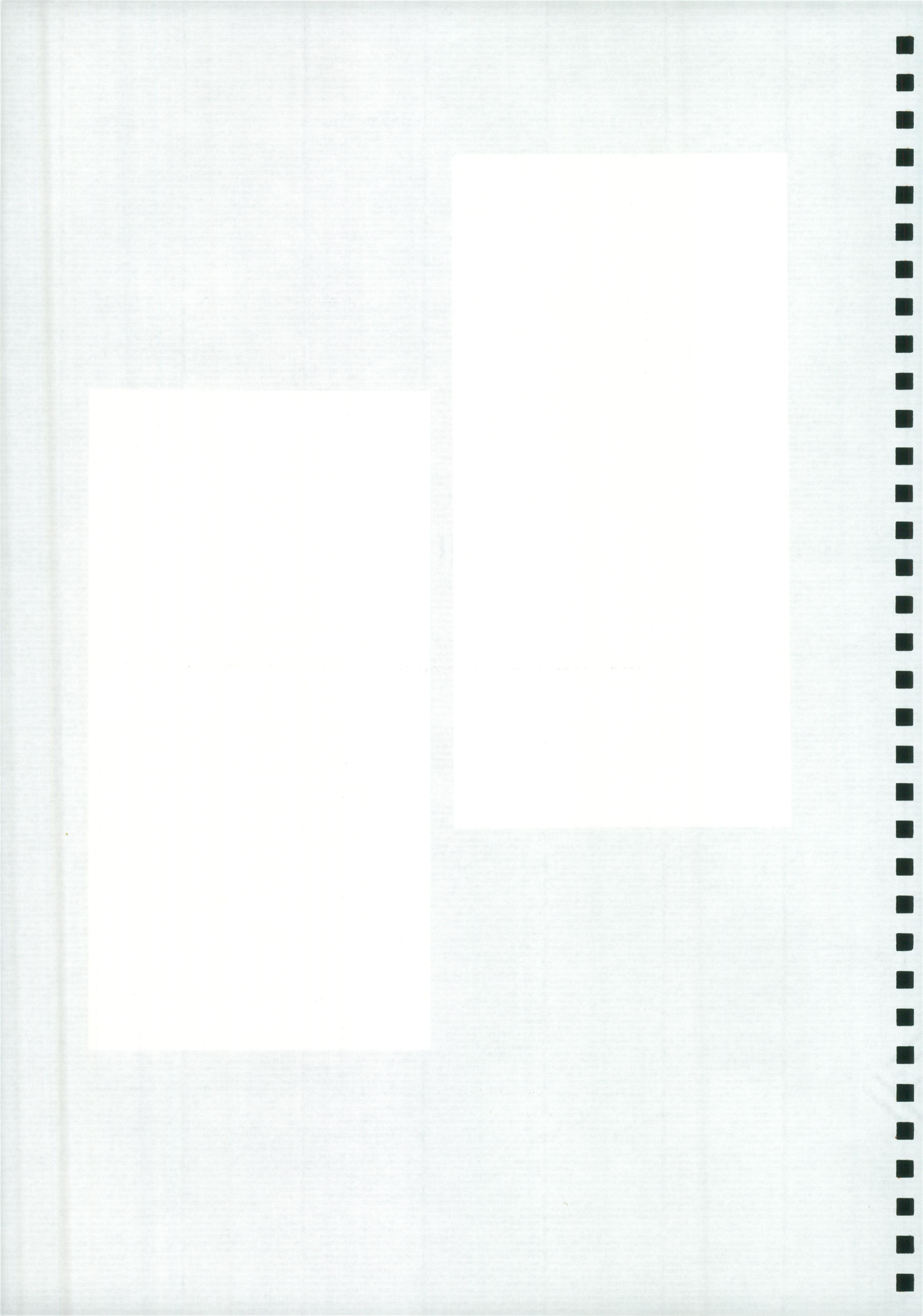


Fig.12 Bruno Taut Entry to Tribune Competition



the whole structure and mass of the buildings would have to be considered and that architecture would now as a result of the laws involve a sculptural element. Skyscrapers faced a forced evolution. They were no longer mere boxes with facades; they were now structural masses and as such required a new approach.

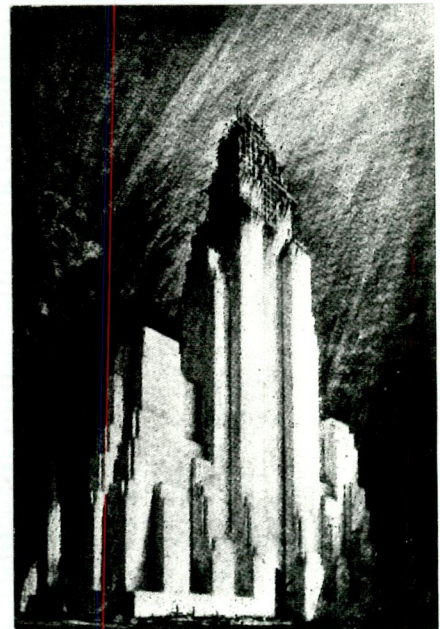
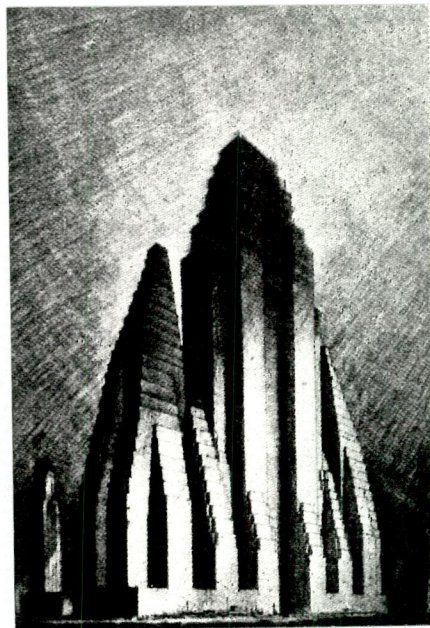
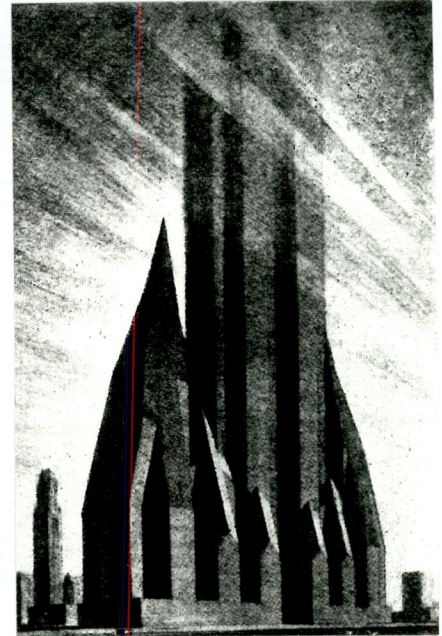
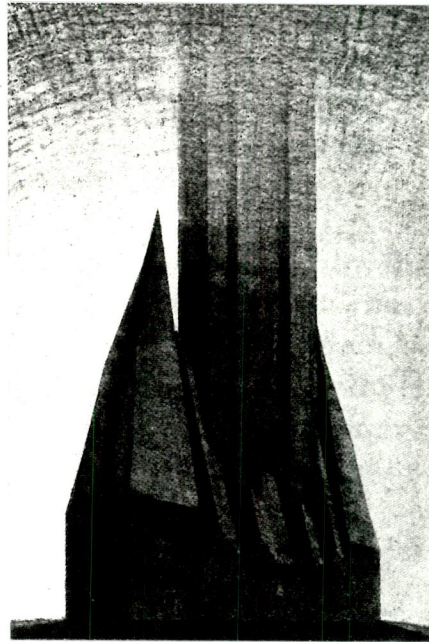
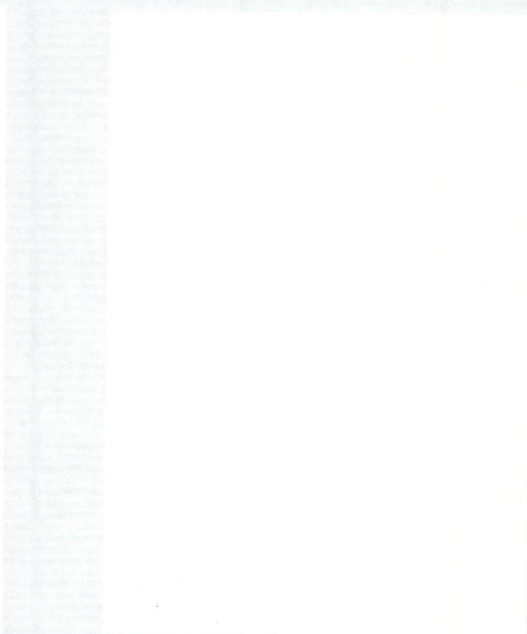


Fig.13 Hugh Ferriss 1916 Zoning Laws



CHAPTER THREE

CONTEMPORARY REACTION AND THEORY

A very important part in discussing the rise of any new form or style is to deal with contemporary reaction. Nothing happens within a vacuum and critical analysis can only hurt what is by its very nature weak. The Tribune competition being a showcase for architectural trends caused a great deal of debate. The aesthetic merits of the skyscraper, (architecture being ahead of the decorative arts in America by several years. Duncan, 1986, p169), and thus the new modernism were for the first time given a hearing by the artistic community. This previous lack of recognition occurred mainly because skyscrapers were seen as a product of commercial interest and thus fundamentally at odds with artistic matters. This was a throwback to European old world values. One of the main arguments was that by their very nature commercial skyscrapers are ideologically opposed to art. This gulf was explored in a book by Henry James called "The American Scene", an expatriate who after immersing himself in the European tradition returns after a 30 year absence. In the book he maintains that the tall buildings were "Giants of the mere market", he compares Giotto's bell tower in Florence to a skyscraper built for economic necessity. He suggests, by juxtaposing such buildings, that architecture must be the product of an elevated conception and not commercial interest in order to possess aesthetic credibility.

Commercial interests was also being criticised at the time as being the reason for the lack of a national spirituality. The mysticism of money had replaced religion, and according to one contemporary -business and state were now linked in such a way as church and state had been linked in the middle ages. The skyscraper the very symbol of this capitalistic business ethic was criticised in the same vein. It was likened religiously to the tower of Babel in its borrowings of styles of the past. It was also criticised in its presumptuous attempt to pierce the sky, a sphere preserved for religious architecture. The ornamentation of such buildings as the Woolworth Tower and the Tribune Tower, "Cathedrals of Commerce" both, can be said to be an attempt to reconcile this rift between religion and business.

These commercial interests or forces of capitalism were also seen as highlighting the powerlessness of the ordinary man. This was also thought to be exhibited in the extreme discrepancy in the scale between the size of the buildings and the man on the street. The skyscraper was seen to dehumanize and engender both congestion and anonymity. People were reduced to "the consummate montones of the pushing male crowd moving in a dense mass... a welter

of objects in which relief, detachment, dignity, meaning, perished utterly" (Schleier,1986,p52). Another contemporary article began with the ironic lines. "What do you know of New York? said one wanderer to another 'Only what I have read in Dante' was the bleak reply (Schleier,1986,p48). The skyscraper became the focus in the fear of urban chaos. Fritz Lang's "Metropolis" echoed and voiced some of these fears. Fears in the power of the skyscraper form as being a detrimental force to both the city and its inhabitants

A great critic of the skyscraper was Frank Lloyd Wright. His authority to speak on the subject was strengthened not only by the fact that he was one of the most prestigious and prolific of early 20th century architects, but also because he was at the birth of one of the first ever skyscrapers " The Wainwright" while still a trainee in Louis Sullivan's offices. In an article entitled " The tyranny of the skyscraper " he wrote. "They are monotonous. They no longer startle or amuse. Verticality is already stale; vertigo has given way to nausea." (Duncan,1986,p20).

Yet for all its critics the skyscraper held a very special place in the nation's heart it became a symbol of the nation and of the future . To understand this a quick look back is necessary. As mentioned before the golden age of skyscrapers occurred in a time when the belief in European superiority in both art and culture were being re-evaluated. Why was this so? The reason behind such this change can be traced to events shaping the lives of the ordinary citizen.

In America as in most countries the post war years were a time of great economic prosperity. Technological advancements combined with a sophisticated advertising system and a unique ability to bring to the consumer the most recent innovations, brought about a vast market for consumer goods. The average citizen of the day was the proud owner of such ultra modern appliances as radios, toasters, refrigerators and vacuum cleaners. Not forgetting of course his automobile, all the items were new in appearances and basic design. Here to the average citizen in his home was irrefutable proof of American leadership in engineering and technology. This leadership led in-turn to the re-evaluation of Old World values which thus led to a gap in the nation's psyche, into which America looked to its own heritage and surrounds to fill. In this search the skyscraper was claimed as being an

extension and product of American culture.

*In this tall eccentric tower we have begun to feel our way toward
national building - building that suits our needs our comfort our
landscape with out regard to any nation or civilisation.
(Goldberg,1986,p9)*

The skyscraper, as well as being seen as expressing the burgeoning American sense of nationalism was also seen as expressing that other American peculiarity - youth. The skyscraper was seen to echoed the "Forceful vitality of youth, adolescence in its tentative desire for beauty" (Robinson & Bletter, 1975, p164) that characteristic which the Americans claimed for there own.

CHAPTER FOUR

THE BUILDINGS

New York Skyscraper architecture is the embodiment of more than just modernism. Buildings like the Chrysler and the empire State reflect their respective decades' social aspirations. In form and ornamentation these two buildings, -the most famous of early skyscrapers-are ideal examples. Because they also chronicle the change in public opinion, built as they were before (the Chrysler) and after (the Empire State) one of the greatest disasters ever to strike America. The Wall Street crash of October 1929, which caused great unemployment and depression also contributed to the change in the nations attitude to modernism. After the crash it became an economic necessity for the country to "get on the go again". Thus the modernist outlook was favoured as being the most in tune with this new necessity and traditionalism and classicism became frowned upon as looking to a past that didn't help the fight for the future.

The Chrysler building (Fig.14), symbol of the omnipotence and infallibility that characterised the 1920s was also a symbol of the power of the business man. The Chrysler Building has always stood apart never being quite accepted as a piece of serious architecture. Its theatricality was provided by both its dramatic method of unveiling and by the larger than life character of its owner. The building was originally planned as the Renolds building after a real estate developer, but was bought lock stock and architectural plans by Walter P. Chrysler, the car magnet. Chrysler a self made man saw the building as a monument to his cars and thus to himself and it was the architect William Van Allen who had to see that it happened. The race for height which became an intrinsic part of the 20s skyscraper affected the Chrysler also. At its proposed height it would have been the tallest building in the world. However a development at the same time by Van Allen's former partner Craig Serverance added a flagpole to his design making it taller the Chrysler by a mere two feet. In retaliation Van Allen - backed by Chrysler came upon the idea of the spire. Designed in secret and concealed in the hull of the building until hoisted into place, it increased the height of the building to 1046 feet making it the tallest building in the world...

When the spire was finally assembled and riveted up securely - the signal was given and the spire gradually emerged from the top of the dome like a butterfly from its cocoon and in about 90 minutes was securely riveted in place the highest piece of stationary steel in the world. (Schleier, 1975, p64)



Fig.14 Chrysler Building



ORNAMENTATION AND ARCHITECTURE

Architecturally the Chrysler is quite characteristic of 1920s modernist buildings- clean lines, steeped back masses etc.. Ornamentally the building is unique, decorative elements include winged radiator caps (Fig.15) at the 31st level, eagle gargoyles and ornamental brickwork in shapes reminiscent of wheels (Fig.15). The overall brick work is also ornamental in a pattern that was described in its day as basket weave (Fig.16). The surface treatment of the windows is quite characteristic of Van Allen, he tended to set window frames virtually on the surface-intending the exterior walls to be perceived as a continuous unbroken structure. Buildings like the Chrysler which has horizontal striping is subject to an optical illusion to people at ground level. The tops of such towers appear larger than their bases, to counter this the corners of the Chrysler are pinched out (Fig.15) and topped by the winged hub caps. Architecturally and decoratively it is the top seven floors that have made this building famous. The elongated dome and spire with its triangular windows and tiered arched format all enveloped in chrome steel seem more like something out of a Disney production than reality.

In the dome along with the exclusive "Cloud Club" which was a mixture between a boys own club and speakeasy, they resided the private rooms of Walter P. Chrysler. Here was a display cabinet of Chrysler's hand tools when he was a mere worker. A commentator of the time put it succinctly...

The Chrysler tower should not be criticised from the usual point of view of architectural design. It stands apart by itself something apart and alone. It is simply the realization, the fulfilment in metal and masonry of a one man dream, a dream of such ambition and such magnitude as to defy the comprehension and criticism of ordinary men or by ordinary standards. (Duncan,1986,p169).

The Chrysler building is an anomaly; it is one of those very few examples of architecture - let alone commercial architecture that engenders an emotional response. A response that allows forgiveness of its theatricality and indeed an admiration of it. Van Allen served his client better than he knew, for in creating a monument to Chrysler he also created a monument to the very decade that formed such a man.



Fig.15 Detail Chrysler Building (Winged Hood Cap)

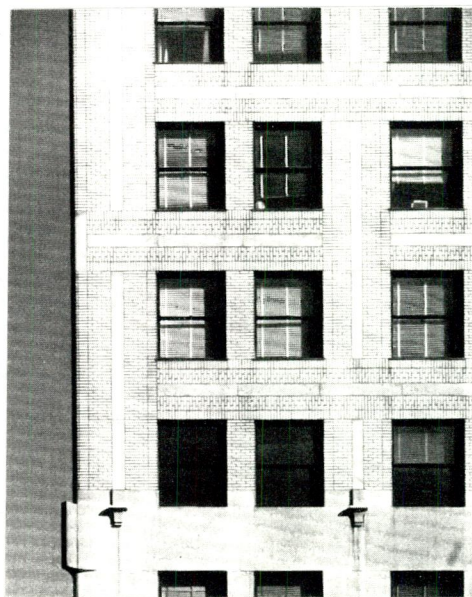


Fig.16 Detail Chrysler Building (Basket Weave))



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THE EMPIRE STATE

If the Chrysler was a monument to the jubilant 20s then it can be said that the Empire State reflected the more austere 30s. The great depression had an enormous effect on the everyday lives of the average citizen. Public opinion focused on the rampant capitalistic system of the 20s as the evil which had brought down society and the working man. Built at the very height of the depression in 1931 by Shreve, Lamb and Harmon the Empire State became the focus for the anger of the populace, in itself becoming the very embodiment of the evils of the jazz era. Built on the site of the old Waldorf-Astoria hotel the Empire State was the worlds tallest building for over 40 years until it was surpassed in the 1970s by the World Trade Center. The skyscraper is primarily a commercial structure and of all building in the golden era the Empire State best fits that description. Its height was not some glorious reach for the sky but a very direct relation to the optimum amount of rentable office space needed to make it a viable enterprise. Even the buildings restrained modernist ornament has been laid at the feet of its intensely commercial nature. Ornament, superficial to the very function of the building, being considered unnecessary .

The Empire State was a machine for business in more ways than one, every piece of stone was mechanically cut, each girder mechanically casted. The Empire State was the epitome of mechanical and thus the modern aesthetic. Built in only one year and 45 days, it grew at roughly four and a half stories a week and drew the labour of every carpenter, electrician, construction worker in New York. As such it was the only structure of such size to be built that year. The rapidness of its construction was related to the depression- every day would cost the owner valuable money. To expedite the plans the whole operation was run on a timetable, workers were given daily blueprints of tasks; its even said that the drivers who delivered the daily amounts of steel etc. had a timetable that showed quickest routes and even took into account traffic delays.

ARCHITECTURE AND ORNAMENT

The Empire State (Fig.18) is architecturally one of the most restrained of modernist building to be erected in this era. The exterior of the building is clad with Indiana limestone and granite trimmed with mullions of stainless steel from the 60th floor to the pinnacle of the building. Its ornamental detail is almost non existence, though as mentioned before this has been laid to economic factors, although another reason could be found; the sheer size of



Fig.17 Empire State



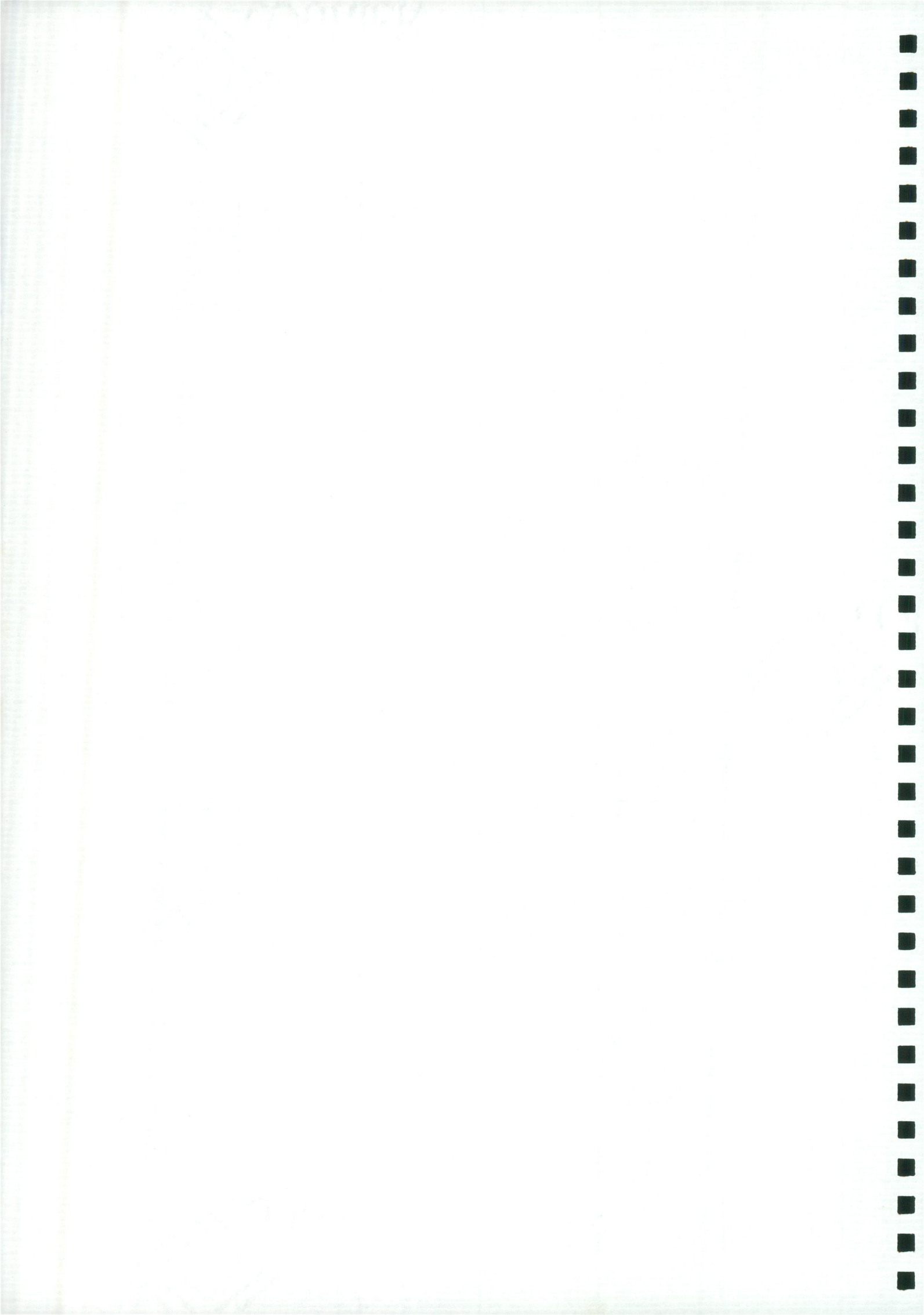
the Empire State is hard to comprehend (the fact the a light weight plane once crashed into it in foggy conditions might give some indication) and on a structure of such magnitude ornamentation would be not only completely lost but indeed slightly ridiculous. What has become an ornamental detail to the building is its use of lighting, the upper 30 floors on the building are illuminated nightly from sunset to midnight in either white or a colour scheme to commemorate special events. This nightly light show elevates somewhat the need for ornament on such a monumental structure- in this case the building itself becomes the ornament. Another interesting aspect about the Empire State is its graceful sculptural massing through its use of set backs, it does not seem the height it is and thus as a result is at a psychologically safe distance to the man or woman on the street below. This however has caused problems as the building is notoriously hard to see from ground level and unfortunately the city plan does not allow an unrestricted view of the building

Upon the opening of the Empire State in 1931 in a slick public relations scheme national recognition was bestowed upon the buildings by the President of the day- Hoover pushing the button to light up the spire. But in spite of the fanfare, the fact that the excitement that had surrounded skyscrapers had collapsed along with Wall Street could not be disguised. The building designed at the end of the jazz era, with its mast for mooring airships unused because powerful updraughts, was meant to be a monument to the future but to the citizens of the Depression it reflected only the tarnishment of the modern dream. Upon opening the Empire State which had cost \$56 million to construct was only 40% occupied and was given the title on Broadway of the "Empty State building" (Robinson & Bletter, 1986, p47).

THE NEW HERO

As a result of the harsh realities of the Depression caused by the crash the focus shifted from the powerful business man to the common man reflecting somewhat the self preservatory nature of the decade. In the photographs of Lewis Hine commissioned to follow the rise of the Empire State the ordinary worker was captured and made heroic. In their individualism these construction workers were heralded as new folk heroes. In such poetic terms they were "Rough pioneers of the steel pushing each year their frontier line up toward the clouds"(S.S,1986,p31)). These new heros could

be seen as countering the charges laid on skyscrapers of engendering anonymity and alienation. But this new individualism was ultimately an impersonal one -the common man was as faceless and nameless as he had always been.



CHAPTER FIVE

THE SKYSCRAPER AND THE DECORATIVE ARTS

One of the most important contributions of skyscraper's in regards to Modernism was its influence on interior design and the decorative arts. As the new style of modernism was seen first in architectural buildings in America it was obvious to architects that this new style called for a new approach to interiors and furniture. At that time there were no designers operating in this field so it naturally fell to the architects to design the interior and furnishing of the buildings they had designed. In 1929 the Metropolitan Museum of Art held an exhibition called "The Architect and the Industrial Arts" it included work by both Hood and Saarine. The brief was to design a modern interior comprised of standardised metal units (indicating the rise of the previous architectural material in the decorative circles).

It will be more satisfactory if all the development of a modern style is left solely in the hands of the architects. After all the designs in which manufactures produce their products are dependent on architects, the designers employed by manufactures must also get their inspiration from architects.
(Duncan,1986,p171)

This reaction to the exhibition ran in an article in the "American Architect", it was not however solely confined to architectural circles that this belief in the suitability of the designer/architect reigned. In a contemporary issue of Vogue a piece run by Helen Appleton Read was in a similar vein.

Because any genuine and vital contemporary decoration is inevitably related to contemporary architecture it was attacking the problem from the right angle to ask architects rather than decorators to design interiors and their accessories.
(Duncan,1986,p171)

In the interiors of the buildings architects solved their problems architecturally. The issue of space and the furniture with-in it was an architectural problem and one of the architectural solutions was to eliminate various types of furniture entirely, for example built-in closets replaced the need for wardrobes and chests of draws etc. Thus many traditional pieces of furniture were being done away with, this caused a realization to the designers of such objects that unless they did something about it their profession faced obsolescence.

PAUL T. FRANKL & DONALD DESKEY

Two such designers who rose to the challenge, and in doing so helped the creation of the modern movement in America, were Donald Deskey and Paul Theodore Frankl. And of the two it was Frankl with his skyscraper (Fig.19) bookcases and furniture who was the first to align himself with contemporary architecture. Frankl was a well known designer at this time but originally his fame was in textile furnishings such as carpets and rugs designed for New England Guild and Ranlow Mills amongst others. But it was his line of furniture inspired by the setbacks and contours of the New York skyline that brought him to the attention of the international media. Frankl's own explanation of the space saving concepts behind his designs.

In my own creation for the modern America I have kept with the architectural spirit of our time. The straight line is the most important feature. They call my chest of draws, my dressing table, my bookcases 'skyscrapers' to which I blushing bow. Why not skyscraper furniture. After all space is as much a premium within the home as it is outside it. (Duncan, 1986, p149)

Frankl isolation of what can be called the skyscraper style (i.e the applied use of skyscraper imagery) has been seen more recently in the post-modern movement and in the work of designers such as Micheal Graves. In commissioning a young unknown to design a series of screens Frankl started the career of one of the most prolific and famous interior designers of the decade. From the beginning Donald Deskey was an experimenter, his success in his designs for Frankl led him to a commission for the Franklin Simon department store on Fifth Avenue. His use cork, corrugated and galvanised iron and copper attested to his unorthodox use of materials. Materials which in themselves would go on to help industrialise the new modern style. Deskey had a long association with the Rockefeller family beginning with a design for a modern print gallery and boudoir for Abby Aldrich Rockefeller. He then went on to design a picture gallery and a ceramic and print room for John D Rockefeller Jr. And in 1931 he began his most famous commission once again in connection with the Rockefeller's. He designed over fifty rooms including furniture, lamps and wallpapers for the Radio City Music hall in the Rockefeller center- this commission (Fig.20) included private rooms for S.L. Rotheffel. These rooms, as are many in the theatre are preserved perfectly as a national heritage portraying as they do the height of modernism in the decorative arts during the 20s and 30s An article in the "New Yorker" in 1938 talks about Deskey's interiors..

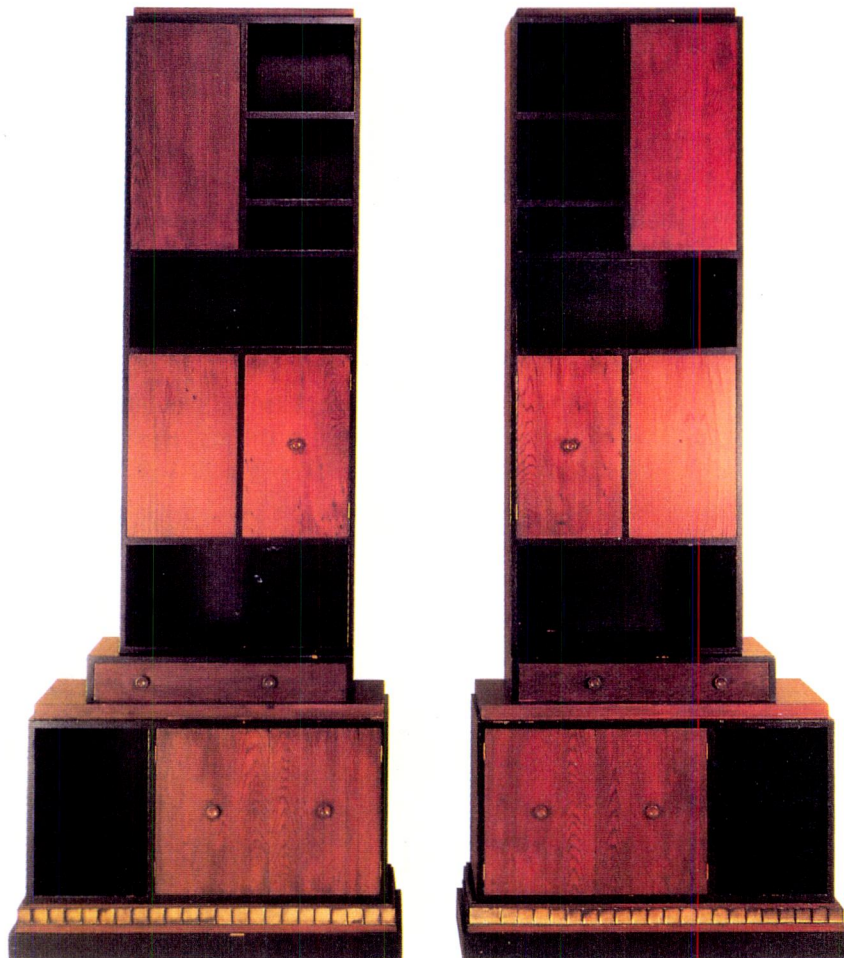
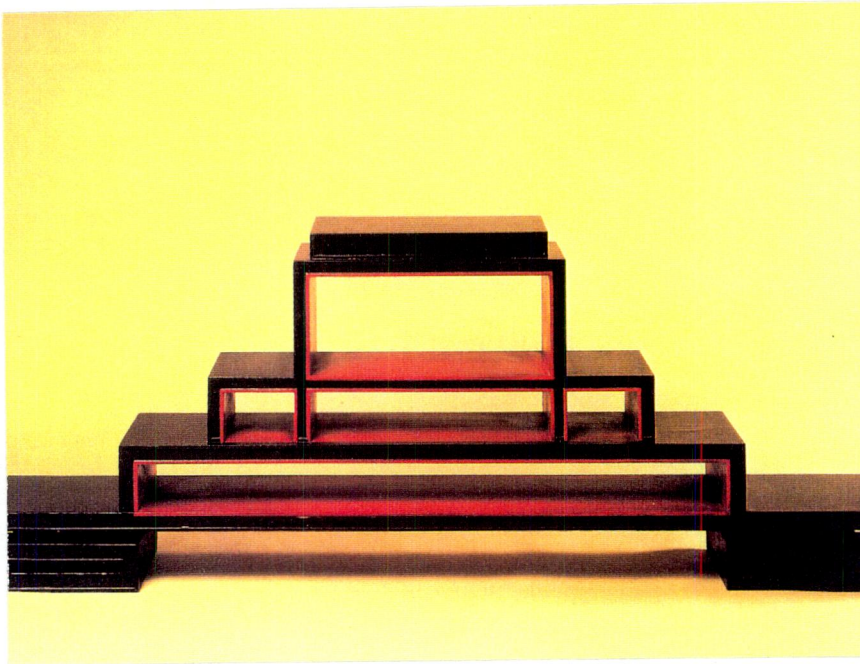
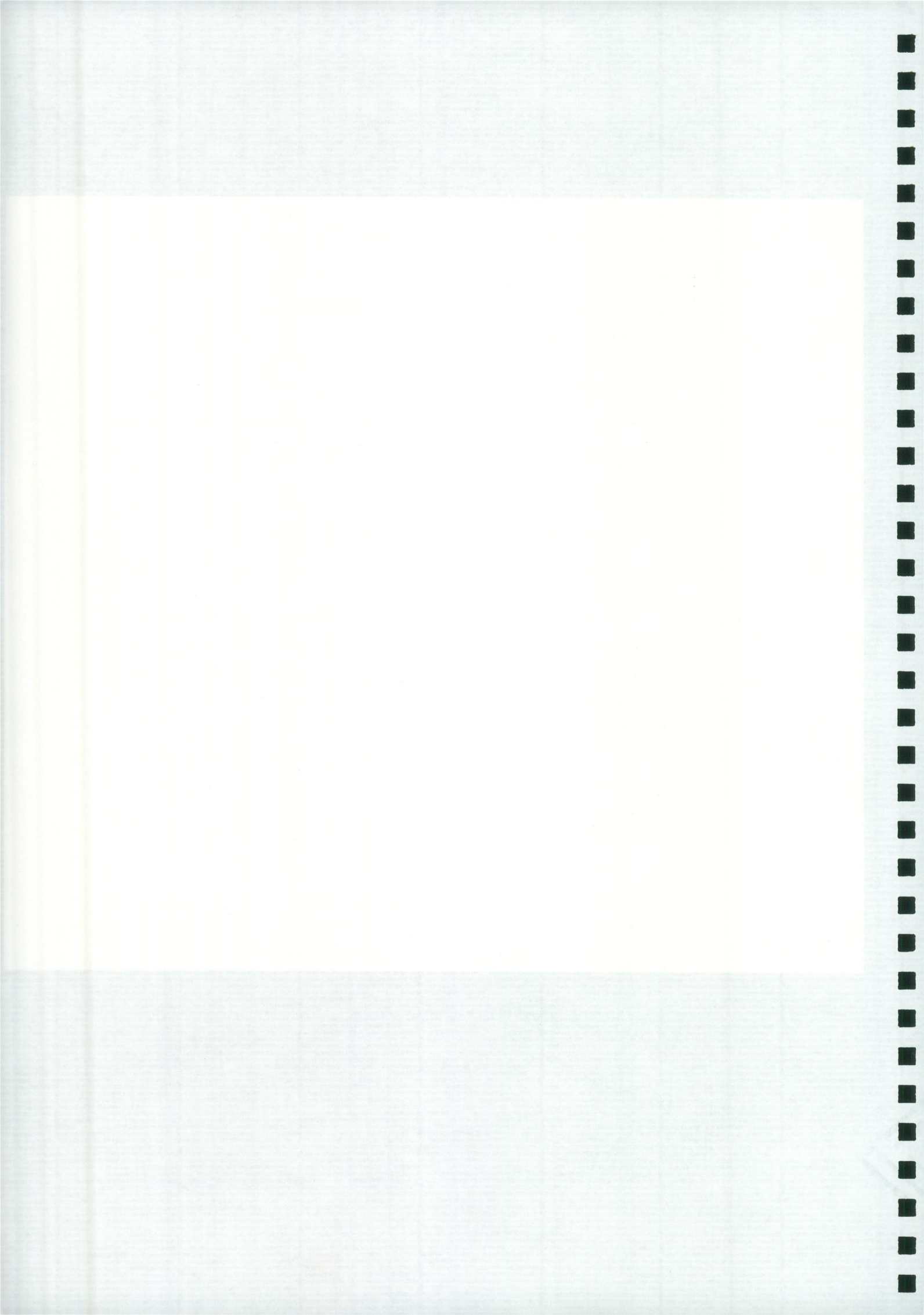


Fig.18 Paul T. Frankl "Skyscraper Fruniture"





Fig.19 Donald Deskey interior for S.L. Rothefel



The distinction of Deskey's furniture is simple, the basic design is good (he does all designing including detail himself) there are no excesses and the pieces are individually striking without being startling. I have seen people come into a room he has designed and liking it feel thoroughly at home discovering after a quarter of an hour that the design is modern.
(Duncan,1986,p145)

An example of a room he designed in 1928 is shown (**Fig.21**), the cork walls show Deskey's love of new materials, the use of metal also attests to its rise in popularity and the establishment of metal in the American home. Deskey was one of the first to learn that in metal, as it had been for wood, designers had to learn to be true to the nature of the material, and to realise that new materials required new approaches.

ARCHITECTURAL DESIGNERS

The new technology that was incorporated into skyscrapers included such things as elevators, central heating and light fittings. These items gave architects the opportunity to design and decorate virtually new objects. That elevator door was a major component in lobbies with often banks of 20 or 30 or more, this gave them a special status and it is often on these doors that some of the finest examples of modernism can be seen. As shown in (**Fig.22**) styles range from classic Art Deco to Art Noveau and from abstract to the geometric (Ill. 20). Not all architects chose to concern themselves directly with ornament often the actual detail was left to their draftsmen for later approval. To the architect it was the idea of the ornament and its placing and not its actual decorative components that provided definition to a building.

When architects did venture into the interiors of their own buildings, it was not always a success. As mentioned before, the lobbies of skyscraper's such as the Chrysler and the Empire State became showrooms for displaying the power and affluence of the buildings' owners directly to the public. The Chrysler and the Empire State cannot be compared in terms of content or materials, they both used marble as the main material there methods of lighting and metalwork are similar however what is vastly different is the method of stylistic approach. The external of the Empire State building has been criticised for its almost total lack modernist ornament, the Chrysler almost completely opposite. However in regards to interiors it has been the more restrained Empire State interiors and lobbies that have fared better with the critics. But first let us examine the interiors to see why this should be so.

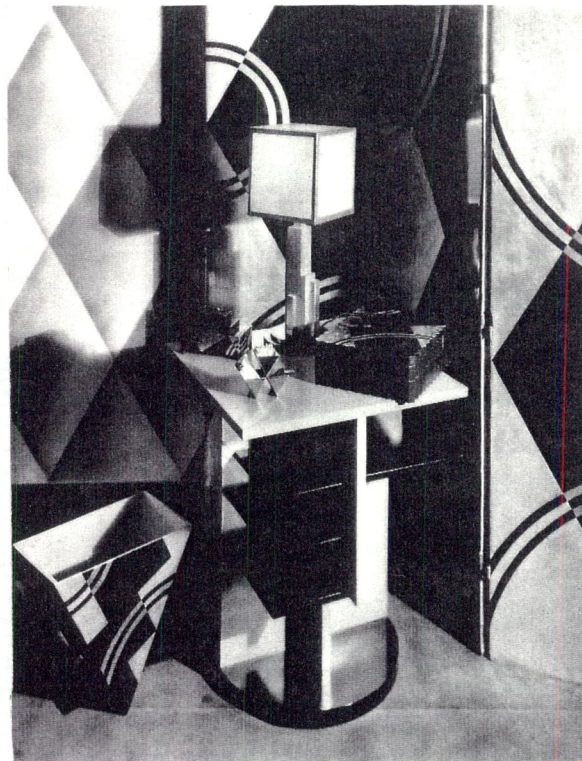
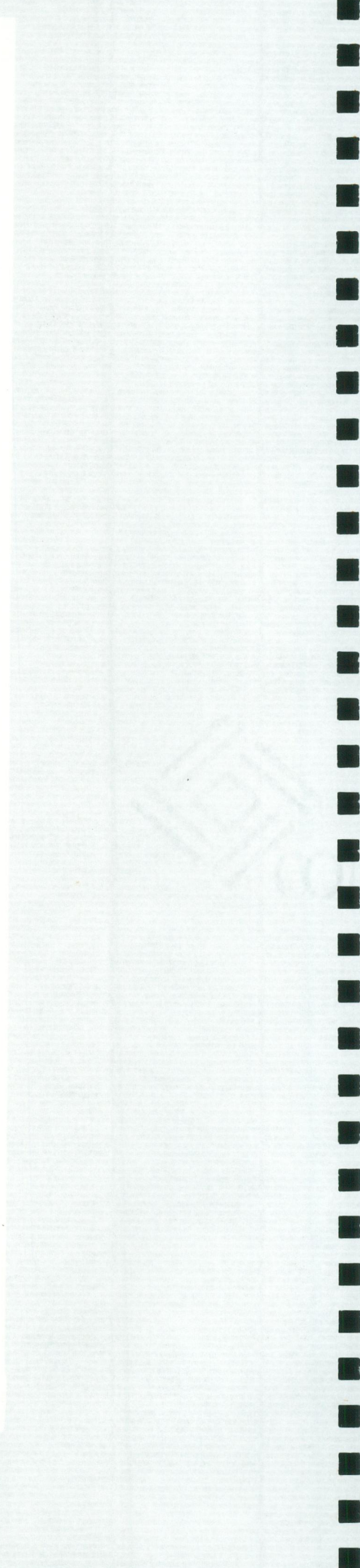


Fig.20 Donald Deskey "Metal Room" interior



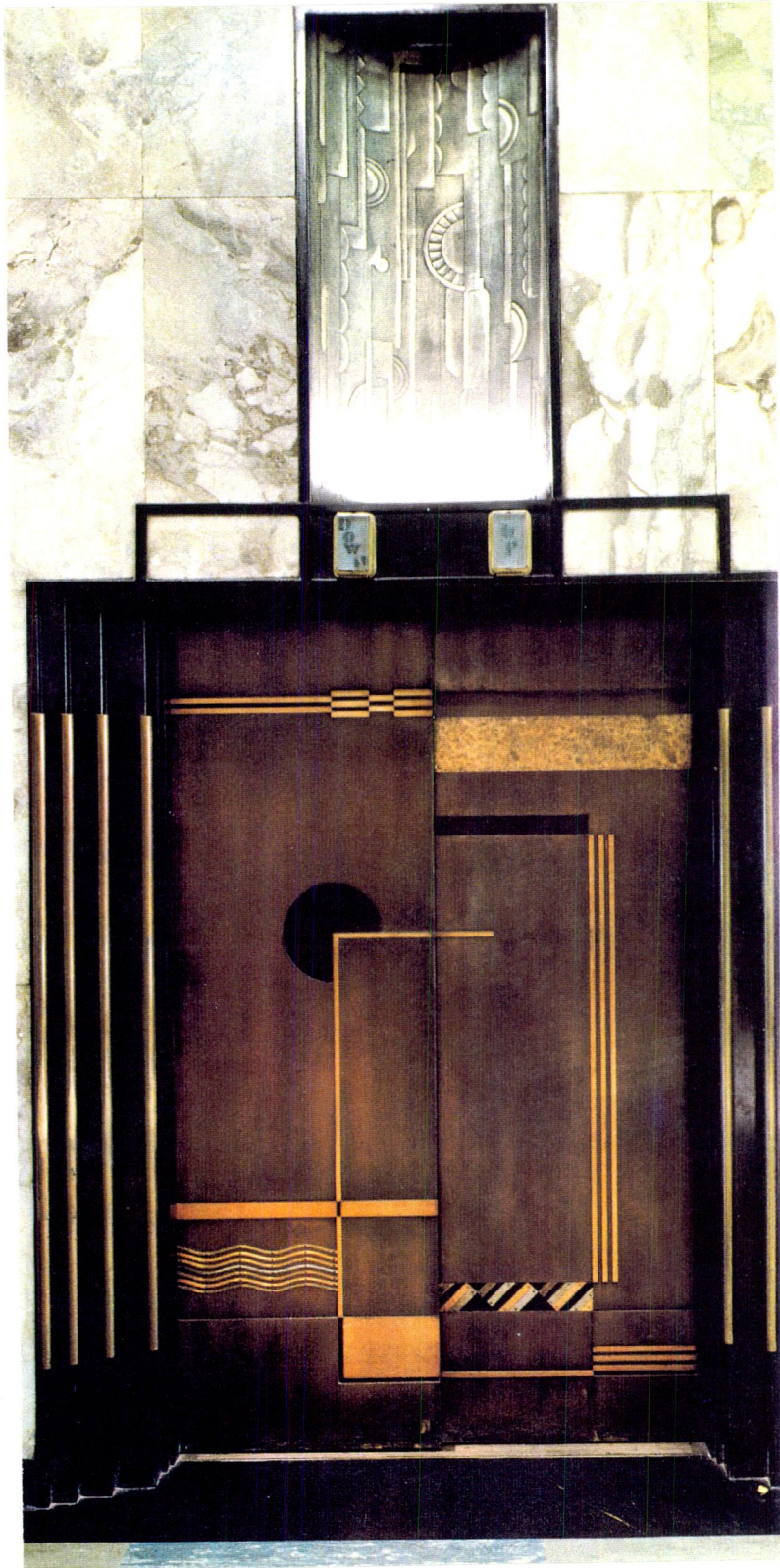


Fig.21 Elevator Doors



THE CHRYSLER

The plan for the lobby of the Chrysler was as visionary as its external decoration, the triangular floor plan created a visually interesting space as can be seen in the plan below (Fig.23). The two story height of the lobby gives a feeling of breath and space that offsets the more enclosed banks of elevators. The lighting in the Lobbies shows the characteristic flamboyancy of Van Allen, the rather cold cathode lighting is covered with glass in a zig zag pattern that seems to mimic the folds of some kind of theatrical curtain (Fig.24 & 25) Van Allen's Chrysler was designed as a symbol of the Chrysler car and the mighty car corporation, in keeping with this aim the lobbies have been seen as an extension of the Chrysler car. The walls as shown below is of a Rose Flambe, a type of a rich marble reminiscent of wood in its striking colour and grain (Fig.26). The overall effect is of wood veneer as used on the dashboards of cars and on the side of cars as wood trim. It has been this use of Rose Flambe marble that was criticised in its day as drowning out the lighting. The murals on the ceiling of transport and human endeavour which were by Edward Trumbel (Fig.27) and the geometric metal work on the entrance and on the mailboxes by Oscar Bachs. A contemporary critic voiced the public opinion at the opening of the Chrysler building.

An effected lighting scheme is thwarted by the highly-grained brown wall surface. These walls with their strong chocolate tone practically obscures what is probably an interesting ceiling decoration. The tone and graininess of the marble are so positive that the walls of the corridors lean in threateningly toward the occupant. (Robinson & Bletter, 1986, p18)

It was the selection of materials, patterns and colours that was found to be clashing not the actual formal structure of the lobby. Van Allen in attempting to give to Chrysler a flamboyancy in the interior of the lobby in keeping with the exterior ended up with a uncohesive overstrained effect.

THE EMPIRE STATE

The lobby of the Empire State like that of the Chrysler is also predominately marble, but the marble used in this instant is a Rose Famosa which is of the same family -as highly grained but of a lighter tone that adds a note of calmness to the buildings interior. The marble for the lobby was imported from Europe and in the need to ensure colour and grain the contents of an entire quarry were removed and shipped over. The plan of the lobby unlike the Chrysler is more conservative, a simple 3 story rectangle is the

Fig.23 Lobby of Chrysler



Fig.26 Mural Detail in Lobby of Chrysler

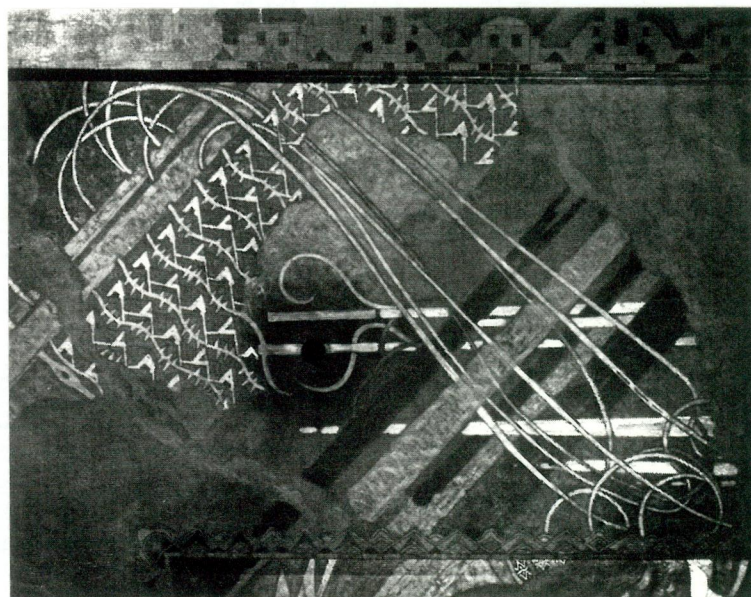


Fig.24 Detail of Lobby of Chrysler

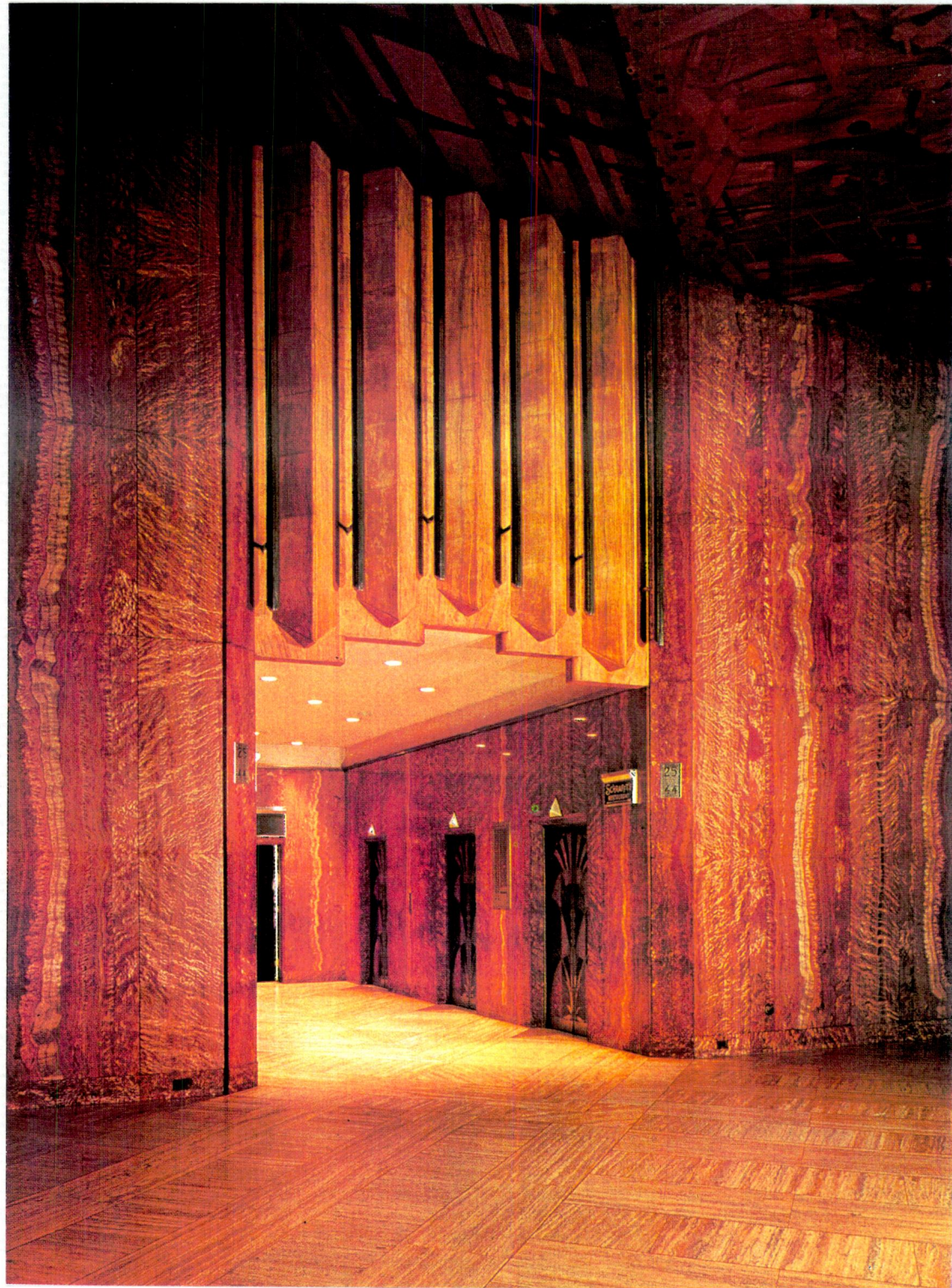
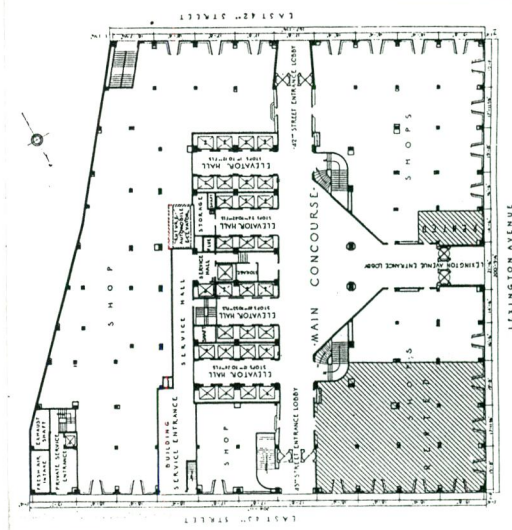
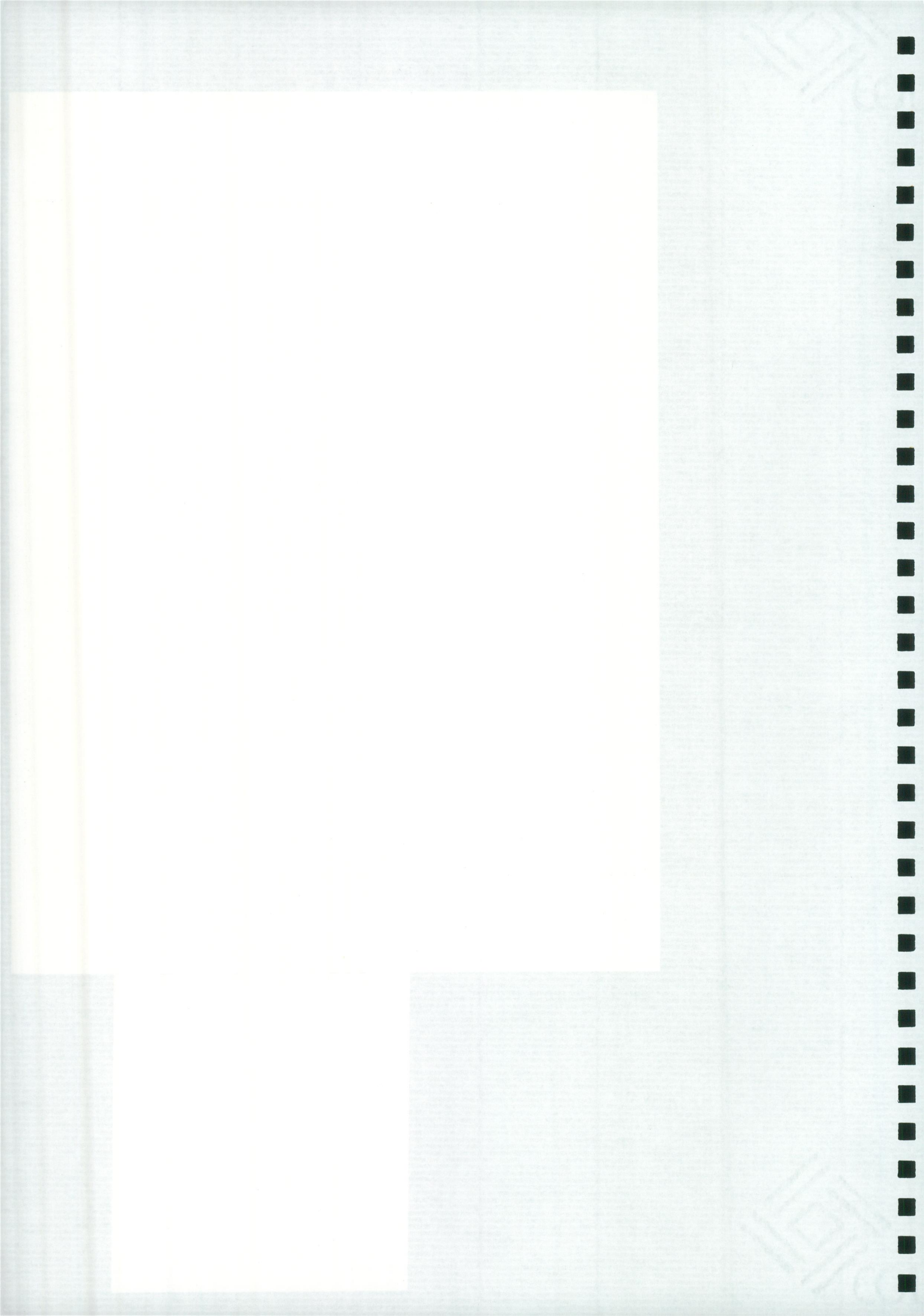


Fig.22 Plan of Chrysler Lobby





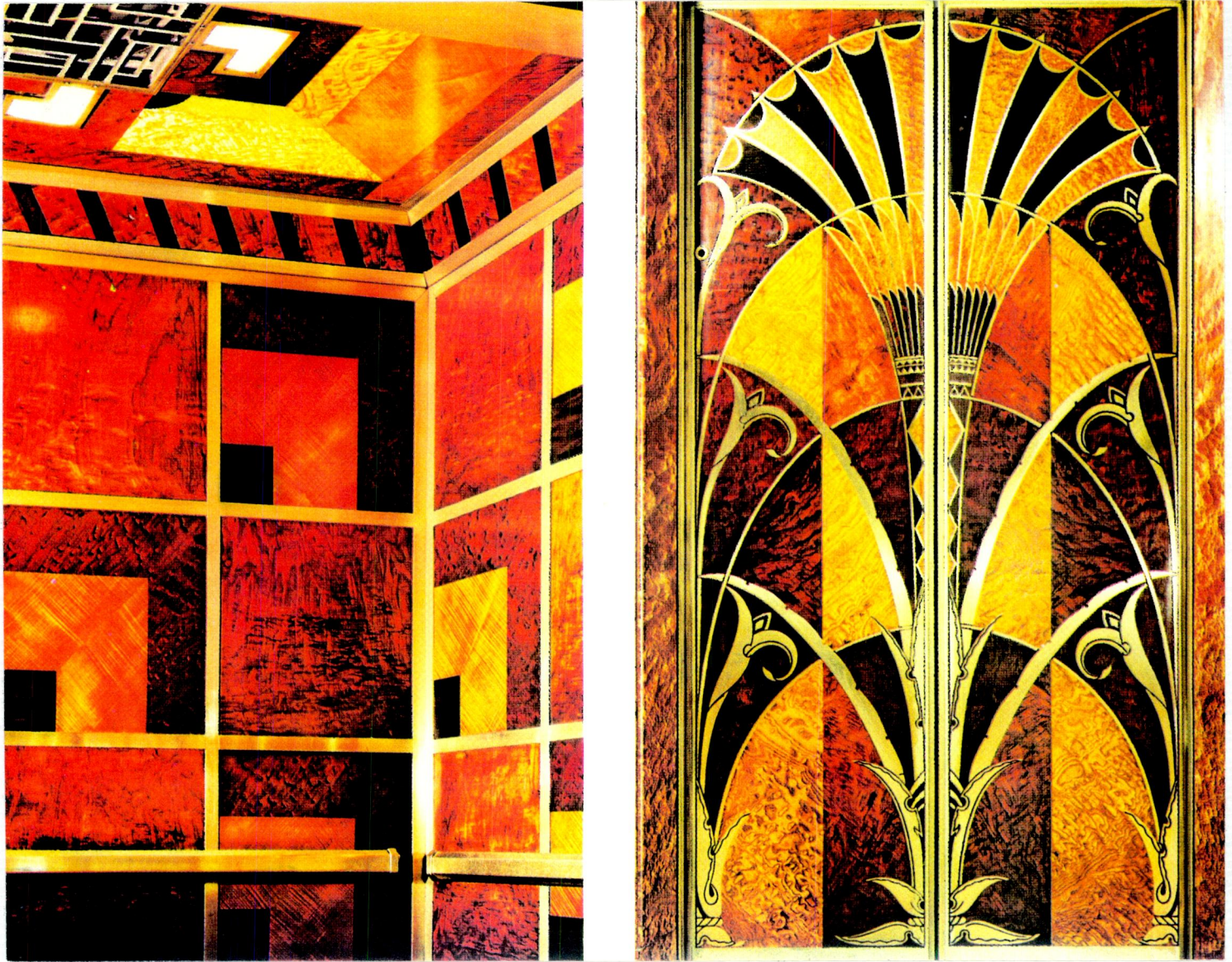


Fig.25 Detail of Wood Veneers used in Chrysler Lobby



main entrance with the banks of elevators, shops and corridors leading off it. An interesting architectural detail to the interior of the lobby is the use of passenger walkways or bridges intersecting with the corridors and moving staircases just to the right of the main lobby area. Originally these walkways were not encased in glass as they are today. In the example shown (Fig.28) the ceiling lighting areas were also uncovered and the panels now hide a stepped up surface from which chandeliers were hung. Inset to the right an example of a series of cast nickel and bronze circular decorations with each portraying a particular theme such as concrete, with graphic images in the background. The entire decoration of the lobby is in keeping with the exterior and the functioning "machine of business" as portrayed by the building. Dominating the lobby is the brass and aluminium relief mural of the building as shown (Fig.29). The mural is some 3 meters height and is one of a series of eight depicting the seven wonders of the world and of course the eighth wonder of the modern world the Empire State building itself. The series by the artist Roy Sparkia and his wife Renee Nemorov and were unveiled in 1963 and in the use of metallics blend in well with the restrained tone of the building.

SKYSCRAPERS AND ART

The decorative element of skyscraper's which became so important during the 20s and 30s stemmed from the fact that the steel frame that was used to construct the buildings had replaced the need for structural walls and thus freed a lot of space that could then be approached in a decorative manner. The use of expensive materials such as marble, veneers etc. have always played a large part in the decoration of the interiors and lobbies of skyscraper's. It was here that the wealth and affluence of the owner's of the buildings were on direct show to the public. Art was also an extension of this show of wealth, buildings such as the Empire State and the Chrysler boast murals and sculptures in both glass and metal, these sculptural decorations were of course modernist in style, in keeping with the building exteriors. Architects demanded fresh images and forms to accent their towering skyscrapers and in rejecting historical ornament architects provided avant-garde painting and sculpture of the decade with a new vehicle for expression. Art in relation to buildings was favoured for another reason, painting and sculpture in particular were seen as softening the line between the harshness of the modernist forms and the more classical forms the public were use to. Art became the perfect mode of expressing the new modernist style with-in the bounds of its own classical heritage.

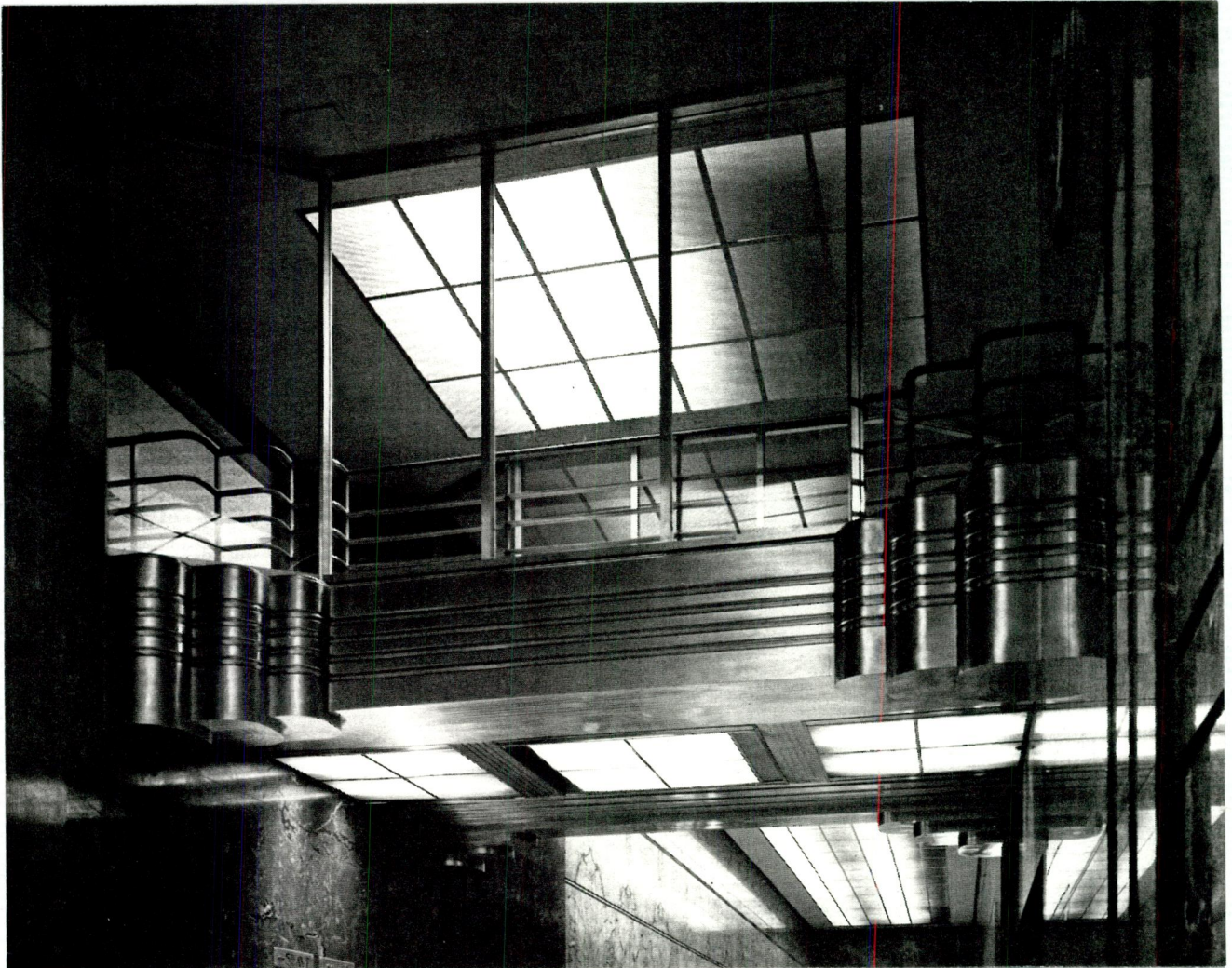


Fig.27 Empire State "Walkways"

COURIER



COURIER

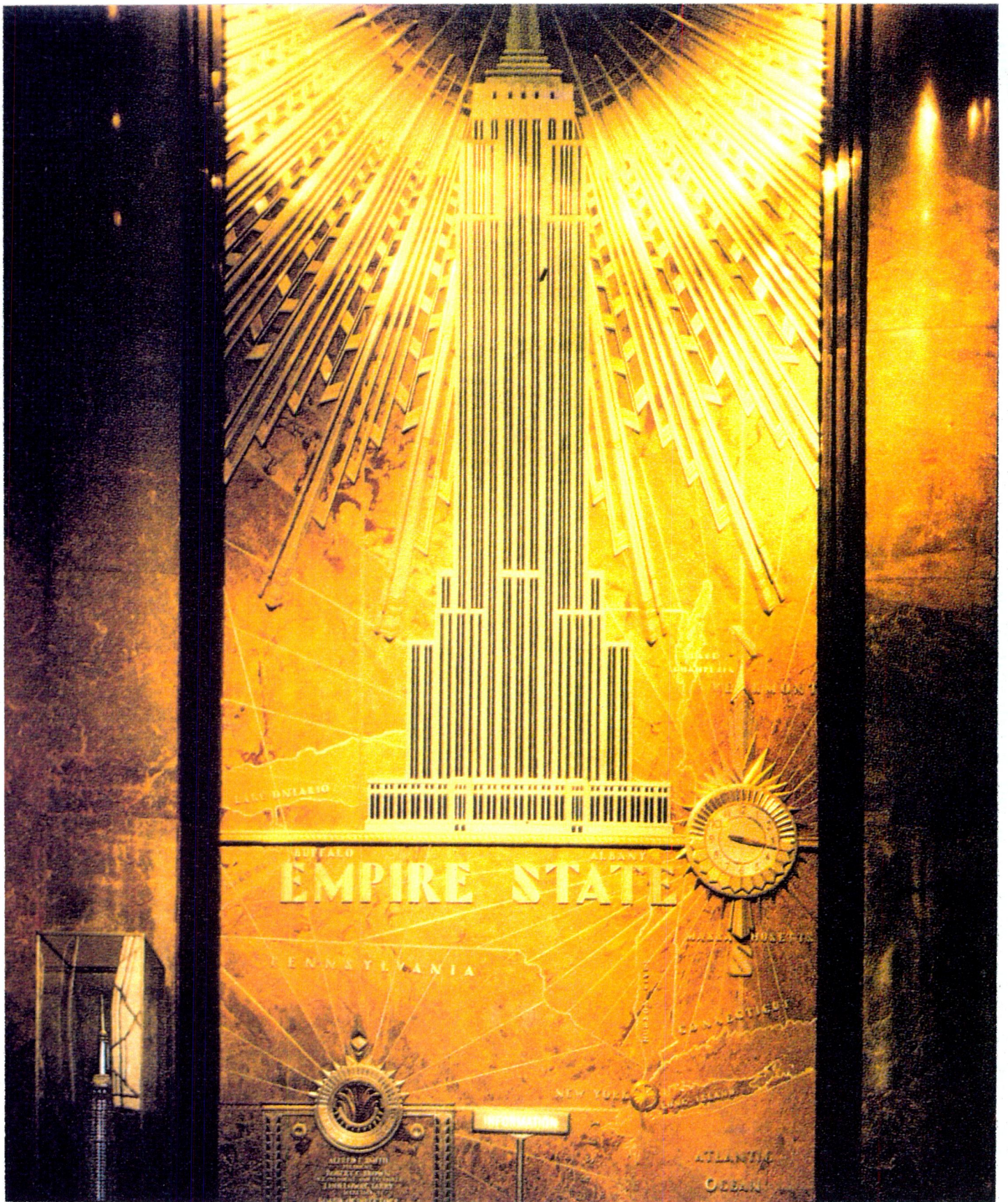


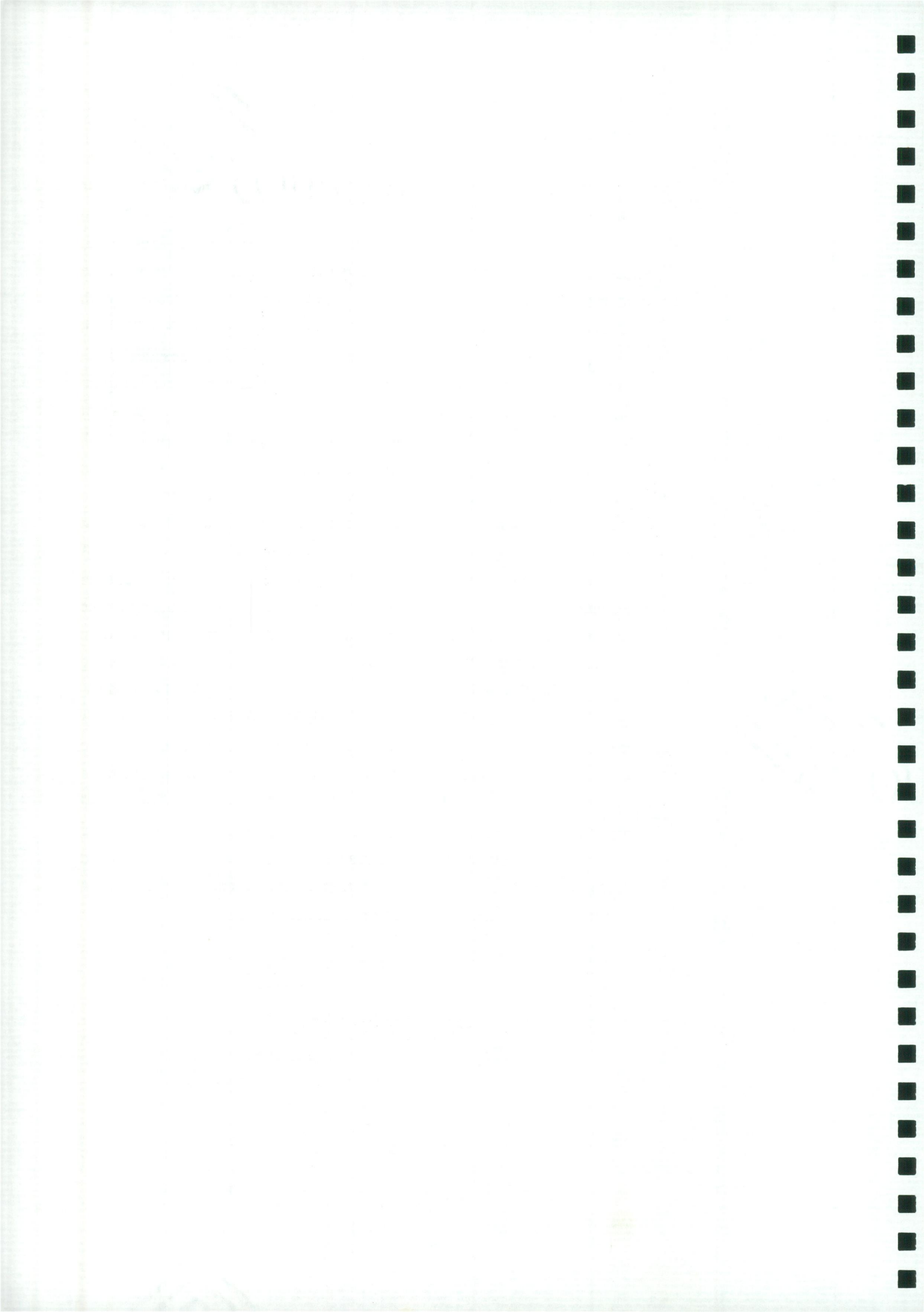
Fig.28 Detail of Relief Empire State



CHAPTER SIX
URBAN PLANNING

Skyscrapers became the icons of the futuristic and modernistic ideals that were prevalent throughout the twenties, buildings such as the Empire State with its mooring for airships were meant as monuments to a future that seemed just around the corner. And as skyscraper's were seen as the architecture of the future they became part of that great architectural myth, the belief in the "City of architecture", which simply put, is the belief that through architecture society can be rebuilt. In the two decades dealt with here the 1920 and 30s this myth gained much popularity because quite simply the average man needed only to look around at the skyscraper's that were springing up to glimpse the new social and architectural order which seemed to be coming. One of the main propagators of this myth in the twenties was the renderer Hugh Ferriss, as shown before in the visualization for the 1916 zoning laws, Ferriss had a poetic and visionary style that captured the imagination of the decade. In his book "The Metropolis of Tomorrow" which was published in 1929 to widespread public and critical acclaim, Ferriss dealt with a number of current buildings, such as The Chrysler and The Tribune Tower, as illustrations of a future city based on tendencies already seen in contemporary urban planning, such as the zoning laws, technology and the already recognised tendency toward centralization. Ferriss had a method of illustrating (Fig.29) that blocks and ignores surface detail and used dramatic light and dark areas that removed the buildings from mundane associations and placed them in a believable mythical twilight of a future age. In "The Metropolis of Tomorrow" skyscrapers are predominant, there are lofty gardens high above the teeming mass of transport which in themselves are split into levels for foot, rail and wheel. The city itself is split into zones business, art, science etc. against each illustration is a poetic description of the zones such as..

*Buildings like crystals
Walls of translucent glass
Sheer glass blocks sheathing
a steel grill.
No gothic branch; no Acanthus
leaf; no recollection of the
plant world
A mineral kingdom.
Gleaming stalagmites
Forms as cold as ice.
Mathematics,
Night in the Science Zone.
(Ferriss, 1929, p26)*



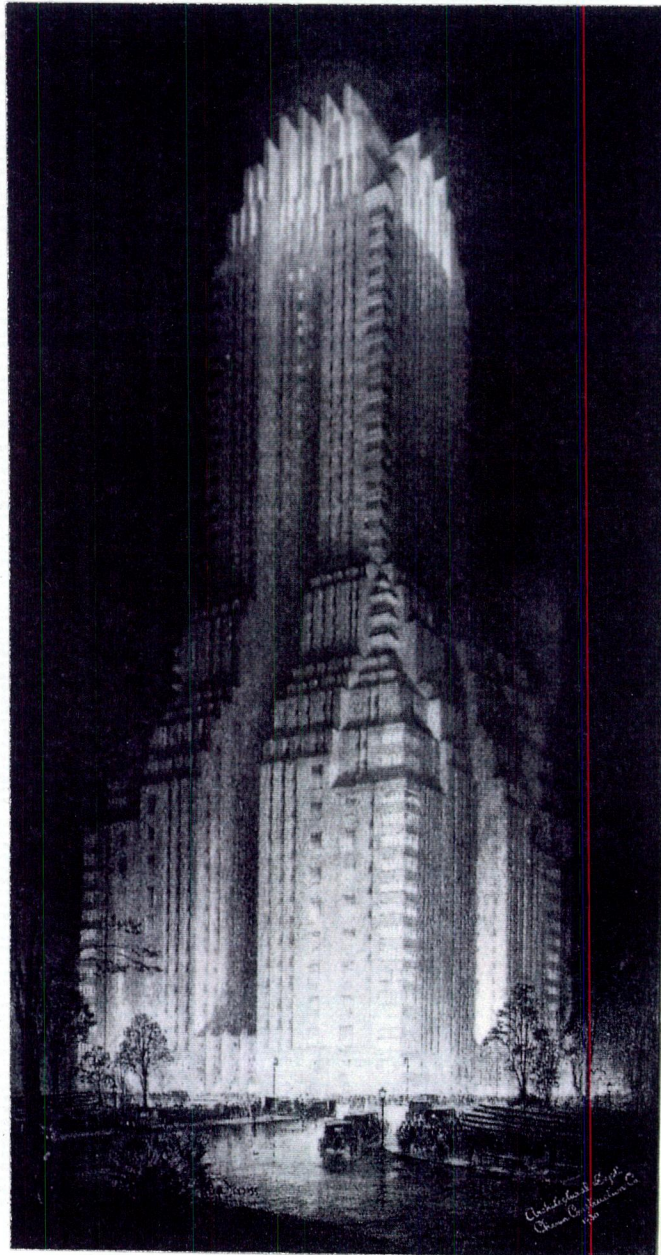
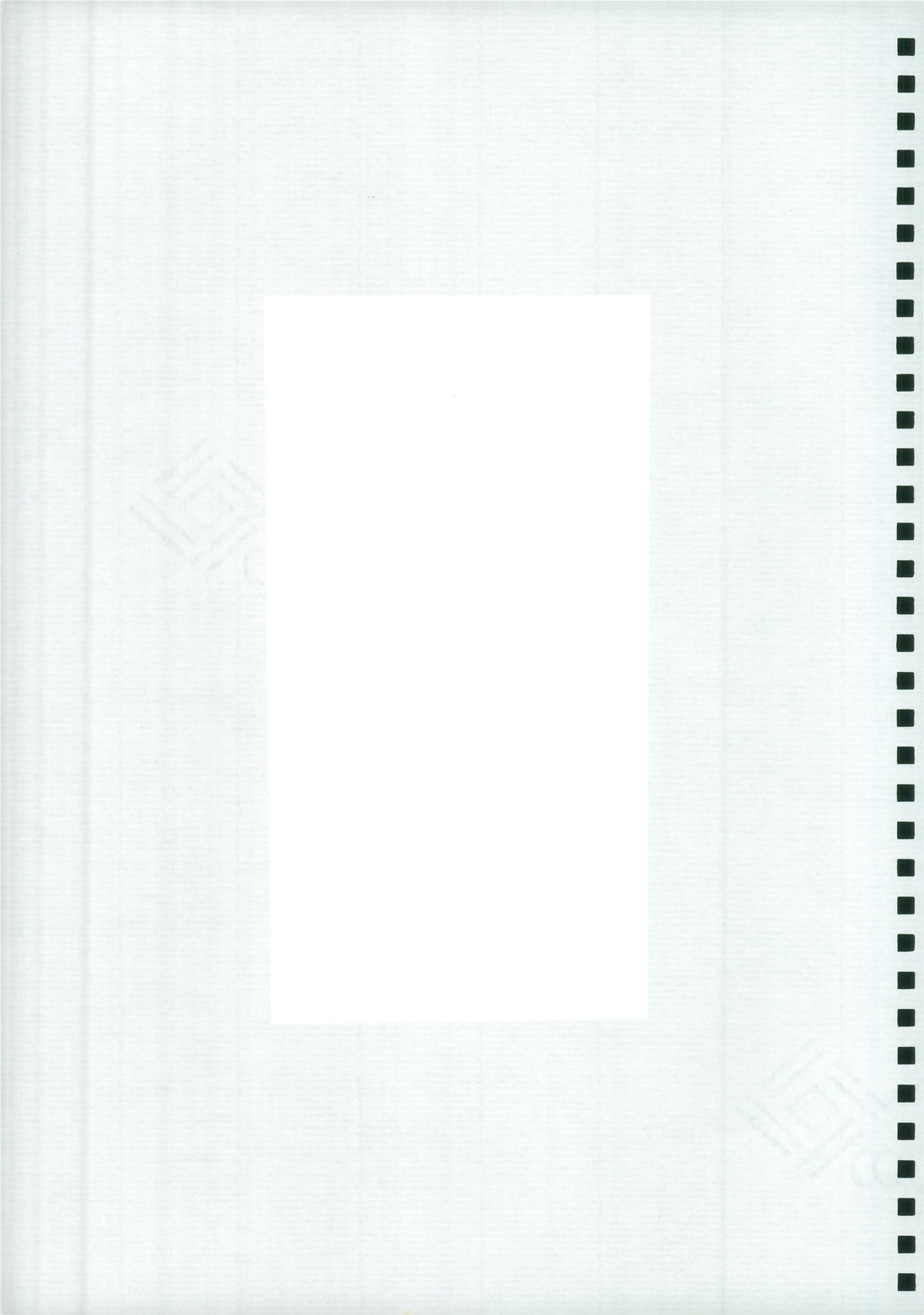


Fig.29 Hugh Ferriss illustration



This romanticised version of the future captured the minds of people. Here growing around them was the future. However Ferris's futuristic musing were devoid of human inhibitions. This gives his cities an image of order and rationality which it seemed echoed the need for reassurance which the scale and seeming endless possibilities for height, congestion and thus urban chaos had caused in the minds of the people. Ferris was a modernist and a utopian, these two are not necessarily connected though on first glimpse they might seem to be. He was a utopian who believed that the skyscraper in well planned groups and with urban planning would elevate the metropolitan chaos that was already beginning to manifest itself. And in his poetic illustrations shown below (Fig.30), Ferris's romance with the skyscraper causes it to be seen in the light of not only being the architecture of the present but of also being the harbinger of the future. Ferris was not some lone idealist visionary his ideas spread out over the architectural community to much critical acclaim and indeed reflected somewhat the ideas of Le Corbusier himself. At the same time Ferris book was published Le Corbusier's "Urbanisme" in its English edition was also published. The methods and approach of the future cities in the books were different but they were identical in their belief of the possibility of an urban utopia.

But why not the city of architecture- that is something built for perfect mechanical function in the service of man, with an over value of sheer pleasure giving beauty in buildings...Let the vision be of a city beautiful, clean walled, glowing with colour, majestically sculptural, with a lift toward the sky. Robinson & Bletter,1986, p83)

These beliefs that chaos can be avoided by either opening up the city i.e. to separate skyscraper's in open space (Le Corbusier) or by having a well planned transport system (Ferris) seems in hind-sight to be beliefs based upon a false assumption. The assumption that a rational structure could be imposed upon the city that would solve all problems. The belief still reigns today but the difference is that today we have a better grasp as to what a complex organism the city really is and that a limited order can be imposed but only to control direction not growth. And it is this growth that is the fundamental condition of the city. These architects predicted that chaos would reign unless control and thoughtful urban planning was started, they did not realise that maybe congestion was an integral part of a correctly functioning city not a barrier to it. This view was shared by one architect at this time, Raymond Hood. To Hood the city was a marketplace for ideas and

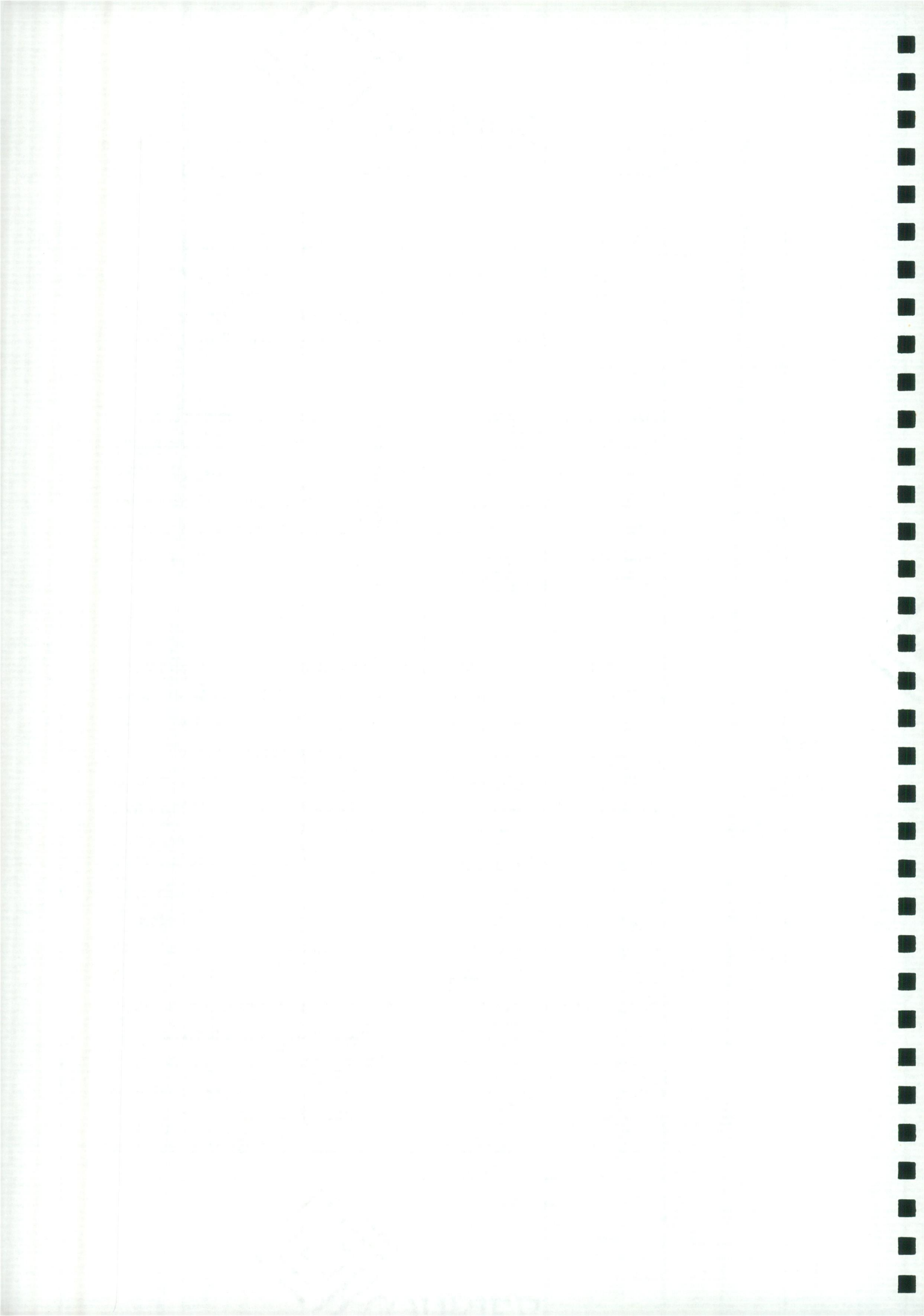
the much dreaded city of unplanned skyscrapers in Hood's eyes, so long as congestion was kept in control, would result not in disorder but in a greater vitality...

Congestion is good, New York is the first place in the world where a man can work within a ten-minute walk of a quarter of a million people.... think how this expands the field from which we choose our friends, our co-workers and contacts, how easy it is to develop a constant interchange of thought. (Goldberg, 1982, p24)

Hood's opinions may have seemed radical at the time but looking back at the banality of the Corbusian model and the cities and neighbourhoods based on them we realise that Hood's thinking reflects what we know today. Hood however did not believe that a city must be allowed to grow where and how it wills, his use of formal structuring in the Rockefeller Center shows how fundamentally he understood the planning of such skyscraper groups and the part they might play in the future of cities to come.

CONCLUSION

The skyscraper is a form of architecture that is monumental in both size and symbolism. In examining some of the effects of the skyscraper form on the culture of America and some of the effects of the culture of America on the skyscraper form. From the two major events that shaped the form -the 1916 zoning laws and the Chicago Tribune Competition- to the arrival of a European style of modernism that effected its ornamentation. The enormous effects of this form of architecture on the American psyche can be seen and in the reaction in the design community as it filtered down to the decorative arts. We see the birth of the modern movement as we know it in America. The skyscraper is a uniquely 20th century architectural form. And in its form, its ornament, its very presence it is a reflection of the society that built it. The golden years of skyscraper architecture -the 1920s and 30s shows this at its best, standing in the past one can see clearly the reflection of there respective decades on there facades. The Chrysler epitome as it was of the jazz age and 20s optimism to the Empire State reflecting in its ornament and facade the post-depression austerity of the 1930s One of the most important contributions of skyscraper architecture is its ability to be a mirror reflecting the society that built it. Skyscrapers are "barometers" to the forces of economic and cultural pressures facing there respective societies and this is as true today for Foster's "Commerzbank" and Nouvel's "Tour Sans Fins" as it was



for the Chrysler and Empire State. By examining the past let us hope that our understanding of these structures and the lessons learned will help us in the creation of skyscraper's that can stand the test of time as proudly and as honestly as those first created.

FINI.

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