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THE PUSH SKYWARD

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There is no argument that, after some dormancy, the skyscraper has once again become a flourishing and viable building type. After seeing a slow decline in its vitality and generation in the urban context, we have witnessed its comeback, this time rapidly proliferating across a global geography and confirming its allure as an urban edifice and that our infatuation with its being had never diminished. It is still able to captivate our imagination and vindicate its role as the single most important signifier of a vibrant and developing city. Despite its international and multicultural presence, its current ideological development has its immediate and inevitable lineage to the typology's historical positions vis-à-vis its evolution. To know where it is going and its immediate reasons for being, we must understand where it has been, warranting a look at the genesis of building tall.

The recorded history of the tallest structures built at the hands of man spans approximately 4,700 years. The pyramids in Egypt, with heights ranging from 62m to 146m, held the record for over 3 millennia as the tallest man-made structures until the medieval period when the Gothic cathedrals started to raise the bar on height. However, those load bearing stone buildings would ultimately limit obtainable height and prove to be restrictive due to the increasing weight imposed on the structure as they grew taller, thus most of the height gain for this period was achieved by the addition of steeples and spires on top of these ecclesiastical buildings. With their wooden framed structure, the spires were light in construction and thus able to achieve greater heights. One of the earliest spires, the 12th Century pyramidal spire on top of the Chartres Cathedral, reached a height of 105m. This trend of building taller spires would continue into the Renaissance period. During the 14th Century the spires would top out at just over 120m on the Salisbury Cathedral. However, it would not be until the late 19th Century, aided by the advancement of material and technology that a real breakthrough in buildable height would occur in the construction of the Eiffel Tower in 1889.

While material advancement and technology made the push for height possible, they were merely the facilitators of the true momentum behind building ever-higher structures throughout history. Arguably, the pivotal driving force was found within the desire and naked ambitions of man. The origin of this claim resides in the biblical story of Nimrod's kingdom:

"Then they said. Come, let us build ourselves a city, with a tower that reaches to the heavens, so that we may make a name for ourselves and not be scattered over the face of the whole earth." (Genesis 11:4)

...And so it began, the Tower of Babel, built in the city of Babylon with its top "in the heavens," not for the worship of God but instead dedicated to the glory of man - man's desire to build skyward as a testament to himself. In this Biblical story, God thwarted the attempt to build a monument to man in the fall of Babel; it nevertheless marked the symbolic beginning of man's desire to build tall structures. What drives this desire? Ambitions propelled by the politics of power, stature, status, and economics. Even in the religious buildings of the early Gothic to Renaissance periods, despite their purportedly spiritual groundings in religious order, the ever higher reaching spires on those churches and cathedrals were not just a symbol of piety, but were often seen as testaments of the wealth and prestige of the order, or patron, who commissioned the building.

It is with the above understanding of ambitions that Gustav Eiffel's tower came to be. It originated as a competition entry launched by the *Journal Officiel* for the erection of a tower for the *Exposition Universelle of 1889* (World's Fair of 1889), a date that also marked the centennial of the French Revolution. The tower's design carried neither clichéd cultural identifiers nor functional intent. Being a static structure, its design simply sought delight in reaching skyward and in the colossal. It would rise 312m (original height) and dominate as the tallest manmade structure in the world for four decades. Due to its lack of functional purpose, questions were raised about its validity as a signifier of a city, a country and its culture. However, in its realization and its awe-inspiring height, the Eiffel Tower proved the ingenuity of its designer and would receive acceptance and overcome many initial criticisms to become a national icon of France, embodying the pride of the culture and its people. While the Eiffel Tower marked the crowning achievement of Gustav Eiffel's engineering and entrepreneurial career, the benchmark of the tower's success in history would not be measured merely by the ambitions of one man and his ingenuity in engineering, but rather by the a structure's ability to project socio-cultural

status, political, and economic prowess. Arguably it is these signifiers that propelled the Eiffel Tower onto a world stage to make it one of the most recognizable structures in the world.

Recognizing the complexity of symbolisms associated with the Eiffel Tower across the sociopolitical spectrum, over time an understanding developed that these tall structures could be realized beyond their mere humanistic dimensions and ride on the undercarriage of economic and political representations and ambitions. Seizing upon this propagandistic potential, Vladimir Tatlin, painter and architect and a key figure in Russian Constructivism, utilized this force in his design for the Monument to the Third International in Petrograd after the 1917 Bolshevik Revolution. Designed as an antithetical response to Lenin's "monumental propaganda" programme of 1918 where the tsarist statuaries would be replaced by conventionally styled Bolshevik monuments. Tatlin's design was to be a bold utopian vision and in the words of the famed Russian art critic, Nikolai Punin, "a synthesis of the different types of art." Completed in 1920 as a riposte to Gustave Eiffel's tower not only in height, at 400m it would be 76m above the Eiffel tower, but also in the tower's intended purpose, this time as a utilitarian device. By integrating programmed functions of congress, conference, office and administrative activities it would have been the operational headquarters of the Communist International (Comintern). The introduction of utility to the tower's design propelled the structure beyond mere monumentality to further the already projectively complex object and established a new purpose for being for these extremely tall structures - a functioning building. Though not realized, Tatlin's intentional use of the tower as a device for propaganda cinched a future outlook and furthered the ambitions for such tall structures that would become a primary driving force for its existence throughout history, holding true even today. If realized, its immense height, light steel frame structure, glass enclosure, and functional objective could have perhaps qualified it as the first true skyscraper.

While Tatlin's Tower conceptualized the integration of utility with monumentality in seeking severe height achievements, the tall building as a functional building typology actually saw its physical birth halfway around the world about three decades prior in the United States. Though not the first metal skeletal structure (that title goes to Ditherington Flex Mill built in 1797), the Home Insurance Building in Chicago built in 1884 and designed by William LeBaron Jenney is often referred to as the father of the skyscrapers with its full load-bearing structural steel frame (contested) and elevators. Conceived as a fully efficient and functional office building, at only 42m in height, whether deserving of its title or not, it would come to represent the economic and commercial ambitions of the American metropolis and later the corporatization of the American companies and work force.

If human ambitions, religion, political oligarchy and ideologies sowed the seeds for the sprouting of tall structures in the form of iconic monuments, capitalism offered a new framework for thinking about the genealogy of these tall structures as iconic buildings. Already accepted as feats of engineering, hubris of man, social catalysts, political will, and propaganda device, capitalism blanketed all of that with the paramount objective to utilize these tall structures as economic symbols and engines. Nowhere was this objective manifested more clearly than in the U.S during the fertile period before WWI and after WWII when economic expansion and growth, guided by capitalism, saw the transformation, expansion, densification, and modernization of major U.S. cities. With the city now as the center for economic activities, available land became extremely expensive. Aided by the invention of the elevator as a building system, the skyscraper emerged in the U.S. as a totally new type of urban building - a byproduct of industrial capitalism remaking the entire economic framework governing the real-estate market in these cities.

Once rooted, the typology would evolve rapidly in the U.S. Backed by capitalistic ideology of the free market system and its abundant resources, U.S. cities were the most fertile ground in the development of these tall buildings which still stand as signifiers in the cities for which they reside today. With the removal in 1892 of the building and zoning regulations that previously made steel framed constructions impractical in New York City, the typology would offshoot from Chicago to New York as the lead city in its development and evolution. In the decades between 1890 and 1920, towers would reach never before seen heights with the construction of buildings such as the Masonic Temple in Chicago (1892, 100+m) and the Equitable Building in New York (1915, 164m). In 1929, four decades after the Eiffel Tower, the Chrysler Building in New York City would surpass 319m and claim the title of the tallest structure and building in the world. Despite a primary building focus on Chicago and New York, further offshoots of the typology would also reach other fringe U.S. cities during the early decades of the 20th Century. By mid-century, fully taking advantage of their economic symbolism, skyscrapers would come to be recognized as economic strength and corporate dominance. It would also see the race for height top out at 381m in the construction of the Empire State Building in 1931. As with the Eiffel Tower, the Empire State Building would hold its title for just over four decades until it surrendered to One and Two World Trade Centers in lower Manhattan, which briefly held the title until the completion of the Sears Tower in Chicago in 1974 at 442m. The title for the tallest building would not return to New York City again.

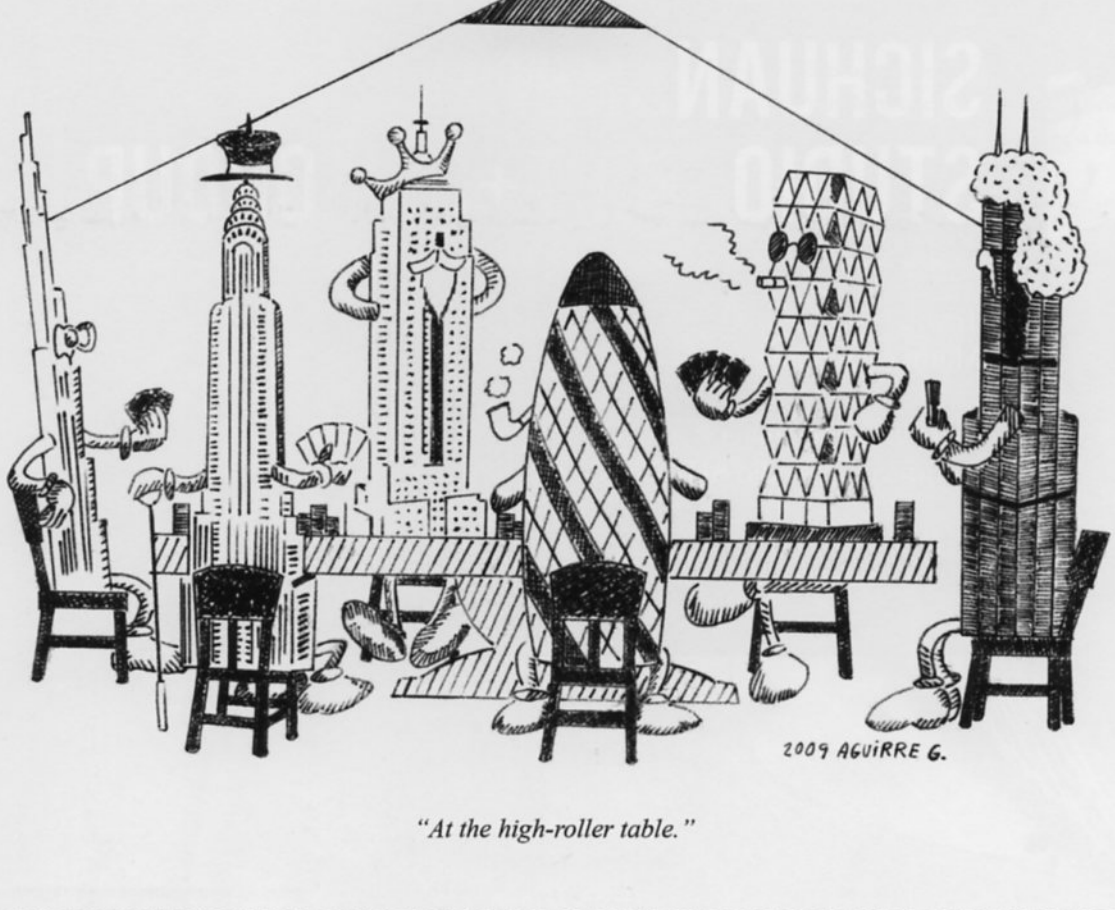
Even though the race for height met its limits by the second half of the century, the typology would continue to evolve in its aesthetic transformations. The first half of the 20th Century would see the design of these towers shift from the historically striated, Gothic inspired aesthetics to what many consider to be the most spectacular era of skyscraper design, the Art Deco period of the 20's and 30's. Later, the 60's and 70's would come to be dominated by a modern language of the smooth crystallized curtain wall designs merging with the sky not only through height but also through reflectivity of its materiality. With the stagnating economy and inflation of the 70's followed by the recession of the early 80's, the thrust to build skyward would stall. The few skyscrapers being built then would see a return to the historically inspired language that would come to mark the era of the postmodern towers. While facing economic demise, the typology, like a rhizome, sought out new fertile grounds to nourish its existence. While the U.S. developments slowed in the last decades of the 20th Century, the rhizomatic offshoots of the typology began to take root in many other developing/developed cities and economies across geographical divides on the world stage. Throughout the second half of that century, global cities such as Moscow, Tokyo, Toronto, Hong Kong, Singapore, Frankfurt, Melbourne and many others would all see new sproutings of skyscrapers. As the design of the skyscrapers had previously been catalogued by their periods of aesthetic transformation and exuberance, the current design thrusts, armed with powerful digital tools and guided by digital intelligence, seek new expressions of height that defy traditional classification and categorization. They are, nonetheless, an archetype allowing their real fulfillment to be simultaneously brash, complex, paradoxical, polemical, and poetic.

Nearing the turn of the new millennium, skyscrapers would witness a renewed race for height. The Chicago Sears Tower would surrender the title it held for over two decades to the Petronas Towers in Kuala Lumpur in 1998, topping out at 452m. Directly following were towers erected in Guangzhou, Shenzhen and Shanghai, in 1996, 1996 and 1999 respectively, entering the race for height and adopted into the world's top ten highest building ranking. New York would continue to have three towers represented in the top ten and Chicago only one, but none would be built in the U.S. after 1974. The millennium milestone would mark the end of the skyscraper as a quintessentially American phenomenon where the skyscraper's future was surrendered to the global community. As we near the end of the first decade of the new millennium, a global skyscraper stage is becoming increasingly clear with the Willis

Tower (Originally the Sear's Tower) as the only U.S. height holding on the top ten tallest buildings list (accounting for the destruction of One and Two World Trade Centers) while the other nine are spread across two continents and eight cities (Petronas Tower being counted twice). It is also important to note that never before in the evolution of this typology has it witnessed the incredibly shortened time span between the transfers of the height title. It is expected that the title will transfer three times in the span of a decade when the Burj Dubai is completed at the end of 2009 (projected.) It is important to keep in mind that that the title was relinquished only four times in a century of progress and evolution in building tall (Eiffel Tower to the Petronas Tower.) With the end of the first decade of the 21st Century, it would offer witness to a massive growth of the typology spurred by economic expansions across the globe. From 2000 to 2009 the Council on Tall Buildings and Urban Habitat recorded the completion of 61 new skyscrapers ranked in the list of 100 tallest structures in the world, 21 of which are in Chinese cities and 23 of which are in United Arab Emirates. The second decade of the 21st Century already holds a projection of two height title transfers with planned projects.

To say that skyscrapers developed merely as a by-product of economy, efficiency, and productivity would be to shortchange the true complexities and reasons for being of these tall edifices. In addition, as history continues to evolve for these structures, we will continue to understand that the forces at work in reinforcing, shaping and justifying the future of the skyscrapers haven't changed. They will guarantee its continued proliferation and growth. As much as they continue to evolve and mutate in their formal manifestation, they inevitably all share the same genealogical tracings. Height representing power, drama, prestige, narrative, and glamour still hold the same symbolic references after millennia of human, societal and cultural evolution. The U.S. once enjoyed the gaze of the world for being the proving ground of these tall buildings, but a shift has occurred across geographical and international boundaries with other aspiring nations seeking to propagandize their developing status on the world stage through the erection of ever taller and more expressive towers. It is for certain that the skyscraper typology will continue to seek ever-new soil to sprout and flourish. To ask if these edifices are necessary would be to question both the purpose of man, and everything they have come to symbolize about humanity since Nimrod's desire to build the Tower of Babel as an icon to gather its people. It is with this perspective that we must view the skyscrapers of the past, the present, and the future. The skyscraper narrative reinforces a slow erosion of the divine doctrines from the story of Babel and illustrates man's desires and ambitions to continue to reach higher towards the heavens, as if to confront the once ruler of man in a show of defiance and disobedience.

(1) Gustav Eiffel, "The Tower Stirs Debate & Controversy: Eiffel interview in Le Temps summing up his artistic doctrine," La Tour Eiffel, 14 February 1887, 5 October 2009 <http://www.tour-eiffel.fr/teiffel/uk/documentation/dossiers/page/debats.html>.
(2) Charles Gounod et.al., "The Tower Stirs Debate & Controversy: Protest Against the Tower of Monsieur Eiffel," La Tour Eiffel, 14 February 1887, 5 October 2009 <http://www.tour-eiffel.fr/teiffel/uk/documentation/dossiers/page/debats.html>.
(3) Brian Dillon, "Poetry of Metal," guardian.co.uk, 25 July 2009, 5 October 2009 < http://www.guardian.co.uk/books/2009/jul/25/vladimir-tatlins-tower-st-petersburg>.
(4) Historical and Future Tallest Buildings in the World: 2000," Council on Tall Buildings and Urban Habitat, 5 October 2009 <http://www.ctbuh.org/Portals/0/Tallest/CTBUH_Tallest_2000.pdf>
(5) Historical and Future Tallest Buildings in the World: 2010," Council on Tall Buildings and Urban Habitat, 5 October 2009 < http://www.ctbuh.org/Portals/0/Tallest/CTBUH_Tallest_2010.pdf>



"At the high-roller table."

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