

Preservation, Restoration & Expansion within the Metropolis

The rapid densification of metropolises, has increased the need for expansion and generation of residential and commercial spaces that meet the growing demand within the cities. While expanding towards the outskirts of a city has been an initial solution to meet the needs of an ever-growing population; it has taken a toll on our natural environment, considering the amount of land seized for construction. On the other hand, expanding toward the heavens has been a popular method of construction that reutilizes a set built ground and provides a sustainable solution for the growth of a metropolis, with the capacity of recovering green space throughout the different levels of a building. Historic heritage sites are starting to recognize the potential of buying or selling their air rights in order to preserve and restore their historic ground, and allow the expansion of the city through their air space.

Manhattan, considered as the most densely populated borough of New York City, is a clear example of a metropolis that has struggled with intense fluctuating densities throughout its history. According to NYU research scholars Shlomo Angel and Patrick Lamson-Hall, densities in Manhattan had reached its peak during the 1910s, and declined afterward. Some of the reasons that decongested the overcrowded neighborhoods in Manhattan were “the annexation of Brooklyn, Queens, the Bronx and Richmond County to Manhattan in 1898; the creation of vast new areas for urban expansion in the 1900 Topographical Bureau plan; and the building of the subway system from 1904 onwards”¹. Solutions that allowed the population to afford a living at the urban edge while still being able to work in Manhattan. However, the decline in density halted during the late 1970’s and has been growing ever since, thus requiring newer solutions.

¹ Shlomo Angel and Patrick Lamson-Hall. The Rise and Fall of Manhattan's Densities, 1800 – 2010. Marron Institute of Urban Management. November 2014. http://marroninstitute.nyu.edu/uploads/content/Manhattan_Densities_Low_Res_1_January_2015.pdf



Figure 1: Article from The New York Times depicting the struggle of historic heritage sites during the 1900's.²

During the early 1900's, several historic structures in Manhattan were demolished in order to accommodate buildings that would hold up to the intense development climate of the city. Considering the lack of designated city landmarks during this period; the thought of preserving a building due to its historic significance and beauty was not considered essential to the city's interest of expansion. However, historic buildings such as The Second Church of Christ Scientist, were preserved after the surrounding community pressured for their protection and preservation as a landmark. These communities accentuated the importance of historic heritage sites within their neighborhoods and throughout the island of Manhattan.

² Maitland, Leslie. "Church on Park Debating Plan for Demolition." *The New York Times* (New York City, May 1982). December 6, 2016. <https://www.landmarkwest.org/church-on-park-debating-plans-for-demolition/>.



Figure 2: Analytical mapping of modern Manhattan illustrating the varied densities of the island and indicating the historic houses of worship throughout the west urban edge.³

As cities like Manhattan continue to densify and the cost of preserving older structures increases; historic heritage sites are starting to consider negotiating the air rights of their existing structures. Air rights have become a vital part of modern city sustainable development as well as a preservation tactic due to its overall benefits, including its design opportunities and flexible characteristics. Negotiating the air rights of a historic building gives the opportunity for the city to preserve a heritage site. In addition, the historic building can direct the funds of the transfer towards its renovation and considerably lessening its mortgage and the buyer would be able to further expand their business vertically on a space that otherwise would have never been used by the historic structure. Overall, it's a mutually beneficial situation that allows sustainable expansion and preservation by reutilizing an existing constructed area.

³ David Gomez and Matthew Hewett, "Gaudium Et Spes", Digital Image (Gainesville: University of Florida, 2017)

Analyzing a metropolis such as Manhattan allowed us to comprehend the historically and culturally rich macrocosm of infrastructure it possesses. Among its districts, the Upper West Side is characterized by its low-rise townhouses, intellectual and cultural hubs and historic heritage sites that share their urban edge with Central Park West. These qualities allow the district to be considered for future vertical expansion. The architect Claire Weisz, who researched the Upper West Side area for the potential future of a new skyline claims “Central Park West is a grand proscenium marking the threshold between park and city, an open volume and the city’s dramatic built mass.”⁴. Weisz emphasizes the importance of developing the threshold between Central Park West and the Upper West Side’s historic urban edge.

The Gaudium et Spes tower is a response to the historical and cultural context of Manhattan, incorporating the modern studies of potential vertical expansion throughout the city. The building makes use of the airspace above the historic Second Church of Christ Scientist; aiming to preserve the church and its key features including its materiality and original design. The tower highlights these features through experiential spaces within the structure. Signifying “Hope and Joy”, the historic building allows its existing qualities to influence the design of the tower, giving a sense of place and belonging. These relationships create a visual relation and contrast through the elliptic artifact that punctures the entire axis of the building, and originates from the inversion of church’s existing dome. These sets of spaces would revitalize the church through community engagement and activity within the natural environment. Species of grass and trees inherent to Central Park would mimic the seasonal moods of the indigenous flora, allowing the public to experience a local phenomenon within a vertical space.

⁴ Claire Weisz, *Central Park West Skyline Potential Futures*. Landmark West. March 2009. <https://www.landmarkwest.org/central-park-west-skyline-potential-futures/>.



Figure 3: Exterior view of Gaudium et Spes portraying the overall urban context.⁵



Figure 4: Access perspective of Gaudium et Spes depicting the main entrance and interaction with the church's materiality throughout the design.⁶

⁵ David Gomez and Matthew Hewett, "Gaudium Et Spes", Digital Image (Gainesville: University of Florida, 2017)

⁶ David Gomez and Matthew Hewett, "Gaudium Et Spes", Digital Image (Gainesville: University of Florida, 2017)

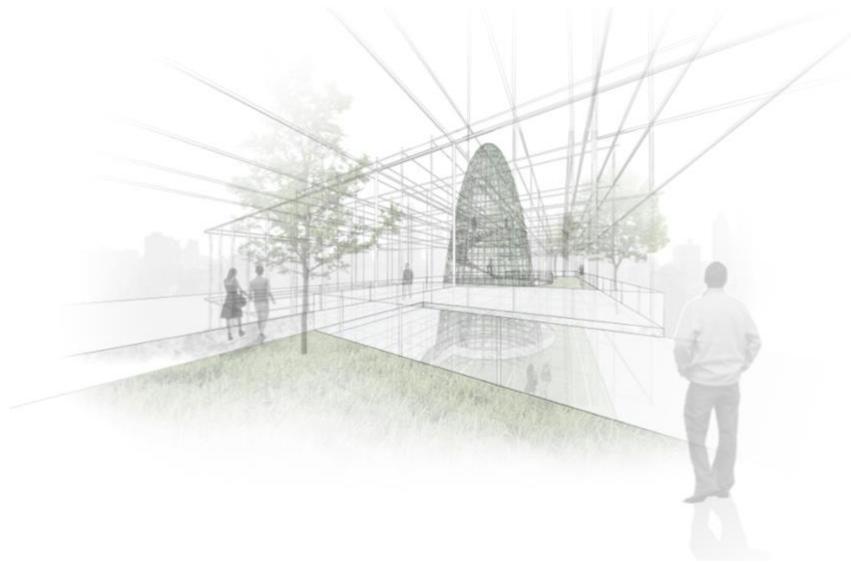


Figure 5: Gaudium et Spes top level perspective, illustrating an experiential extension of the existing church dome through a natural environment against the cityscape.⁷

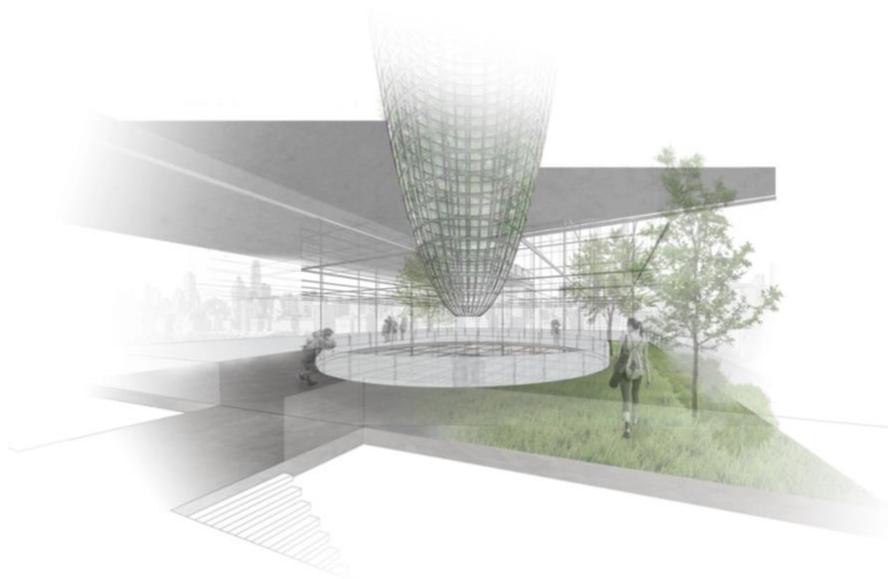


Figure 6: Gaudium et Spes interior garden perspective, depicting the moment of interaction between the existing church dome and the inverted artifact dome.⁸

⁷ David Gomez and Matthew Hewett, "Gaudium Et Spes", Digital Image (Gainesville: University of Florida, 2017)

⁸ David Gomez and Matthew Hewett, "Gaudium Et Spes", Digital Image (Gainesville: University of Florida, 2017)



Figure 7: Section perspective of Gaudium et Spes depicting circulation and historic influence of the church throughout the design.⁹

The continued densification of cities like Manhattan require a viable solution to satiate the demand of an ever-growing population. Utilizing the air rights of heritage buildings in a sustainable manner provides several benefits that allow for the restoration and preservation of historic heritage sites and a chance to recover lost green space through a vertical intervention. The contemplation of the cityscape and variety of architectural solutions within Manahattan allows the Gaudium et Spes tower to set an example as a design intervention that incorporates its historic context to generate a set of vertical spaces that not only generate experiences that invite the public to reconnect with nature, but allows the existing qualities of a historic building to be incorporated within the architectural design.

⁹ David Gomez and Matthew Hewett, "Gaudium Et Spes", Digital Image (Gainesville: University of Florida, 2017)

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