Spring 5-1-2018

Contemporary Preservation

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Abstract

Architects are redefining how preservation can act in contemporary culture. Traditionally, preservation has been used to isolate and protect; freezing a building in its decayed state or in its original inception. Typically, preservation is only applied to culturally significant buildings. Obsolete typologies often do not fall under this category; therefore, they are destroyed to make way for the next best innovation. As such, innovation has been viewed as separate from history. Contemporary societal issues, such as climate change, drive us to reconsider this separation and embrace architectural methodologies that value cultural heritage.

This thesis aims to use contemporary ideas of preservation in the transition of post-industrial buildings by accounting for the potential loss of cultural heritage. Architectural methodologies of preservation and redevelopment must change in order to consider not just the 'hard' conditions of a building as an object of preservation, but also accounting for the 'soft' conditions of its cultural heritage; to understand how culture is embodied in the built environment. Doing so allows any intervention to act along various scales and have a more fluid relationship with the cultural landscape of a given site. The processes involved must work through all modes of preservation practices and focus on contextualizing the intervention.

This project will preserve the cultural heritage of Red Hook, Brooklyn by giving the neighborhood a symbol of its industrial heritage. This symbol will be transformed to address the contemporary needs of the neighborhood and thus, create ways for it to become resilient. As a manual of *Contemporary Preservation,* this project addresses how contemporary societal needs are changing and how design through preservation can provide a necessary safe haven that addresses both societal issues and the maintenance of cultural heritage.

Executive Summary

The fringes of our cities are teeming with obsolete post-industrial structures currently facing redevelopment, as cities grow through demolition in light of rapid innovation. If architects do not recognize this trend and account for the "soft" aspects of architecture, we will be facing a tremendous loss of cultural heritage and resilience efforts. This trend can be addressed by re-conceptualizing our ideas of preservation and adapting them to contemporary culture as a manifesto for the future.

Historically, obsolescence transitioned forward though destruction and rebuilding. Preservation is rooted in restoration and conservation practices to freeze and preserve. Today leading experts in the field of historic preservation look to re-imaging buildings to address contemporary needs rather than saving artifacts as landmarks. Moving forward *Contemporary Preservation* aims to inform architectural practices through addressing both the 'hard' and the 'soft'. It incorporates the influences of cultural heritage by embracing resilient ideologies that address the impact on natural systems in relation to humans and machines. This project calls broadly for zoning policies that retain cultural heritage by creating a manual that can direct future architectural innovation. In this thesis, this is accomplished through the design of a project revolving around the *Contemporary Preservation* of an abandoned grain elevator along the waterfront of Red Hook, Brooklyn.

This project, acting as a manual informed by *Contemporary Preservation*, focuses on a mechanical structure that was never made for human habitation and a landscape that contradicts the natural ecological systems of the site. The transition of the grain elevator in its current setting will solve contemporary societal issues that are present within many post-industrial sites and create incentives for developers to invest in under-utilized communities by creating a safe and

accessible waterfront with the dual function of protecting and serving the community during flooding crises.

The manual proposed here extends Le Corbusier's manifesto on architecture, where in *Towards a New Architecture* written in 1931, he states "thus we have the American grain elevators and factories, the magnificent first-fruits of the new age" (Corbusier and Etchells 2014). This thesis takes a step further to future needs of contemporary societal needs by using new ideas of preservation to re-imagine machine structures so that they benefit the surrounding community; in a sense creating a new machine that relates back to the natural organic systems that societies face as a result of climate change.

While considering the project's successive authorship, the intervention logic stems from a strategy of combining both mechanical alleviation of water level rise and a person's visual connection to rising water as he/she is being sheltered from a storm. In the transition to a contemporary waterfront, the site will enable the community to address a new set of societal issues while also strengthening the architectural fabric that lies within an obsolete post-industrial structure. The project goes beyond the concept of buildings acting as a machine in pure mass with a singular function, but instead works towards a future of post-industrial sites which connect back to their social, cultural, historical and environmental impact.

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Introduction

This thesis project considers how contemporary culture is changing our notions of preservation in architecture. The project will act as a part of a larger manual that will combine overarching ideas generated from the thesis as they apply to *Contemporary Preservation*. The implementation of *Contemporary Preservation* will function as a strategy moving forward for both architects and developers, enabling them to re-conceptualize their building culture with contemporary urgency in mind. The inspiration for the project came from a quotation by Rem Koolhass, "Architecture is saved from obsolescence and appears contemporary as it is framed and re-framed by preservation as culturally significant" (Koolhaas 2016). In *Preservation is Overtaking Us,* Koolhass claims that preserving structures which are currently no longer being used can be reconsidered for reuse in contemporary culture through both traditional and new acts of preservation (Koolhaas 2016).

The concept of preservation has evolved over time and now has the potential to influence the way in which we primarily build today. Moving forward, it is crucial to keep sustainable design practices in mind, in terms of building construction, building reconstruction, and the relationship of buildings to their existing landscape. Using a different design perspective, which incorporates contemporary societal issues, projects that deal with an existing building fabric must consider its historical heritage before developing a new building's formal logic, technical systems, and landscape strategy.

History of Preservation

Traditionally, the idea of preservation has been used in architecture to freeze historical artifacts that society deems valuable. Buildings not seen as worthy are destroyed and built a new. Historically, the reaction to obsolescence is for master planners or developers to destroy in order to make way for the next innovation. This methodology was used on Penn Station in the 1960s, which resulted in New York City losing a critical artifact of its cultural heritage (Kimmelman and Chakrabarti 2016). At that time, Jane Jacobs became one of the leading figures who helped to preserve portions of New York City from destruction. Jacobs believed that emphasizing the preservation of a neighborhood's walk-ability and social character was essential to future design (Jacobs 1992).

Investing in experimental preservation practices can be worth the risk since it can result in both private and public investment in the value of history. Beyond historical landmarks, *Contemporary Preservation* creates experiences that connect history and culture, creating a unique, rare and individualized relationship to the surrounding context and the human inhabitant. Preservation can contribute to changing our current methodology of innovation, often guided by destruction. To begin, however, it is important to recognize how preservation has been understood historically from the leading figures in conservation, restoration, adaption, and experimental preservation. The following schematic timeline categorizes these leading figures according to their respective definitions of preservation.

Restoration practices were the initial definition of preservation. Eugene Viollet-le-duc, a French architect and theorist who played a major role in the Gothic revival, understood preservation as a restoration practice to maintain, creating an indistinguishable new from the

original. In other words, preservation restores a building to its original state. In the case of Medieval Narbonne Gate in France, the building showcases the original base and an upper addition and thus, is made to look as if it was part of the original building, instead of two separate pieces. Ultimately, the building was restored by rebuilding portions to make it look as if it had never been touched (Eugene-Emmanuel 1996).

Conservation is the most common understanding of preservation today. John Ruskin, depicts in his book *The Seven Lamps of Architecture*, that preservation allows for decay of a building (Ruskin 1961). This is in opposition to Viollet-le-duc, in that to intrude upon something of historical significance will undermine the value and tamper with the beauty of an object's or building's history. Thus, conservation combats ideas of restoration, since it assumes that restoration efforts lack integrity. Ruskin believed that allowing the materials to be true to their properties gives them integrity and is what creates beautiful architecture (Ruskin 1961). Matera Castlein in Cadiz, Spain represents his notion of conservation well, since after its partial collapse, which dated back to the 9th century, it has undergone reconstruction in order for the building to remain, paying homage to its original existence, yet the new construction is distinct (Franco and Watkins 2016).

The notion of adaptation today has been framed as connected to contemporary societal issues of climate change and gaining greater capital. Lilian Wong, author of *Adaptive Reuse: Extending the Lives of Buildings,* understood preservation to be the reuse of pre-existing structures for new purposes, most of which are market driven (Wong 2017). Concerns about climate change has shifted the ideas of renovation and refurbishment towards reuse of underutilized buildings or materials serving a new purpose, making connections across time and space (Wong 2017). Norman Foster's the Reichstags in Germany, is one of the first examples of

adaptation in the 20th century. The design proposed a large steel glass canopy, which complements an understanding of history, and commits to accessibility of the public yet still embracing a vigorous environmental agenda (Douglass 2015). Norman Foster's Foster Foundation is set up on the principles of helping "new generations to be better prepared to anticipate the future, especially in times of profound global uncertainty—in particular those professionals who are concerned with the environment" (Foster n.d.).

These traditional concepts of preservation are in need of a new definition. Current practices of rebuilding from scratch, for efficiency and financial reasons, are causing cities to lose their cultural identity. Jorge Otero-Pailos argued that preservation must critique ideas of adaptation and use experimental strategies to preserve heritage (Otero-Pailos, Langdalen and Arrhenius 2016). The Fondazione Prada is projected in a former industrial complex, where new and old combine materialistically and spatially to display artwork. An example of this type of preservation is the Prada Foundation in Milan by OMA, Office of Metropolitan Architecture. The additions include a cinema, a gallery, and a tower which are integrated into the existing fabric of historical industrial buildings (Fondazione Prada / OMA 2015). This project goes above and beyond adaptive reuse by adding additional building, experimenting with materials and new program to a site which was original industrial and has been turned into a museum.

Contemporary Preservation

To inform architectural practices, architects need to account for both the hard (built) and the soft (cultural) conditions. This concept follows Emily Radosavljevic, who states in *Re-Imagining Workers' Clubs in Moscow* that "the life, shape and forms of the buildings are made through their socially-embedded, symbolic and performative aspects which are actively created and re-formed by users and inhabitants of a building," thus advocating for the building as an extension of the heritage (Radosavljevic and Dixit n.d.).

As contemporary societies face climate change, it is essential to rethink building practices. Not only are we creating a larger carbon footprint by destroying and rebuilding but if we continue this behavior our cities will lose their industrial and cultural heritage in the process. The world can benefit from a new definition of preservation in architecture by embedding culture into our sustainability methodologies. *Contemporary Preservation* questions current architecture practices by considering ideas of successive authorship, heritage policies, and permanent assets when thinking about building design.

Successive authorship can be used to understand notable historical architecture and to speculate on its continuous evolution. For example, Saint Peter's Basilica, located in the Vatican, showcases a rich level of authenticity. The original Basilica was created by Emperor Constantine the Great and resembled a typical basilica of the time. In the late 15th century it was in a state of disrepair until Pope Julius commissioned the new edifice churches of the time. Donato Bramante's design was selected, inspired by the Greek cross, and thus it was reconfigured into a more contemporary church. However, it was never built. Instead the concept was later re-adopted by Michelangelo turning it into a more intricate structure of monolith sized scale with structural

walls and engaged columns. In the 17th century, Carolo Maderno was commissioned to extend the nave and narthex, creating smaller chapels (St. Peter's Basilica 2016). This sequence of successive authorship created a dialog between the architecture and its many designers. This complexity is what makes Saint Peter's Basilica so elaborate. It is a reincarnation of a building’s identity overtime that informs architectural practice today. That is, rather than having only one author, contemporary architects must contemplate the work of subsequent architects will have on their own creations over multiple generations.

Zoning Policy

A cultural revolution in architecture will be needed in order for the profession to embrace *Contemporary Preservation*. We need to think about what man is making, not just in the present but in the future. We need to create policies that help incentivize this behavior, in order for change to occur. We need to add value to the objects which we are creating or are naturally created in order to better preserve sustainably and conservation. This project argues that in order to move forward towards more sustainable construction methods designed to preserve our cultural heritage we must change or modify existing zoning policies.

In the greater New York City area, zoning is a complex system of written rules which mainly focus on the imagined envelope in which a developer is allowed to build. The main factors in creating a zoning envelope deal with the surrounding area of a partition, such as light and air, the street condition, and the amount of FAR (floor area ratio). These factors will dictate how much one is allowed to build upwards in relation to the surrounding context. Thus, zoning codes have been written so that any building project conforms to what is within the surrounding context. However, in New York City there are numerous loopholes, which over the last two decades have allowed taller buildings within smaller neighborhoods. Such loopholes incentivize building more taller buildings and do not consider the surrounding neighborhoods or businesses which may not been deemed significant enough for the city to save (Burden 2011). For instance, historical churches in New York City are currently selling their air rights in order to pay for simple upkeep fees as funds are dropping to low records. For buildings which are not landmarked, many are demolished since there are currently no zoning laws which incentivize their reuse. However, this is not something new to New York City. Loft-style apartments

emerged from the idea of taking an abandoned warehouse and turning it into apartments with high ceilings. This sort of reuse gives New York City its character and to some extent preserves its cultural heritage. Neighborhoods which were once industrial have now become high-end residential (Baum 2014).

The reason this has become possible is a zoning change or for a district to become a ‘Special Mix-Use District’. While this type of district zoning can infuse new life into neighborhoods that were once filled with abandoned blocks, these buildings often served as home to people who reside there because of affordable rents. Long Island City is an example of this specific type of zoning change. The neighborhood went from industrial to commercial on the ground floor and housing on the upper floors. In the process most of the original fabric of the neighborhood was destroyed and replaced with taller high-end housing towers which lead to the gentrification of the neighborhood (Burden 2011).

Of course, gentrification has both good and bad connotations. Often a neighborhood becomes safer, more people move there, which attracts businesses and restaurants. This can boost the existing economy of the neighborhood, which in turn ends up driving the original inhabitants away from the neighborhood. The result is a new cultural identity but a loss of its original cultural heritage. This project’s aim is not to stop gentrification, but instead work with it and help to preserve the existing cultural heritage by creating jobs and a community center, to help local people feel comfortable and able to stay in their own neighborhood (Sophia Alvarez 2018).

The Project

Moving forward, the project will use an abandoned industrial grain elevator as an experimentation for the manual the project is creating for *Contemporary Preservation*. There are addition challenges in Red Hook, given that a majority of the land never existed naturally. The first mappings of Red Hook created in the 1770s showed only a fraction of land that exists today. These additional industrial grounds and ports are now susceptible to flooding due to climate change (Gray 1990).

On January 3rd, 2018, Governor Andrew Cuomo dedicated a portion of his state address to the redevelopment of Red Hook. He called on the Port Authority "to accelerate the relocating of Red Hook's maritime activities to free up this waterfront for more productive community use" as well as for the Mass Transit Authority to "take steps to improve transportation options to Red Hook, including studying the potential of a new subway line to connect Red Hook to Manhattan" (CBS 2018). Such high-profile attention suggests that the state is serious about creating accessibility between Red Hook and New York City. In fact, lack of accessibility is the reason why the area has been left as abandoned post-industrial land. Moving forward, the state, developers, and designers need to recognize that the neighborhood is likely to experience tremendous transformation in the coming years and, therefore, set in place policies that will account for both resiliency efforts as well as adaptive reuse of the post-industrial landscape. Developers are currently being incentivized to rebuild with a commercial ground floor and residential above within Special-Mix Use Districts, which today only constitute a small portion of Red Hook. If zoning policies change to incentivized redevelopment along the waterfront

through *Contemporary Preservation*, Red Hook could be reimagined as a resilient neighborhood while preserving and reusing existing buildings along the waterfront. In 2015, areas of Greenpoint and Williamsburg, Brooklyn were rezoned as parkland in compensation for denser developments along the waterfront (NYC Department of City Planning 2006).

Precedent References

In working towards new zoning policies, Zeitz MOCAA in Cape Town South Africa is an excellent precedent. The project is a part of a larger zoning change that allowed for residential, as well as commercial markets, hotels, gift shops, and restaurants. It has turned the area of the Victoria and Albert Waterfront into a destination location for both locals and tourists. The rezoning incorporated some of the existing buildings along the original industrial landscape (Zeitz Museum of Contemporary Art Africa / Heatherwick Studio 2017). Zeitz MOCAA showcases the success of an abandoned grain elevator structure being transitioned into a new contemporary experience. From being able to experience this museum in person and talk to the locals, the museum represents more than just the art it curates. The building is a prime example of how powerful adaptive reuse can act in creating unique experiences which will continue to showcase Cape Town's original industrial heritage as it transitions its waterfront to become more public and inviting.

This project aims to give obsolete buildings a second life in their industrial heritage, making them a symbol of cultural significance for which they are today. Extending the life of a building to go from an industrial and production function to a commercial and consumption function is tricky. Therefore, zoning policies moving forward should include regulations to maintain some semblance of its cultural heritage on the site.

Zeitz MOCAA does this incredibly well. The building's circulation makes one feel as though you are a part of this machine, and many of the exhibits detail the original industrial nature of the site. Also, the original machine elements which make up the silo are left untouched and visible, connecting back to the original function of the building. The museum itself preserves

and displays the largest collection of Contemporary African art in the world (Zeitz Museum of Contemporary Art Africa / Heatherwick Studio 2017).

For Zeitz MOCAA, the original grain silo had always been historically significant to Cape Town. It showcases the history of the city's economic boom from agricultural exports that came from all over Africa to the city's port to be shipped to other countries. In the case of the grain elevator, the silo was used to hold grain temporarily before shipping it around the world (Zeitz Museum of Contemporary Art Africa / Heatherwick Studio 2017). In 2004, this grain elevator, much like many other grain elevators around the world, became a victim of more efficient logistics. As technology advanced, there was no longer a need for holding grain before shipment. This once efficient machine, has now become an obsolete tool which failed to adapt to the transitory nature of the industrial boom.

Similar zoning changes along the waterfront areas of Brooklyn have led to innovation adaptive reuse projects such as Maker Park. The overall design "captures the creative ethos of the neighborhood around it—and reflects its rich history by breathing new life into the site's industrial fabric. The idea springs from an awareness that both our waterfront heritage and the local creative community is being wiped away at alarming speed" (Waterfront Park and Maker Space in Williamsburg, Brooklyn 2016). One problem the designers faced was the area dedicated for Maker Park was not owned by the city. This became a major issue as land values skyrocketed after rezoning. Pressure from local community groups pushed the city to purchase the land last year and it is now in the process of developing the park. Similar rezoning policies should be considered for parts of Red Hook's industrial waterfront as a way to incentivize the public sector to purchase the land for redevelopment. A design informed by principles of *Contemporary Preservation* will ensure that both present and future needs of the community are met while

preserving the current structures, removing any unnecessary machinery, and transforming the resiliency of the waterfront.

Project Conslusion

This project starts from the assumption that we want to preserve and reconsider our existing built fabric before it falls prey to demolition. It considers a structure which was never designed for human habitation but rather to house raw materials for distribution. Working naturally with the existing industrial infrastructure and reintroducing something of which was originally naturally apart of the landscape will both preserve its original cultural heritage as well as prevent rising flood levels. The project's design will enable the surrounding community to cope with climate change by creating a softer, more porous water edge condition, which will slow tides from rising in their natural ecosystem rather than creating a harsh vertical wall. The project will add mechanical systems to house and clean the water which has been polluted from the neighboring Gowanus Canal. It will house people during emergencies and store food and materials through the act of subtraction of the network of silos. It will require rewriting current zoning codes to not only deal with the building's size and scope but also to better integrate it more naturally into the surrounding landscape.

As Eduardo Rojas stated in *Tabula Plena* by Bryony Roberts, "When the material capital inherited by a city is adapted to satisfy contemporary needs with sustainable financing, it acquires an economic value" and that "the urban rehabilitation discipline should provide instruments and interventions to bring new activities to abandoned and deteriorated heritage areas or rebalance the uses in response to intense and conflicting development pressures" (Rojas 2016). Thus, the project makes economic sense because it will bring more development to Red Hook, conserve its urban heritage, attract new users and investors, remediate polluted water, and house people during times of crisis.

The project's strength lies in its ability to transition existing structures sustainability while addressing current societal needs. If we are going to continue to build along the waterfront, in dangerous areas of flooding, then how do we build in order to also be resilient? Additionally, changing zoning policies for these post-industrial waterfront portions of cities is crucial to their redevelopment. Such changes will account for any loss of post-industrial cultural heritage and an ability for cities to act more proactively when addressing issues of rising sea levels. Finally, this project creates a manual of *Contemporary Preservation* by reclaiming an existing building in order to reimagine the contemporary needs of the next generation.

In today's contemporary culture, most developing cities have portions that were dedicated to the industrial era, which now lay abandoned and unused. This created a physical separation between the waterfront or the original natural landscape of the water's edge and the surrounding communities. It accounts for climate change societies must adopt innovative ways of reimaging this barrier between the water and the people. Any intervention must account for sea level rising. By creating a landscape which provides a safe barrier for the surging sea/water while working with the existing cultural heritage of the post-industrial buildings we can transition the landscape without losing our heritage or landscape stability.

In this proposal the project reimagines the existing building providing the contemporary need for shelter and living essentials in times of water level crisis. The once grain elevator, continues its life as a working machine, yet changes its function in order to provide shelter, food, water and sanitation to its surrounding community of Red Hook Brooklyn.

The transition this industrial grain silo is in its ability to give back safety to its community through providing a place for at least one eight of the population, mainly including

those in need such as the elderly, disabled, and younger children. This building will during times of crisis become a haven from flooding disasters. This site is an act to keep the flooding from reaching worse heights and the building provides shelter, water, food and power. The building becomes a contemporary machine of innovation which accounts for the fact that Red Hook will flood.

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