

Aydelott Travel Award 2022

Elisa Sofia Castañeda, Student

Dr. Kate Malaia, Mentor



MISSISSIPPI STATE UNIVERSITY™
COLLEGE OF ARCHITECTURE,
ART AND DESIGN

Spain Library Park (Parque Biblioteca España) by Giancarlo
Mazzanti in Medellín, Colombia

Cardboard Cathedral or Christchurch Transitional Cathedral by
Shigeru Ban in Christchurch, New Zealand

Superkilen Park by Bjarke Ingles Group, TOPOTEK 1, and
Superflex in Copenhagen, Denmark

Constitutional Court of South Africa by Janina Masojada, Andrew
Makin and Paul Wygers in Johannesburg, South Africa

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Elisa Castañeda is a first generation Latina-Americana from Huntsville, Alabama. She is currently a fourth-year architecture student at Mississippi State University pursuing minors in Geospatial Information Systems and Remote Sensing, as well as Sociology. In her undergraduate career Elisa has had the fortune to develop research that reaches from the living conditions and housing insecurity of rural Mississippi to the sustainable development of informal settlements in Peru. At MSU she has also sought to celebrate the Latino community on campus by developing and exhibiting research on Latino Architecture and Urbanism in Central and South America for three consecutive years. In conjunction with her studies at MSU, Elisa has also worked as an intern for Congressional offices on Capitol Hill as well Smithsonian Institute via the surveillance of cultural heritage sites in Ukraine and Kabul with GIS, in addition to contributing to in-depth open-source research reports for the State Department. It is with these unique experiences that equipped Elisa with the right analytical tools to see architecture as an opportunity for social change. After obtaining her bachelors, Elisa hopes to pursue a master's degree in urban planning and international development, with an emphasis on sociology and public advocacy.

Architecture and Social Responsibility

Establishing Community Resiliency and Identity Through Architecture in the Wake of Extenuating Circumstances



Figure 1: Image of Superkilen Park in Copenhagen, Denmark

Source: Author

"Architecture or, more precisely, space affects and effects social relationships in the most profound ways, from the very personal to the very political. Adopting the feminist maxim "the personal is political," buildings conjoin personal space and political space. In recognition of the role that architecture plays in part of the production of that social space, designers have to face up to the responsibility of affecting the social dynamics of others and in ways beyond the delivery of beauty. The key political responsibility of the architect lies not in the refinement of the building as a static visual commodity, but as a contributor to the creation of empowering spatial, and hence social, relationships in the name of others"¹

Our daily lives are influenced by the built environment that surrounds us. Architects participate in the production of space

and have the opportunity to take into account the social responsibilities in that moment, but also the long-term consequences of those actions. In these considerations can architecture develop community resiliency? Resiliency against economic stratification in extreme urban density, or resiliency in combatting natural disaster, adjusting to mass migration, or reconciliation in a post-colonial era. How does one walk the fine line between regenerating a community or gentrifying it? In this research these questions are asked with the goal to analyze examples of architecture that were intended to meet these challenges and to what extent accomplishes them. Furthermore, can they become models for the future?

This interest in how modern architectural intervention could provide solutions to problems in the forefront of today's world led to an investigation in the summer of 2022. The research sought to understand how, through architecture and architectural analysis, a community can be uplifted in the wake of extenuating circumstances. First-hand exposure lead to a deeper understanding of how the built environment influences the urban fabric of a community and can stand for social change. The following four architectural were chosen as sites for analysis because they are all modern constructions that deal with 21st century problems that I foresee will continue to intensify in the future:

1. My first case study, **Parque Biblioteca España** built to address the growing inequality including uneven access to resources and infrastructure (public buildings and public spaces)

2. The second case, **Cardboard Cathedral** in Christchurch falls under a category of a social response to a natural disaster;

3. **Superkilen Park** in Copenhagen attempts to create connectivity for those forced to flee their homes due to social disorder in a migrant community.

4. Finally, **Constitutional Court of South Africa** envisioned to rebuild society in the aftermath of colonialism.

Visiting these sites gave invaluable insight to the reality that architectural interventions face in the post-production phase. Measuring resiliency of a community based on an architectural intervention was a challenging task. To approach it, interviews were conducted in a series of formal and informal settings with the users and experts of these spaces. "Formal" interviews were prearranged upon arrival to the sites, while "informal" interviews were spontaneous encounters with the users of the sites. This method of analysis helped begin to uncover just how integral the built environment could be to meeting large scale challenges and implicating change. Like in Christchurch, where residents take great pride in their Cardboard Cathedral, speaking about it in deep reverence in conjunction with a devastating earthquake. Assessment was conducted through a series of site visits, photographic and video documentation, hand sketches, on-site interviews, and in-depth research of the contextual background of each site. The explanation of each site's context, as it relates to its history, ethnography, politics, and geography, are fundamental to the report as the architecture is indicative of these things in

communicating the identity and resiliency of the communities they serve. These projects addressed global crises with site specific methods, and in many ways they have succeeded. Yet, this success cannot be measured with the same uniform template. Success means different things in all these cases, and their individual strength and shortcomings provoke as many questions as they offer answers.

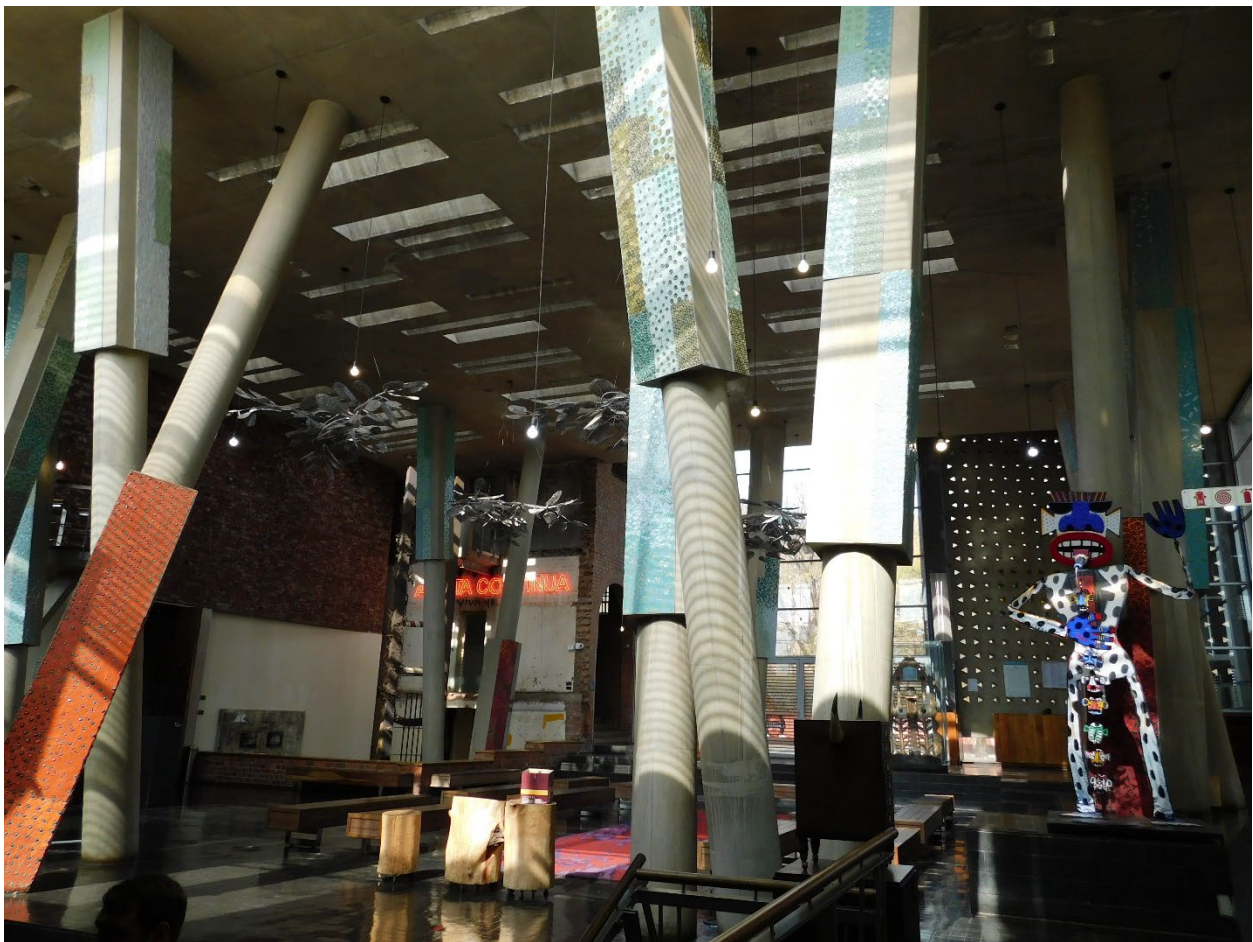


Figure 2: Foyer to the Constitutional Court of South Africa in Johannesburg, South Africa. Source: Author

¹ Nishat Awan, Tatjana Scheider and Jeremy Till, *Spatial Agency: Other Ways of Doing Architecture* (Routledge, 2011), 38.

Parque Biblioteca España

The Successes and Failures of Social Urbanism



Figure 1: Public park infrastructure incorporated into Comuna 13, Medellín, Colombia
Source: Author

In his Noble Peace Prize acceptance speech in 1982, Colombian author Gabriel Garcia Márquez said the following,

Latin America neither wants, nor has any reason, to be a pawn without a will of its own; nor is it merely wishful thinking that its quest for independence and originality should become a Western aspiration. However, the navigational advances that have narrowed such distances between our Americas and Europe seem, conversely, to have accentuated our cultural remoteness. Why is the originality so readily granted to us in literature so mistrustfully denied us in our difficult attempts at social change? Why think that the social justice sought by progressive Europeans for their own countries cannot also be a goal for Latin America, with different methods for dissimilar conditions?¹

The culmination of Medellín's present built environment is evidence of this struggle for social change. It is demonstrated through its physical evolution of social strata driven by internal and external conflict and sculpted through Medellín's relationship between the landscape and what is built. At the precipice of political turmoil, activists in Medellín turned to investing into accessible public infrastructure in an attempt to address its social inequities. Thus, *Social Urbanism* was introduced in the region as a socio-political approach to reimagining the growth of the city and mobility of its inhabitants. Through architectural innovation, Medellín has rapidly changed the perception of the city's urban reality.² This innovation included a series of "library parks," the first of these constructed being Parque Biblioteca España.

Objectives of Research:

1. Analysis of **Parque Biblioteca España** (Spain Library Park), built to address the growing inequality including uneven access to resources and infrastructure (public buildings and public spaces).

Contextualization of Qualitative Design:

Medellín, Ciudad de la Interna Primavera.

Medellín, the City of Eternal Spring. This place is an urban experiment whose past makes it an unlikely a model for the future. Nevertheless, below is an analysis of Medellín's revival and success. Medellín, Colombia lays in the middle of the Andes Mountains, in the Valley of Aburrá. It is known as the city of Eternal Spring due to its

close proximity to the equator and geographical conditions that cause it to be a lush green semi-tropical climate, with cool evenings all year round. Medellín is a city of over 2.6 million, with the surrounding metropolitan areas in the valley making a combined 4 million. It is the capital city of the Antioquia region, the people there call themselves Paisas, and have their own distinct cultural identity within the colorful fabric of Colombia. Medellín became the second largest city in Colombia in the early 1800s after the construction of the Antioquia Railway. With it came the mass production of textiles in the region, as well as an expeditious way to export the cash crop, coffee, which has since supported the development of the city's infrastructure and establishment as an industrial powerhouse.

One may be aware of Colombia's tumultuous past before arriving to Medellín, and yet be unaware of the city's unique Social Urbanism projects that became the catalyst for its redemption and resiliency. After World War II, Colombia entered an era of violence and corruption that was dictated by independent armed forces throughout the countryside. This led to the nationwide migration of farmers to cities

like Medellín that developed into *comunas* or informal settlements that support the density we see in the city today.



Figure 1 "We are all immigrants" Graffiti art in Comuna 13

Source: Author

The country experienced major political instability and economic struggles that ultimately led to the drug cartel's momentum on the political stage. The Medellín Drug Cartel, headed by the notorious Pablo Escobar in the late 1970's, led the city to have the highest homicide rates worldwide for over a decade. But the same Medellín that was once the epicenter of Colombia's drug war, dubbed "Cocaine

Capital," has since reinvented itself. The worst hit neighborhoods were Santo Domingo and Comuna 13, with the highest poverty, homicide, and crime rates in the city, recognized as the most dangerous areas to live. But after a military operation in the early 2000's expelled illegal militias that had been controlling these neighborhoods, the murder and crime rates drastically declined. Comuna 13 began voicing their stories through artistic expression, with over 800 murals currently found in the neighborhood (Fig.2). This movement gave the community fame as a tourist destination that has since enabled the residents to mobilize and create a healthy economy. This physical demonstration of resilience is a form of storytelling through built environment that Paisas used to transform Medellín's narrative. This shift was the catalyst for a series of reformist mayors allied with activists, architects, and urban planners in the late 1990's to begin the first of the Social Urbanism Projects, and by 2004 Medellín welcomed the world's first metro cable car public transit system. Its intent was to connect these informal settlements back to the city center and proof them against being taken over by illegal militias through providing government-funded public infrastructure. In 2005 El Equipo Mazzanti (Mazzanti Architects) completed the poster child for the Social Urbanism initiatives, Parque Biblioteca España in Santo Domingo.

Architecture that Goes Beyond Aesthetic:



*Figure 3: Image Taken of the library August 8th, 2007 by Alejandro Rojas
Source: Wikimedia Commons*

Parque Biblioteca España, inaugurated by the King and Queen of Spain in 2007, closed indefinitely less than seven years later in 2015. Despite this, I chose the library as the site to examine how architecture has played a role in altering the perception of Medellín's urban landscape (Fig.3). The analysis of Parque Biblioteca España contributes to determining just how integral spatial and symbolic characteristics of architecture contribute to Medellín's economic, political and socio-cultural ambitions.³ The building was an open-air public library, built at the start of the social inclusion agenda of former mayor Sergio Fajardo to provide equal opportunities

for social and economic development to communities outside of the city center. It offered services such as children's educational programs, computer resources and public Wi-Fi, as well as vocational training and a theater for the neighborhood. It was the first of ten library parks to be built between 2005 and 2010, and the first architectural work out of a growing number of urban development projects in the city.⁴ In the summer of 2022, I ventured to Medellin to understand not only how this library may have impacted the local population and the public discourse on its placement in the area with the lowest literacy rate, but also how it failed tectonically.

Architecturally, this building had a bold and profound presence in the landscape, but to what degree, in conjunction with public policy, has it contributed to reducing the community's inequality and violence? Additionally, was its approach in planning and anticipated maintenance appropriate for its setting? And how have the individuals it was meant to serve responded to it? Being the recipient of many awards when the project began, such as exhibitions in MOMA (New York, 2010), Centre Georges Pompidou (Paris, 2015), CMOA (Pittsburg, 2016), and the XVI Bienal Panamericana de Arquitectura Prize (2008) and IV Bienal Iberoamericana de Arquitectura Prize (2008), it gained sizable social media attention before cracks began to form in its physical structure.⁵ Knowing of its closure, the building was evaluated based on its concept versus its execution as well as its subsequent fate.

Synergy Between Built Environment and Human Experience

The concept behind the building was to incorporate public space and expand accessibility to basic needs in hard-to-reach comunas of the valley through *in-situ* development rather than displacing the existing population (Fig.4). The model that was developed in Medellín through its Proyectos Urbanos Integrales (PUI program) was accepting that as cities become denser throughout the twenty-first century, informal settlements are to become a rule rather than an exception. This crossed a psychological barrier establishing that “slums” were not marginal to the city, but rather, integral to its success.



Figure 4: Image of the Aburrá Valley taken from Comuna 13. Source: Author

The framework that surrounded the production of Parque Biblioteca España consisted of five objectives that Fajardo created as the strategy behind the operation of the PUIs. First was participatory design, where both government and residents understood their role and could achieve compromise; second was to "achieve priorities of inclusiveness and provision of services, especially to extend the reach to the most vulnerable, such as young children and the displaced, so that all citizens can have a life with dignity."⁶ The third objective was to produce a building that created public space and improved quality of life; fourth, to activate local economy within the comunas; fifth, to meet global architectural and urban standards.⁷

The library was strategically placed adjacent to the metro-cable-car station in Santo Domingo:

Biblioteca España, at the top of the run, which despite controversy over the building's current condition, has acted as a beacon, from the bottom of the city, looking up, and vice versa, calling out the northeastern neighborhoods of the city, recognizing, rather than omitting them⁸.

The boulder-like shapes of the three main buildings of the library were informed by the mountainous terrain that is intrinsic to Medellín's identity. Yet, its contemporary style and monumental scale made the library stand out from the neighborhood, creating a paradoxical dialogue between this piece of modern architecture nestled within a landscape of informal settlements. "This type of programming identified the potential for other open-air libraries and public plazas which have been inserted into historically violent areas..."⁹ The bottom-up development model spurred an urban renewal that prioritized creating urban centers in formerly neglected spaces, with social

inclusion as its main goal. As a part of the site analysis, several PUI-programmed spaces were visited throughout Medellín to understand the extent to which change in the built environment has affected social mobility in the city. Although Parque Biblioteca España was the first of these projects, it was not the last. For PUI projects, the entire city became the site for the related redevelopments, integrating the library within a network of public resources throughout the city. The projects I visited are as follows:

- Comuna 13 - Outdoor Escalators and Murals (Fig.2,12&13)
- Parque Explorica- Children's Museum (Fig.14,15&16)
- Jardín Botánica Medellín; Orchideorama - Botanical Gardens (Fig.17&18)
- Museo Casa de la Memoria - Memory House Museum (Fig.19&20)
- Coliseum for the South American Games (Fig.21-25)
- Santo Domingo Metrocable Car Station (Fig.9)
- Parque Berrío - Berrío Park (Fig.26)

This bottom-up development model was the catalyst for a long-term development plan that has sustained through three mayoral cycles. This investment in architecture and public infrastructure is how mayor "Fajardo mobilized the physical and symbolic value of architecture in local politics by opening a space for it to become an important instrument for social change."¹⁰ Parque Biblioteca España is part of an interconnected social effort across Medellín to provide resources to those who seemed out of reach.

The execution of this building was done by means of public participatory design. The preliminary processes for Parque Biblioteca España, and all PUIs, were carried out through “local design consultations and civil budgeting priorities to establish a healthy culture around educational capital, mobility, and infrastructure in marginalized areas.”¹¹ All of Parque Biblioteca España’s public services were housed in three building masses: auditorium, library, and community center. These were then connected through a concrete podium that acted as the public square with semi-covered spaces.

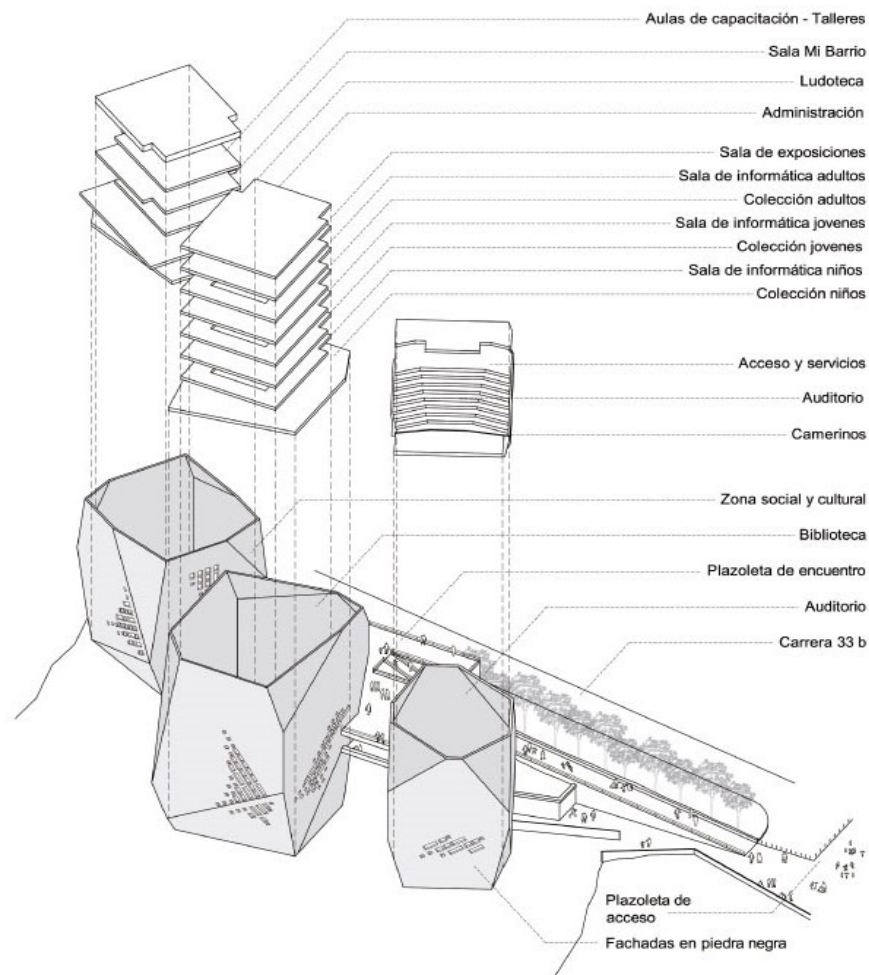


Figure 5: Exploded axon of library showing orientation and organization of space. Source: El Equipo Mazzanti

Figure 5: Exploded axon of Biblioteca España and programming. Source: El Equipo Mazzanti

A deck linking the volumes framed breathtaking views downward toward the valley within the interstitial spaces created between the building masses. The exterior of the library buildings was clad with dark stone tile and faceted with small rectilinear openings that crossed diagonally over the façade in irregular patterning. The building was structured with a cast-in-place concrete core, and wrapped in a steel framed exoskeleton, which allowed natural lighting to enter through the skylights and reach all the way to the bottom floors.¹² The seating in the auditorium aligned with the contour of the hillside, and limited daylight openings to help users temporarily disconnect from their context.¹³ The core of the library building had three double-height spaced reading rooms, lined with computer labs and mezzanines that provided views downward to the other rooms. The community center building housed a daycare in the lower levels, with the floors above holding classroom spaces, workshops, and an exhibition/event space.¹⁴

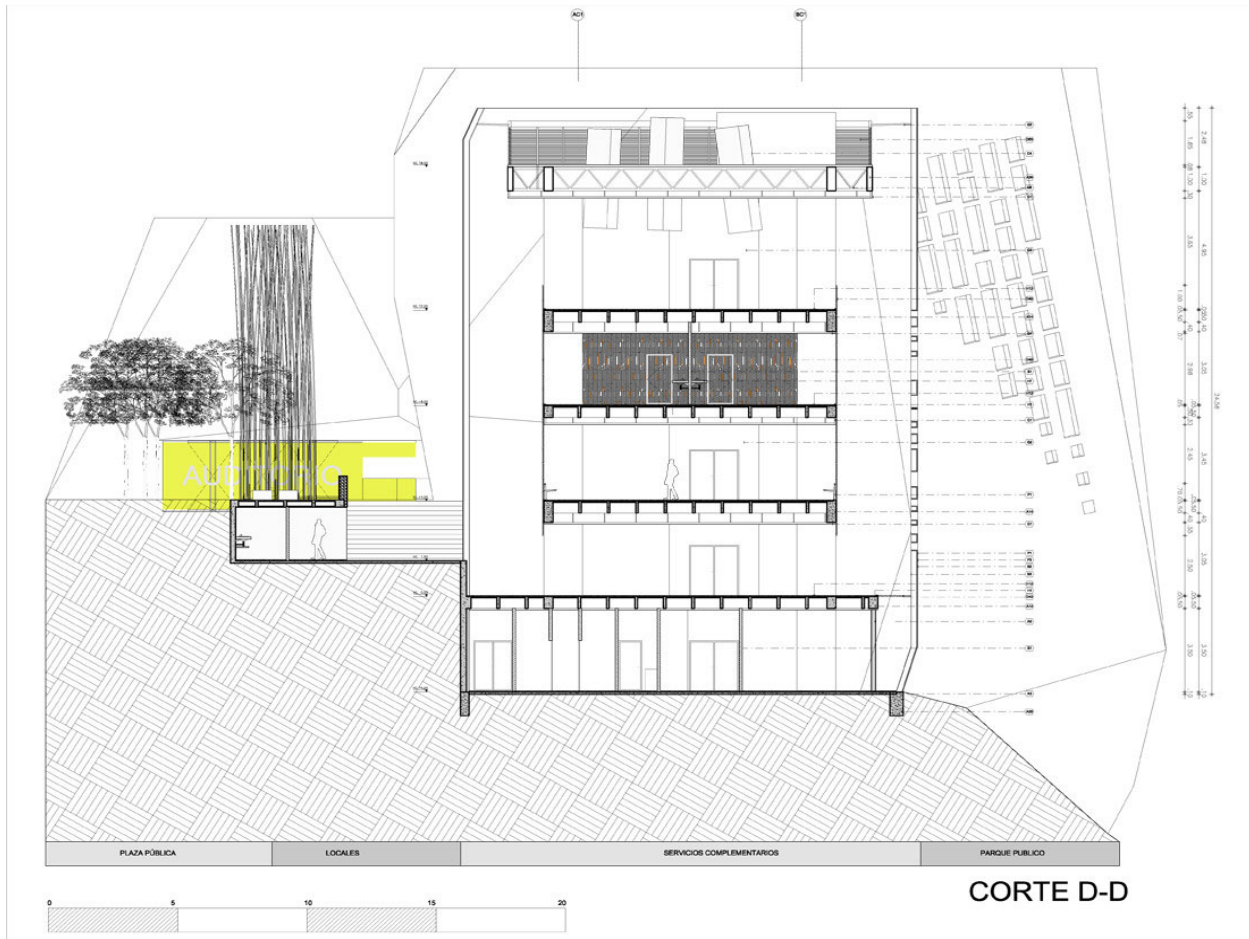


Figure 6: Sectional drawing showing core and shell of main library building. Source: El Equipo Mazzanti

"Mazzanti employed simple materials, such as the dark stone tile for the exterior walls, which comes from the Bogotá area; a local stone tile for the floors, commonly referred to as "café pinto"; and drywall. Oak paneling sheathes many of the interiors in the library core, and is accented with squares of lime-green laminated glass, while a dark stained patula pine wall system encloses the core space in the community center."¹⁵ (Fig.7)



Figure 7: Image taken by Jorge Lascar, April 17, 2010. Source Wikimedia Commons

Construction of the building, however, was not met with the same level of intention as the design, with the library showing signs of failure within its first two years. The architect Mazzanti has stated that a combination of pushed deadlines, cut corners, and unskilled labor led the building specifications to go unmet. It has taken almost seven years since the library's official closure in 2015 for local officials to announce its reconstruction. In January 2022, the Empresa de Desarrollo Urbano (Urban Development Company) of Medellín released plans to complete the library after gradual deconstruction of the building's façade and structure that had to take place in order to meet the appropriate earthquake risk management systems and support prevalent wind loads. The news of the building's reconstruction has

increased moral in a neighborhood, which has since taken an economic hit due to its closure. I spoke with many locals that were optimistic about the prospects of what the new library may bring. In an interview, Gabriella Monte, a long-term resident of the library's neighborhood in Santo Domingo stated:

There were boys who used to meet people at the [cable-car] station and offer architectural tours, they were so proud, I am happy that they are finally fixing it.¹⁶

She went on to describe how the library used to offer classes on leadership and have activities for children. Gabriella admitted that after the many years of waiting, she did not think the government would reconsider the building at all, and that it had become an eyesore. And although many in the neighborhood were optimistic like Gabriella, some shared criticism for the announcement, wondering whether it was true.

The library was good for us, but it takes them so long to get anything done up here, with the streets... it is too narrow. I doubt I will see another library here for another seven years.¹⁷



Figure 8: Image taken by Claudia Vila on Google Street View, Sept. 2017.

As for its present state, the building proved to be completely inaccessible: I was unable to locate the site within its context at all. This led me to believe that it has since been completely dismantled, as the very nature of the building was meant for it to be visible from far reaches of the valley (Fig.8). The encounter with this reality deemed the library as the control study within the research project. This added a unique discourse within the analysis of other sites following my visit to Colombia. It created more critical questions as to whether or not a building's continued physical existence was pertinent to its success in affecting social resiliency and reinventing cultural identity. Acknowledging its closure, its short-lived presence still functioned as a catalyst in promoting the PUI's agenda. Between 2006 and 2013, time of Sergio Farjardo's term,

nine library parks were built in marginalized communities throughout Medellín. Public parks, footpaths, schools, and medical centers are all a part of the PUIs ongoing agenda. Parque Biblioteca España, though very imperfect, was also the first of these and has proven to be the guinea pig of the projects since the program first started in the early 2000s.



Figure 9: Metro Cable Car Station in Medellín.

Source Author

Architecture for this Moment

Since 2004 the crime rate in Medellín has dropped over 50%, poverty levels have dropped over 55%, and Medellín has become a city to visit as opposed to one to avoid.¹⁸ Parque Biblioteca España had to confront a mixture of social problems unique to Colombia, including economic and social inequality deeply rooted in political violence and geographical isolation, and disparity in access to sanitation and other public resources. Parque Bibliotec España helped to spur Medellín's urban renaissance but was also a casualty of fast-paced development intent. Parque Bibliotea España saw dramatic influence across the valley and still garners tourists from around the world despite its closure. Since the Proyectos Urbanos Integrales program began, one can book a tour of the city to visit various architectural attractions, all of them via public transit. One can ride a metrocable car and seemingly float all the way up one end of the valley and see a highly contemporary and brightly colored elementary school nestled in a sea of informal homes (Fig.10). Or perhaps one might see a series of outdoor escalators that haphazardly crawl its way up a tightly knit organization of red brick homes adhered to the mountainside (Fig.11, 12). This could be right next to a public amphitheater where children screen their favorite movies and skate on the concrete steps (Fig.13) that overlook the city. In Medellín, such proximities are frequent. From one end of the valley to the next, comunas are beginning to have

more and more access to clean water, WiFi, affordable public transportation, and beautiful architecture.



Figure 10: Preschool in Comuna 9 seen from cable car, Medellín. Source Author

Unfortunately, the comuna of Santo Domingo is still missing its championed library park, whose life was very short lived. It was ill-suited for its environment, and quickly deteriorated due to cut corners in expediting the process for the press. Nevertheless, it is easy to see the measure of its impact, through local memory, maintained optimism about its future, and Medellín's continuing work on library parks and similar projects.

The model emphasizes architecture's ability to incite social change and focuses on a selection of key political actors and architectural works to significantly shift dialogues on the city toward more positive descriptions. These descriptions of Medellín are underpinned by a narrative of historic violence comprised of

the narcotics wars, and urban transformation linked to innovative development.¹⁹

Library parks, like Parque Biblioteca España, continue to be a fundamental part of social urbanism development across Medellín, with nine active libraries, and many travelling library collections housed in local facilities throughout the valley. Through trial and error, the city has transformed to tell a story of resiliency in the wake of extenuating circumstances.



Figure 11: Outdoor Escalators in Comuna 13 Figure 12: Solar Powered Outdoor Escalators in Comuna 13, Source Author



Figure 13: Outdoor Amphitheater and combined playground in Comuna 13, Medellín.
Source Author



Figure 14: Parque Explorica Children's Museum in Medellín, Columbia Source: Author



Figure 15(left) & 16(right): Parque Explorica Children's Museum in Medellín, Columbia Source: Author



Figure 17: Jardín Botánica Medellín; Orchideorama - Botanical Gardens Source: Author



Figure 18: Jardín Botánica Medellín; Orchideorama - Botanical Gardens Source: Author



Figure 19: Museo Casa de la Memoria - Memory House Museum

Source: Author



Figure 20: Museo Casa de la Memoria - Memory House Museum

Source: Author



Figure 21: Coliseum for the South American Games

Source: Author



Figure 22: Coliseum for the South American Games

Source: Author



Figure 23: Coliseum for the South American Games

Source: Author



Figure 24: Coliseum for the South American Games

Source: Author



Figure 25: Coliseum for the South American Games

Source: Author



Figure 26: Parque Berrío in Medellín, Columbia

Source: Author



Figure 27. Unformal settlement in Medellín, Columbia

Source: Author

¹ Gabriel García Márquez, "The solitude of Latin America" - Nobel Lecture, 8 December, 1982, accessed October 25, 2022,

<https://www.nobelprize.org/prizes/literature/1982/marquez/lecture/>

²Deluchi, Christina, "The Politics of Social Architecture in Medellín: A Reading of the Parque Biblioteca España." *Interstices: Journal of Architecture and Related Arts*, n.d.,. doi:10.24135/IJARA.VI.647. 58

³Christina, *The Politics of Social Architecture in Medellín*, 60.

⁴ María Bellalta, *Social Urbanism: Reframing Spatial Design-Discourse from Latin America* (Applied Research and Design Publishing, 2020), 122.

⁵ El Equipo Mazzanti, "Proyectp - Parque Biblioteca España," accessed November 30, 2022, <https://www.elequipomazzanti.com/en/proyecto/parque-biblioteca-espana-2/>

⁶ Jennifer.S. Holmes & Sheila Amin Gutiérrez de Piñeres, "Medellín's Biblioteca España: Progress in Unlikely Places" *Stability: International Journal of Security and Development*, (2014) 3(1),2, accessed December 18, 2022, Art. 2. DOI: <http://doi.org/10.5334/sta.cz>

⁷ Holmes & Gutiérrez de Piñeres, *Medellín's Biblioteca España*, 2.

⁸ Bellalta, *Social Urbanism*, 192.

⁹ Bellalta, *Social Urbanism*, 168.

¹⁰ ¹⁰Christina, *The Politics of Social Architecture in Medellín*, 62.

¹¹Christina, *The Politics of Social Architecture in Medellín*, 65.

¹² Beth Broome, "Parque Biblioteca España - Giancarlo Mazzanti builds an icon to foster optimism in Medellín, Colombia, with his Parque Biblioteca España," *Architectural Record*, November 19, 2008, accessed December 14, <https://www.architecturalrecord.com/articles/8132-parque-biblioteca-espa>

¹³ Mazzanti, "Parque Biblioteca España"

¹⁴ Broome, "Parque Biblioteca España."

¹⁵ Broome, "Parque Biblioteca España."

¹⁶ Gabriella Monte. Interview with Elisa Castañeda, on-site interview. Medellín, June 8, 2022

¹⁷ Jorge (undisclosed). Interview with Elisa Castañeda, on-site interview. Medellín, June 8, 2022

¹⁸ Stephanie Russo, "The Transformation of Crime in Medellín, Colombia," *The Borgen Project*, September 3, 2022, accessed December 14, 2022, <https://guides.library.msstate.edu/c.php?g=578110&p=7775596>

¹⁹ Holmes & Gutiérrez de Piñeres, *Medellín's Biblioteca España*, 2.

Christchurch Cardboard Cathedral
Emergency Architecture: Disaster Relief as Monument



Figure 1: Image of Christchurch Transitional Cathedral by Shigeru Ban, taken at dusk
Source: Author

Architecture, out of all human creations, is perhaps the most vulnerable to earthquakes and other natural disasters. It is with this vulnerability that one must bear in mind the social responsibility of the architect. Emergency architecture is often associated with temporary housing structures for those displaced by climate change, natural disasters, and armed conflict. But the problem lies in assuming that any *temporary* architecture does not, in reality, become a permanent installment. Emergency buildings are often ill-equipped for this permanent status. This is evident in sites like the Nakivale Refugee Camp, established in 1958. It is one of the oldest refugee settlements in the world, and is far from temporary.¹

Indeed a long-term view is essential to the success of such projects because otherwise the worst traits of short term thinking are played out in the most vulnerable situations to tragic effect. Humanitarian work thus holds up a magnifying glass to the actions of spatial agency, both intensifying its productive potential and spotlighting where it may go wrong.²

With crises like these occurring more frequently, emergency architecture must begin to turn away from reacting with the *temporary* "band aids" and rather focus on long-lasting solutions that can begin to mitigate the consequences and social disruptions caused by natural disasters. In the landscape of disaster relief architecture, Shigeru Ban's Cardboard Cathedral in Christchurch, New Zealand (or Aotearoa) is an outlier in how it addressed a crisis to facilitate community healing.

Objectives of Research:

2. Analysis of the “**Cardboard Cathedral**” in Christchurch, and its effectiveness under the pressures of a needed social response to a natural disaster.

Contextualization of Qualitative Design



Figure 2: Image of Tauhinukorokio Mountains in New Zealand at sunrise. Source: Author

With a population of less than half a million, Christchurch, was founded in 1856, making it the oldest established European city in New Zealand (Aotearoa). It is known as the Garden City for containing the oldest piece of protected forest in the country. It is located at the feet of the Tauhinukorokio Mountains (Fig.2) lining its Southern end, and meets the Pacific Ocean at its Eastward end on New Zealand’s South

Island. With both the mountain and the ocean, the landscape of Christchurch is diverse with activity. However, this landscape is vulnerable to earthquakes, as it lies between the Australian and the Pacific tectonic plates.

In 2011, a 6.3 magnitude earthquake erupted in Christchurch, New Zealand. One hundred and eighty-five people perished, a majority of whom were victims caught in the collapse of the CTV Building (Canterbury Television) where one-hundred and fifteen lost their lives. Christchurch's principal cathedral at the municipal and religious center of the city, and the city's namesake, was also destroyed. This earthquake, and the tremors that followed caused widespread devastation throughout the community.



Figure 3: Image of Christchurch Cathedral under restoration present day
Source: Author

In response, Shigeru Ban was asked to construct a transitional cathedral that could serve the community while the historic Christchurch Cathedral was restored. The cardboard construction of Shigeru Ban was chosen as community leaders were aware of the Kobe Church, a work he had designed and completed a few years earlier in Japan. When analyzing disaster relief architecture, the prime ingenuity behind Ban's works was the selection of materials, in which blurred the boundaries between paper and composite materials.³ Ban chose to work with paper tubes, and kept them standard by "using existing forms discarded from textile factories and paper mills" allowing these building elements "...to be sourced globally for little

cost.”⁴ Additionally, the cylindrical geometry of the cardboard tubes gives these structures practical strength and engineering validity.⁵ Ban took the commission free of charge and in 2013 the Cardboard Cathedral opened to the public.

Architecture that Goes Beyond Aesthetic

The success of the Cardboard Cathedral raises questions on how emergency architecture can be more than just an immediate response to disaster with surface level relief, but rather instill social resilience after the disaster. How can emergency architecture celebrate spatial agency in the wake of natural disaster, going beyond answering the immediate question of relief, and instead contribute to long-term recovery? The kind of recovery that goes beyond the physical rebuilding after disaster and includes a social recovery as well. Can disaster relief architecture become a symbol, a coping mechanism for those effected by earthquakes and climate change? The architectural profession has the unique position to be able to make connections between cultural heritage and disaster mitigation.⁶ This “requires that architects and planners develop inspired and enterprising approaches and designs that cast the rich repository of the past in terms of a safer, vital future ... [through] highly innovative retrofitting measures that would strengthen an entire” community.⁷ With the architectural profession really only entering the humanitarian scene in the early 2000s⁸, “over the years much architectural ingenuity has been devoted to the design of emergency shelters, most famously

Shigeru Ban's cardboard buildings after the 1995 Kobe earthquake, and Nader Khalili's SuperAdobe constructions."⁹



Figure 4: Interior Image of Transitional Cathedral in Christchurch, New Zealand, demonstration of cardboard construction and stained-glass motif. Source: Author

Thusly, this idea that architectural efforts towards disaster relief and humanitarian crises could serve as a multi-dimensional point of connection and healing to the continual reconstruction of a community is a relatively new consideration. Architecture serving as a symbol in this context would mean that it goes beyond the base level response of temporary housing shelters, and rather acts as a monument of community resilience and identity, providing methods for rebuilding with long-term performance.

Since the Kobe Paper Church, Ban has taken his fascination for materials and progressively developed his own style.¹⁰ Although this structure was originally built as a "temporary church", it is still in place over ten years later. What is its continual presence an indication of? How do the techniques and an approach in design and construction make this relief project a more sustainable solution for natural disaster relief on a more global scale? Furthermore, do the locals wish to see it replaced, or do they identify with Shigeru's transitional church as a symbol of resiliency? It is clear that although it was meant to be a transitional church, it has had far more social impact upon the area than many initially anticipated.



Figure 5: Image of Christchurch Transitional interior space with alter in the center
Source: Author

Synergy Between Built Environment and Human Experience



Figure 6: Image of Christchurch Transitional Cathedral by Shigeru Ban, demonstrating the opacity of the stained glass motif Source: Author

The Cardboard Cathedral, celebrating its ten-year anniversary in 2023, has now become a permanent installment within the city's urban fabric. Upon arriving in Christchurch, it is evident that although they are continuing efforts to restore the original cathedral, the impact of the transitional church resonated so deeply with the community that it has since become an iconic symbol for the city. This observation has led to the following questions: does the transitional church serve as a reminder of the tragedy caused by the earthquakes, or is it rather a symbol of new hope and reconstruction? Is it

possible that both of these truths act simultaneously to create a compelling architectural language? If it serves as a beckon for new beginnings, why continue to restore the old cathedral? If it serves as a reminder, why not replace or remove it? I believe that a part of these revelations has to do with Ban's ability to create notable and lasting design in his disaster relief architecture.

In the Christchurch Cardboard Cathedral, Ban used resources that were readily available to him while being cognizant of the environmental and social context of the site. This is a demonstration of how the "specific skills that architects bring to post-disaster reconstruction include the ability to do more with less...architects can find solutions that makes structures more efficient, cheaper, more resilient, and better suited to their purpose."¹¹ In this instance, Ban used the nature of the island itself to his advantage. Because New Zealand needs everything shipped, there was a plethora of shipping containers at his disposal. Additionally, there was a concrete plant near the site, and rather than use the concrete, he used the cardboard tube forms they use to cast columns as his structural material. With this he had the building blocks he needed for the transitional cathedral, but it took Ban's considerations of what was lost in the earthquake, and the needs of the community, for it to resonate with the residents of Christchurch in the long term.

Development, and construction in particular, should be brought to the fore as an integral part of disaster-risk reduction and emergency relief because decrease vulnerability to disaster depends on resilience ...on having long term solutions...it is our responsibility to provide the means of mitigating vulnerability.¹²

I visited the site August of 2022, the year Cardboard Cathedral was originally set to be removed from its current site. The impact that the cathedral has had was immediately impressionable. When I was asked by TSA upon my arrival why I was visiting, the officer instantly knew they building I was referring to. They went so far as to say they recalled when they called in a Japanese architect to build it, even though they never regularly attended church themselves.

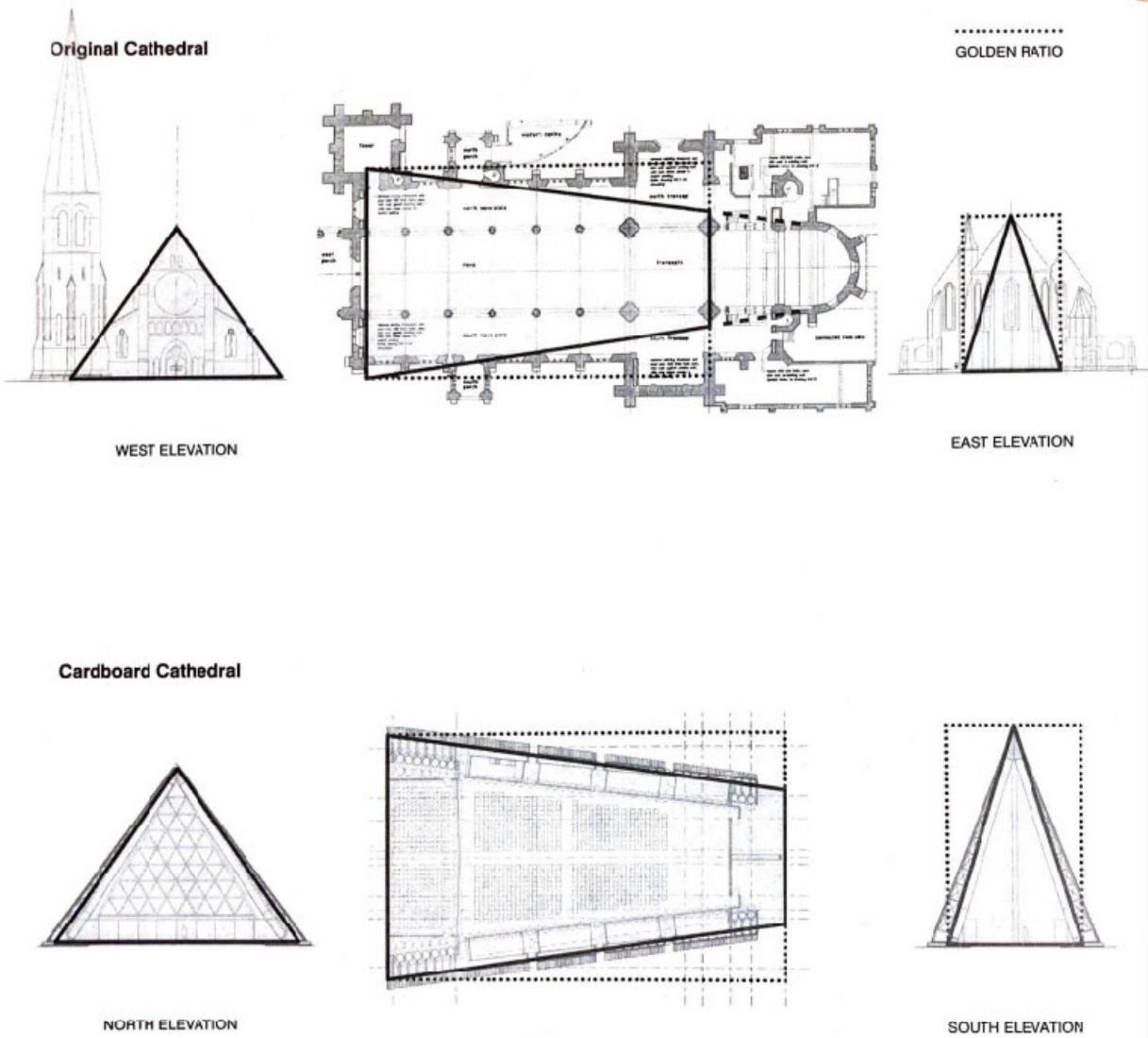


Figure 7: Drawings of design process done by Shigeru Ban Architects and Warren & Mahoney Architects

Ban's approach was unique in that he worked directly with the affected community, involving them not just in defining the architectural program, but in realizing the built work.¹³ Within the structure there are ninety-eight cardboard tubes, six hundred millimeters wide and up to 23 meters in length, that run the full length of the cathedral, that are then clad with polycarbonate plastic.¹⁴ These materials are expected to last upwards of fifty years, and can be easily replaced when needed.

The geometry of the Cardboard Cathedral was drawn from the façade and plan of the original cathedral (Fig.7), with the front façade in the shape of an equilateral triangle, the plan in the shape of a trapezoid, and the back façade in the shape of an isosceles triangle. The length of the cardboard tubes used was never compromised, thus as one travels from the nave to the altar (Fig.5) the space becomes higher and narrower (Fig.8). There are gaps between each cardboard tube that allow light not only to come in through the polycarbonate, but also to shine outward from within the church at night, creating an ethereal glow. From the street elevation the cathedral is a triangular structure, being one of the strongest shapes known, capable of withstanding future earthquakes to come. This is also in part due to the foundation of the cathedral, with its typology known as a concrete "raft" which is made up of 4,000 meters of steel¹⁵ that will maintain the cathedral's structural integrity despite movement from subsequent earthquakes.

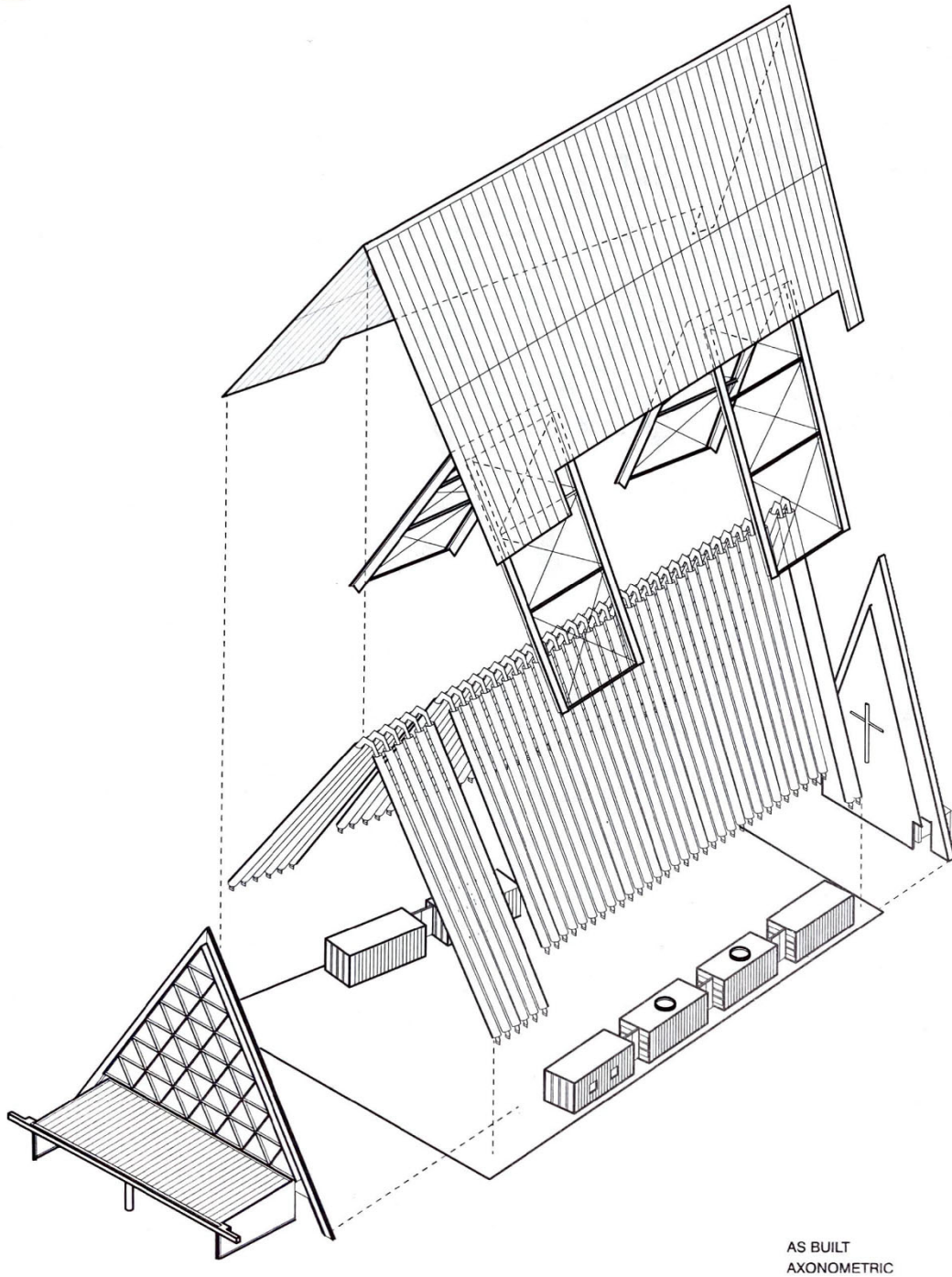


Figure 8: Exploded axonometric demonstrating assembly and volumetric nature of the Cardboard Cathedral done by Shigeru Ban Architects and Warren & Mahoney Architects



Figure 9: Image of Christchurch Transitional Cathedral from the interior, showing the quality of light in the space. Source Author

One can see just how fitting this architectural form is to the landscape in New Zealand when given a first-hand account of its natural land formations. The backdrop for the cathedral was the tail end of Tauhinukorokio mountain range. The triangular prism of the cathedral not only countered the new development surrounding the site but made appropriate and delicate tribute to the existing setting and beauty of Christchurch's environment.

Here [reconstruction process] spatial judgment comes to the fore as a particular way of thinking that understands reconstruction to be about much more than bricks and mortar, but is clearly about the intersection of the physical and social, in which any provision has to respect the cultural and environmental context in which it is placed.¹⁶

In respect to the existing context, Ban addressed historical context by incorporating a "stained glass" motif taken from the original Christchurch Cathedral and made it the most animated portion of the space (Fig. 6). To reconstruct the original images of the rose window that was completely destroyed in the wake of the earthquake, he was able to use modern technology to print directly onto glass that was embedded into the front façade of the transitional cathedral.¹⁷ By doing so, the building simultaneously respects the past, while looking toward the future. This is arguably the most important point to be made in this specific body of work. It is no longer just a point of connection after tragedy, but a symbol of resilience. Our urban spaces are critical to successful disaster mitigation. Assigning cultural heritage a proactive role in disaster relief efforts can lead to more resilient cities as they "struggle to retain their social and architectural traditions while undergoing massive upheavals that lead to even greater risk."¹⁸

Ban also took a step further in siting the edifice, placing his cathedral right next door to the former CTV building that completely collapsed in on itself during the earthquakes in 2011. The pertinence of the site in the context of the lives lost at the CTV collapse greatly influenced how the building was received. The cathedral became a place of remembrance for those who continue to grieve their loved ones, memorializing their loss with a colorful shaft of light.

Design can provide both an innovative window for understanding the complexities of disaster-risk reduction and recovery, as well as a conceptual bridge to new ways of building socio-economic and physical resilience in disaster-affected communities.¹⁹

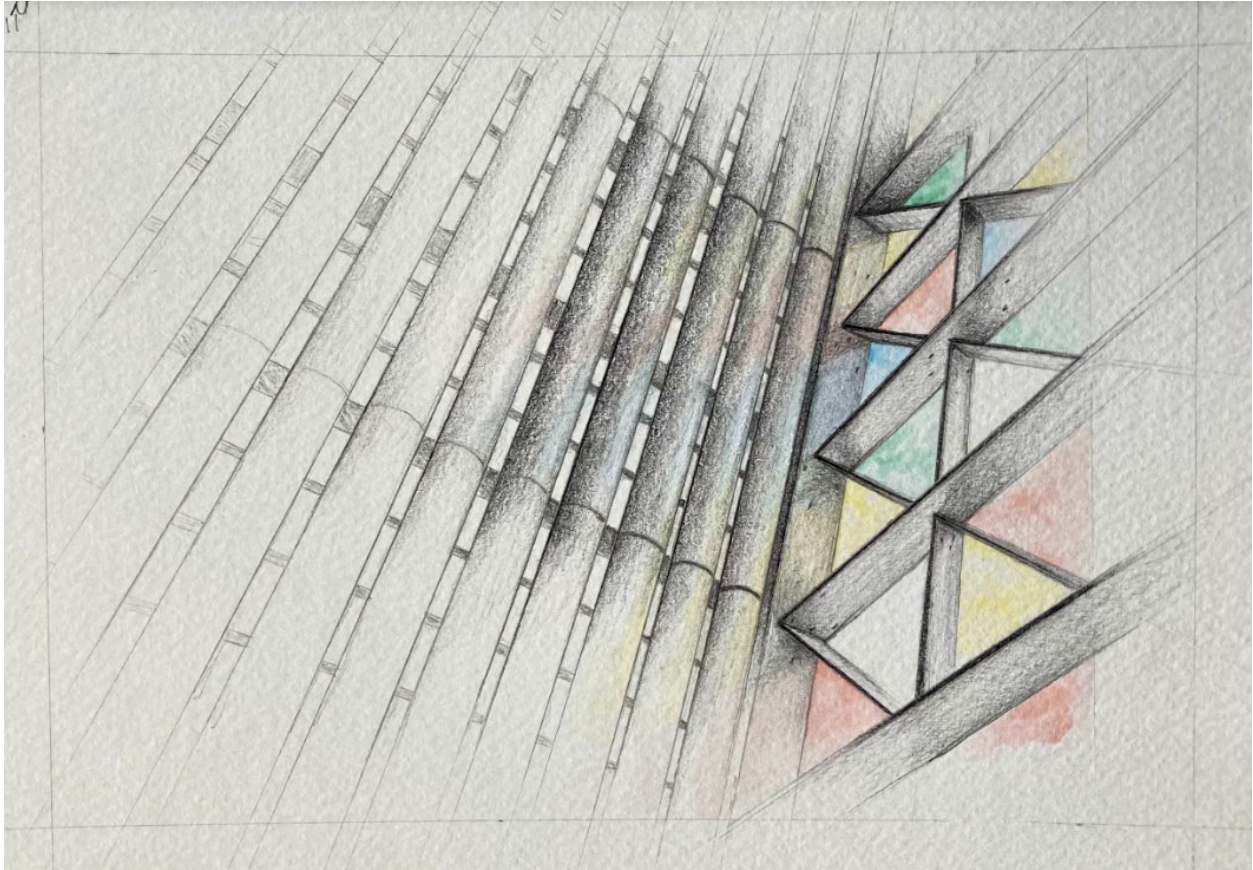
Architecture For This Moment

Figure 10: Light study of the interior of Cardboard Cathedral with graphite and watercolor. Source: Author

It was evident that Christchurch had gained a certain iconic status from Shigeru Ban's transitional cathedral that was beginning to produce revenue to the city through tourism. In any visit made to the church one will be greeted every by a new volunteer worker offering an in depth a guided tour of the space, explaining the history behind the earthquakes, the outreach to Shigeru Ban, the construction process, and all the small design details of the space. It is a point of pride for the community that increased morale in a time of tragedy and devastation. Additionally, as one tours the surrounding city, most shops would be selling postcards, stickers, posters, and even bookmarks with various images of the Cardboard Cathedral. This

economic development is another agent to the long-term resiliency of a community post-disaster, tapping into what the UNESCO INDRA cites as a wholistic approach towards international disaster resilient architecture. Their framework stipulates that architecture in a disaster resilient environment takes into consideration the social, cultural, environmental, technical, and economic factors of an affected area.²⁰ It is evident that architectural practice has a responsibility, "as we enter a new and uncertain world, in which nature is less predictable and climate change threatens more frequent and severe natural crises"²¹ that we become proactive in mitigating the effects of natural disasters rather than retroactively respond to them.

In conclusion, it is clear that there is a tendency to treat disaster relief only on its surface level. The most vulnerable communities tend to be those least protected by architectural practice, and those most affect by disaster in the built environment. Ban's attention to vulnerable communities demonstrates a way for architectural practice to help them not only heal but also advance after disasters. And although the works of Shigeru Ban are impactful and sustainable resolutions to reconstruction post-disaster, these ideas have not penetrated the field at large yet. Disaster relief architecture made to last and commemorate collective trauma is yet to be widely practiced as a solution to our global crises. Methodologies like these need to be thought of critically as we move forward in the architectural profession. Earthquakes, tsunamis and climate change are inevitable, but disaster does not have to be. The "dropping of tents

[is] still the standard solution despite their climatic and social limitations.”²² As shown by Shigeru Ban, there are alternative methods to disaster reconstruction, and there are certainly ones yet to be explored.



Figure 11: Image of Christchurch Transitional Cathedral at night, with light illuminating from within Source: Author

¹ Alight, “6 Cool Things in One of the Oldest Refugee Camps”, accessed December 18, 2022, <https://wearealight.org/6-cool-things-in-one-of-the-oldest-refugee-camps/#:~:text=Established%20in%201958%2C%20Nakivale%20Refugee,refugee%20camps%20in%20the%20world.>

² Nishat Awan, Schneider, Tatjana and Till, Jeremy, *Spatial Agency: Other Ways of Doing Architecture* (New York: Routledge, 2011), 50. .

³ Andrew H. Dent and Leslie Sherr, *Material Innovation: Architecture* (London UK: Thames & Hudson 2014), 90.

⁴ Dent and Sherr, *Material Innovation*, 90.

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- ⁵ Dent and Sherr, *Material Innovation*, 90.
- ⁶ Marie Jeannine Aquilino, *Beyond Shelter Architecture and Human Dignity* (New York: Metropolis Books, 2011), 167
- ⁷ Aquilino, *Beyond Shelter*, 167-168
- ⁸ Awan, Schneider and Till, *Spatial Agency*, 49.
- ⁹ Awan, Schneider and Till, *Spatial Agency*, 49.
- ¹⁰ Gustavo Gili, *Shigeru Ban* (Barcelona: GG Portfolio, 1997), 4
- ¹¹ Aquilino, *Beyond Shelter*, 13-15.
- ¹² Aquilino, *Beyond Shelter*, 22.
- ¹³ Gustavo Gili, *Shigeru Ban*, 6.
- ¹⁴ Bill Leerie. Interview with Elisa Castañeda, on-site interview. Christchurch, August 1, 2022.
- ¹⁵ Bill Leerie. Interview with Elisa Castañeda, on-site interview. Christchurch, August 1, 2022.
- ¹⁶ Jo Da Silva, *Lessons from Aceh: Key Considerations in Post-disaster Reconstruction* (Warwickshire: Practical Action Publishing, 2009), 13.
- ¹⁷ Bill Leerie. Interview with Elisa Castañeda, on-site interview. Christchurch, August 1, 2022.
- ¹⁸ Aquilino, *Beyond Shelter*, 167.
- ¹⁹ Esther Charlesworth and John Fine, "Design and Disaster Resilience: Toward a Role for Design in Disaster Mitigation and Recovery" *Architecture MDPI* no.2 (2022) 292.
- ²⁰ UNESCO, "INTERNATIONAL Disaster Resilient Architecture (INDRA)" accessed December 6, 2022, <https://en.unesco.org/disaster-risk-reduction/built-environment/indra>.
- ²¹ Aquilino, *Beyond Shelter*, 38.
- ²² Aquilino, *Beyond Shelter*, 15.

Superkilen Park in Copenhagen, Denmark

Identity Markers as Inclusive Design



Figure 1: Outdoor public fountain from Morocco in Superkilen Park Source Author

Architecture has a unique opportunity to address the global refugee crisis. Rather than allowing this seemingly divisive topic separate communities, architects could facilitate connection through the built environment. Latino-American architect Ronald Rael speaks to this in comparing his aspirations for the U.S.- Mexico border wall to the present state of the Berlin Wall in Germany:

Rather than being viewed as meaningless monuments to an outdated method of dealing with immigration, the remnants of a reconsidered wall might be treated with reverence, reminders of a time of trauma that was overcome through creativity, resilience, and imagination... The healing of two cities has been articulated by a

scar that continues to be visible in many places in the form of urban parks, museums, and public pedestrian and bicycle trails.¹

As social disorder caused by armed conflict, climate change, religious and ethnic discrimination, economic and political instability, and lack of access to resources continues to force migrants away from all that they know, the response from architectural institutions has fallen behind. Often the result has been the development of tent cities or container homes that further isolate a group that already feels unwelcomed. This prompts a question: is the refugee *crisis* really a "crisis" or just a facet of life? And why has architecture not adjusted to this fact as urban density is projected to increase in part due to mass migration?

Designers of Superkilen Park in Copenhagen, Denmark, have developed a unique approach to acknowledging the diversity of an immigrant community. Rather than using a cookie-cutter solution for a multi-faceted urban condition, they created a park that celebrates differences. Because there are multiple contributors to migration, there are also multiple solutions. The solution does not reside solely in housing the displaced, but also in recognizing each other's humanity and championing the merging of cultures.

Objectives of Research

- 3. Superkilen Park** in Copenhagen attempts to create connectivity for those forced to flee their homes due to social disorder in a migrant community of over sixty represented nationalities.

Contextualization of Qualitative Architecture



Figure 2: Nyhavn neighborhood in Copenhagen

Source: Author

Copenhagen, the capital city of Denmark, with its storied colonialist past, is now considered one of the happiest places to live in the world according to a report done on Healthy Lifestyle Cities in 2022.² This city is known for its historic canal ways, *hygge* lifestyle, biking infrastructure, and spiraling belltowers that occasionally break the skyline. In the architecture scene, Copenhagen has taken a stark turn from its historic building typology and became a hub of contemporary architectural ideas (Fig.3). The site of study breaks away from this typical worldview on Copenhagen, in an immigrant ghetto, where political riots and poverty, and crime are often associated. Superkilen Park is in Copenhagen's neighborhood of Nørrebro, which currently is the largest immigrant community in Denmark. Nørrebro has a history of migrants finding a home there starting in the early twentieth century and has become the defining

characteristic of the neighborhood. It started with migrants from the neighboring countries such as Sweden, Germany, and Norway.³

Then in 1960, Nørrebro and other parts of Copenhagen witnessed an influx of worker immigration from Pakistan and Morocco. From the 1980s onwards, the neighbourhood was increasingly populated by refugees from Iraq, Iran and Lebanon (Palestinians).⁴

Although there is also representation from Spain to Japan, more than half of the residents living in Nørrebro come from countries with a Muslim majority, such as Bosnia Herzegovina, Turkey, Somalia, Morocco, Iran, Iraq, Jordan, Lebanon, Pakistan and Syria.⁵ Since these waves of immigration are relatively recent, many of these immigrants are first generation.



Figure 3: Contemporary mixed-use residential building across from Nyhavn Source Author

Denmark, like many countries in the Global North, has had and continues to practice unsavory treatment of migrants. With recent policies barring Syrian refugees from receiving visa status and hypocritical reactions to Ukrainian asylum seekers, Nørrebro has been the site of politically motivated riots. Because of this, the community has assumed an identity of both cultural diversity and unrest, with chronic social challenges. The daily battles of identity and place-making in a new home are essential to understanding the importance of immigrant stories within the community, and the impact of the Superkilen project on the transformation of Nørrebro.⁶



Figure 4: Street art on the walls of the Red Square at Superkilen.

Source: Author



Figure 5: Present day Tivoli Gardens
Source: Author



Figure 6: Present day Tivoli Gardens

One of the main objectives for the park was to facilitate integration and promote coexistence among the different minority groups present at Nørrebro. The architects of Superkilen used these objectives to propose an infrastructure of unification, blending cultural artifacts from around the world, “rather than an aesthetic exercise of Danish design.”⁷ At the same time they took precedent from historic references of the *pleasure garden* and the *amusement park* drawn from local heritage. Copenhagen is home to the world’s second oldest amusement park, Tivoli Gardens (Fig.5&6). Tivoli opened in 1843 when its founder, Georg Carstensen, was inspired by his international travels, displaying architectural themes and motifs from Asia and North Africa, and exhibiting gardens with exotic plants and animals. It was allegedly the inspiration for Hans Christian Anderson’s *Nightingale* (as he lived and died in Copenhagen) and was also visited by Walt Disney before he aspired to build Epcot⁸. With Superkilen, the

designers used the multicultural nature of the neighborhood to form a modern and functional hybrid of a global exhibition in a communal space that appeals not only to migrants, but also ethnic Danes.

This park expresses a collective story of resilience, as migrants face some of the toughest challenges in hopes of finding a more prosperous future in places where they are sometimes not well received. Can architectural intervention address these hardships to improve quality of life for a neighborhood? How does the community really use this park ten years after its opening, and to what extent does it cultivate cultural and national identities? And what lessons can be learned for cities receiving an influx of refugees in the wake of climate change and armed conflict?



Figure 7: Neon light sculptures in Superkilen from around the world
Source: Author

Architecture That Goes Beyond Aesthetic



Figure 8: Aerial view of Superkilen (lower-left corner) within the context of Copenhagen. Source: TOPOTEK 1

"Super-Wedge" & the Participatory Park *Extreme!*

Superkilen, which means *super-wedge* in Danish, is nestled between a narrow strip of predominantly refugee housing complexes. The design of this nearly mile-long urban park is a result of a public competition held by the Municipality of Copenhagen, and the philanthropic group Realdania.⁹ The goal of the competition was to generate urban renewal. It was a part of a larger development plan that included projects like Nørrebrohallen and Mimersparken, which are both public recreational centers adjacent to the site. Superkilen was conceived as a collaboration across design fields by three different firms, and the transdisciplinary nature of the group resulted in a unique design

process. This included the Copenhagen architecture firm BIG -Bjarke Ingels Group, a German landscape architecture firm TOPOTEK 1, and Danish artist organization SUPERFLEX.¹⁰

With Nørrebro's history of revolt and social challenges, the district experienced a disconnect from the rest of the city, which further instilled isolation for refugees and immigrant communities in the area. But with Copenhagen's goal to become the first carbon neutral city by 2025, the city began expanding the underground network of metro railways and public transit stops that finally reached the neighborhood and have given its residents more access to the city center, as well as a shared identity with the rest of the city. As a part of the continuing public outreach, the project for the park underwent a series of public surveys for user needs, which eventually led to the call for international artifacts to be integrated into the urban infrastructure of the park. The purpose of collecting a library of urban artifacts for the park was to celebrate the multicultural heritage of the neighborhood, in addition to exhibiting urban best practices. BIG coined the term "participatory park extreme" for this design. The group did this through social media outlets, flyers, public forums, and meetings with local leaders.¹¹ This resulted in the collection of 108 objects, artworks, and urban furniture from approximately sixty nationalities. In many cases, traveling to the countries with community members was necessary to retrieve the objects.



Figure 9: Graphic organization of images submitted by community members incorporated into park. Source: TOPOTEK 1

Whatever objects that could not be retrieved were replicated and/or redesigned for public use outdoors. Above is an organizational amalgamation done by TOPOTEK 1 of all the images that were submitted from community members to the design group that were later incorporated into the site (Fig.9).

When the park officially opened in 2012, the programming included functional public spaces such as trails, bike lanes, recreation spaces, playgrounds, public transportation stops, and communal space for self-expression and markets. The park was also meant to increase a sense of security for residents, replacing the pre-existing fence that divided the complexes. By doing so, the park created a point of connection for the diverse groups represented in the community, while also creating safe spaces in an area that experienced social unrest.



Figure 10: Octopus playground from Japan featured at Superkilen's Black Market
Source: Author

Through community participation it was determined that the park needed various outdoor activities and culturally sensitive landscaping. The community involvement made this project unique among the typical response to the refugee crisis.

By tapping into local intelligence, this approach was meant to invite users to articulate their needs. The public participation was meant to reflect the culturally diverse landscape of the Nørrebro neighbourhood, the objects were meant to create relationships between the residents and visitors, and to promote a sense of ownership of the park among the residents through emotional connectivity.¹²



Figure 11: Playground equipment in use at the Red Square in Superkilen. Source: Author

This cultural integration leans into a new emerging Danish idea surrounding public infrastructure, dubbed *our urban living room*.¹³ It implies a shift from private to more public outdoor spaces, and

creation of a more wholistic view of city spaces. This also entails creating safe and welcoming social spaces for everyone and facilitating connection and security. Allowing the input of the Muslim community, along with the broader neighborhood, provides a cultural mediator. These fragments of different cultures within the landscape have, through architectural intervention, been transformed into the stage for everyday life and the cultural landscape of Copenhagen itself.



Figure 12: Mural painted on fence in the Red Square at Superkilen portraying a gathering. Source: Author

Synergy Between Built Environment and Human Experience

Figure 13: Pavilion in the Green Park at Superkilen

Source: Author

Superkilen spans from Nørrebrogade in the South to Tagensvej in the North. The park is designed with a color coding that indicates different programmatic purposes, including the Red Square, the Black Market, and the Green Park. In the Red Square, the southern end of the park, there is a space designated for cultural events, markets, and sport activities. The Black Market is meant to embody the urban living room, with communal spaces for leisure and play, with points of observation for parents. And the Green Park, which takes up a majority of the park, is where the outdoor garden spaces, trails, hills and recreation are housed.

As one enters the north end of the park, from Skjold Plads metro to Tagensvej, one passes local corner stores, Abu Samra's Lebanese restaurant, Istanbul Kebab, Lemon Grass CPH, Al amir Halal slagter butcher shop, the Bengali Cultural Association, and a local florist.



Figure 14: Entrance to North end of Superkilen park, with bull from Spain
Source: Author

The entrance to the park is almost discrete, with worn foot paths and wildflowers softly swaying in the cool summer breeze, but the visitor's eyes are then drawn to a two-dimensional bull statue from Spain acting as gatekeeper to the neighborhood (Fig.14). Staying along the footpath to the eastward side of the park, one can feel the close proximity between the adjacent residential areas and the park, with many small yards that have paths leading straight into the trail, like

small arteries of the body leading to the heart. As one continues south along the trail, one encounters a bench from Sens, France, an ornate streetlamp from Italy and a hammock from Australia. After passing the soft hill with the bull, is a lawn with covered picnic tables from Armenia, with what look like white pin wheels for shade (Fig.15).



Figure 15: White picnic tables from Armenia in Green Park of Superkilen
Source: Author

Facing south from this lawn the horizon shows a series of elevated paths, and bike trails, with an outdoor gym set to the left, and a concrete basketball court that doubles as a skate part to the right. The court has a unique topography, carving into the earth at its base,

with rising hills to its North and South, almost not revealing itself until one is already upon it (Fig.17).

Here the footpath and the bike trail meet, with graffiti tags, and small illustrations lining the raised portions of concrete where skaters sit while watching their friends skate in the court and pass time. The space feels safe, with no roads interrupting the Green Park and Black Market, the sound of traffic is little to none, the landscaping embraces you with rolling hills that give you vantage points across the neighborhood.



Figure 17: View approaching the basketball court from Northern end. Source: Author



Figure 18: Image of basketball court with striped gazebo in the distance
Source: Author

Just beyond the court is a gazebo from Karachi, Pakistan, its striped bright red and white roof peaking above the basketball court, seen from a distance, enticing the viewer to its colorful canopy (Fig.18). Raised on a hill to the left is a jungle gym, with a tall set of swings, and a view to a bright blue and yellow sculptural pavilion from Russia (Fig.20). These changes in elevation allow pedestrians to have a variety of experiences with each visit to the park.



Figure 19(left) & 20(right): Striped gazebo from Karachi, Pakistan, and a blue and yellow sculptural pavilion from Russia with outdoor gym equipment to the right of the image. Source: Author

The last portion of the Green Park ends in a hill with many tall pine trees and grasses that embrace you just before starkly ending at the crest of the hill with the pavement of the Black Market (Fig. 21&22). The park goes from being a more traditional series of nature trails to a totally new stage set for vibrant activity.

Looking out over the Black Market one can see all the way to the south end of the park, with residential buildings on all sides. The pavement is choreographed with white lanes meant to delineate the movement of peoples throughout the space. They weave between artifacts and exotic trees, drawing pedestrians to various group activities meant to facilitate the ideals of the urban living room. To the right is a row of concrete chess tables from Sofia, Bulgaria (Fig.23), and a grill from Argentina.



Figure 21: View from the top of the artificial hill of the Black market, looking South. Source: Author



Figure 22: View of artificial hill in the Black Market facing Northward Source: Author



Figure 23: Image of concrete chess tables from Sofia, Bulgaria with concrete stools from Romania. Source: Author

As one passes this row of boardgames there is a large eight-edged fountain from Morocco with blue, red, white, and black mosaic tile that detail its shape, where children wet their hands and feet (Fig.1). Its bright colors add contrast to the white and deep greys of the pavement, while also working hand-in-hand with the overall design complexity. Across the fountain to the West is the octopus playground from Japan (Fig.24). With its all-black surface and undulating slopes and punctured openings, it fits perfectly into the highly designed Black Market, despite its foreign origins.



*Figure 24: Image of octopus playground from Japan with traditional Danish backdrop
Source: Author*

Beside the octopus is a colonnade of palm trees from China and a moon crescent bench from Egypt (Fig.25). A light sculpture from Qatar appears to be the Islamic symbol of a crescent moon and star but is in fact a sign from a dentist office, which swapped the star for a tooth, adding a sense of humor to the composition (Fig.26). The Black Market being the central section of the park creates opportunities for intimate encounters in a public space and adds a unique architectural and visual language that contrasts with the surrounding residential buildings.



*Figure 25: Image of colonnade of palm trees from China and moon crescent bench from Egypt facing North from the Back Market, directly behind the octopus playground;
Source: Author*



*Figure 26: Image of neon light sculpture exhibited with crescent moon and tooth.
Source: Author*

To cross from the Black Market into the Red Square one passes Japanese cherry blossoms wrapped in benches from Belgium (Fig.27).



Figure 27: View of Japanese cherry blossoms with benches from Belgium, facing the end of the Black Square to the South. Source: Author

Beyond this you enter the North end of the Red Square in Superkilen, with deep red maples lining the bike and foot path (Fig.28). This first portion of the Red Square is narrow, with cars parked along the left-hand side on porous red pavement. Red brick pavers indicate the pedestrian footpath, and a deep purple concrete serves as the bike lane. Continuing South, one passes the indoor recreation center that opens up into a large square covered in a patchwork of reds, oranges, and purples. Lining the park along the left is the entrance to the recreation center, and a multi-purpose children's library/local

cafeteria with event space. This area is where locals hold community events, religious festivals, celebrations, and a biweekly market.



Figure 28: Entrance to the Red Square after crossing the street from the Black Market
Source: Author

These buildings maintain an industrial feel yet blend perfectly into the backdrop of the park by literally having red and orange paint go from the bright pavement halfway up onto the building facades, as seen on the left-hand side of figure 29. Directly outside of the library is a red toned skate park with benches from Brazil and bike racks from Egypt. The brick pavers are organized in a kaleidoscope of red hues that lead to neon light sculptures, and spaces for communal seating to watch skateboarders, rollerbladers, and wheels in training. To the far left corner the skate park encroaches onto a neighboring building,

crawling up the façade in a soft slope, with red paint that extends all the way to its pitched roof (Fig.29).



Figure 29: Image of the Red Square, with red painted building facades and skate ramp to the right. Source: Author

To the right-hand side of the park facing west, the ground turns into a red rubber composite that has a certain retention upon impact that is softer on the feet. This is where the main recreation and playground is in the Red Square. It begins with a punching bag from Turkey and a Thai boxing ring from Bangkok (Fig.31). From here one might see a father and his daughter attempting to go down the white elephant slide from Ukraine (Fig.32), or a group of children rocking on the bench swings from Iraq or India, while their mothers converse on a nearby bench from Iran. The park ends with an open view to the

street of Nørrebrogade, and the neighboring buildings. From the South end of the park facing North, the Red Square is wide open, embracing color and electric with activity. There are no gates that close or restrict the park, and its neon light sculptures from the USA, Russia, Taiwan, and China can be seen from many blocks away (fig.##). The warm tones on the ground make the square inviting, with seemingly little intervention of built-up surfaces. This contrasts with the Green Park of Superkilen, with an undulating landscape containing hidden surprises around every corner. In the Red Square you can sense all the activity at once: the sounds of wheels against the red pavement, the rocking of the bench swings, and buzz of chatter among parents. These spaces provide an interconnectedness for the neighborhood, passing from North to South for circulation, but also reaching out to the East and West through backyards, community centers, points of play and leisure in place of what once was a dividing fence.



Figure 30: Image of boy practicing with a punching bag from Turkey
Source: Author



Figure 31: Image of young adults conversing as they prepare to use the boxing ring from Thailand
Source: Author



Figure 32: Young families taking turns at the elephant slide from Ukraine
Source: Author



Figure 33: View entering the Red Square from the North with skate park to the left and boxing ring to the right. Source: Author

Architecture for This Moment

In 2016 Superkilen won the \$1 million Aga Khan Award for Architecture, with the AIA Honor Award already in tow from 2013.¹⁴ The award was given for being “a public space promoting integration across lines of ethnicity, religion and culture.”¹⁵ And though one can observe how Superkilen has made a positive impact through the connectivity of spaces in an intentionally artificial landscape (rather than attempting to seem natural), it may just be that not every detail contains a much significances as the “participatory park extreme” meant to convey. Without the assistance of placards that label the objects or occasionally a map that points them out (Fig.34&35), one

could easily miss just how many objects in the park are counted as foreign.



Figure 34(left) & 35(right): Image of placard denoting the origins of a bike stand from France, and a map of the whole park locating where each item is and the correlating placard. Source: Author

Perhaps this creates a sense of discovery, uncovering something new and alien every time one visits the park. A metaphor about immigrants may be found in that observation alone. But it is easy to doubt whether a manhole cover from Israel, bollards from Egypt, and trash bins from Ireland truly create a sense of pride for whomever is from its country of origin.

Nevertheless, Superkilen has had large influence over Copenhagen. Upon using the metro, one will see an image of the Black Market with the cherry blossoms in full bloom on the front cover of all the metro-sponsored visitor maps in every car (Fig.36&37). The park provides a sense of cultural identity, and an iconography that is recognizable in a historically marginalized neighborhood.



Figure 36(left) & 37(right): Images of tour guides found inside of metro cars in Copenhagen. Source: Author

For fast-developing cities the size of Copenhagen or even larger, its important to plan for diversity in social but also in architectural terms. I am convinced that we [as architects] should make an effort to create more socially diverse neighborhoods. In my eyes this is a crucial challenge for the future.¹⁶

The site is vibrant with activity at all times of day and by people of all walks of life. Public infrastructure is a part of architectural practice, and integral to understanding socially conscientious city building. Superkilen chose to address this head on, through deeply site-specific methods, and forwardly bold design. In its multicultural context, the park serves its community as something both simultaneously new and familiar, fostering connection and cultural awareness.



Figure 38: Image of the Green Park at Superkilen Source: Author



Figure 39: View of the Black Market and mosaic fountain from Morocco at Superkilen Source: Author



Figure 40: View of Red Square from its Southern most point, with light sculptures and white elephant in the distance
Source: Author



Figure 41: A local food vender set up at the Red Square, with local artist mural work. Source: Author



Figure 42: The Black Market with coffee truck parked to the far left corner and pedestrians of all ages enjoying the day Source: Author

¹Ronald Rael, *Borderwall As Architecture* (University of California Press, 2017)167

²Lenstore, "Healthy Lifestyle Cities Report 2022", accessed December 29, 2022,<https://www.lenstore.co.uk/eyecare/healthy-lifestyle-cities-report-2022>

³Azra Aksamija, 2016 On Site Review Report - Superkilen, Copenhagen Denmark (Municipality of Copenhagen, 2016) 8.

⁴Aksamija, 2016 On Site Review Report, 12

⁵Aksamija, 2016 On Site Review Report, 15

⁶Brett A. Bloom, *Superkilen: Participatory Park Extreme!* (Kritik, 2013)15.

⁷ Tivoli, "The History of Tivoli", accessed January 2, 2023,<https://www.tivoli.dk/en/om/tivolis-historie/tidslinie>

⁸Aksamija, 2016 On Site Review Report, 16.

⁹Aksamija, 2016 On Site Review Report, 20.

¹⁰Bloom, *Superkilen*, 20

¹¹Aksamija, 2016 On Site Review Report,25.

¹²Aksamija, 2016 On Site Review Report,25.

¹³ Sandra Hofmeister, *Kobenhavn - Urban Architecture and Public Spaces* (Edition Detail, 2021), 49.

¹⁴ The Aga Khan Award for Architecture, "Superkilen", accessed January 2, 2023, <https://the.akdn/en/how-we-work/our-agencies/aga-khan-trust-culture/akaa/superkilen>

¹⁵ The Aga Khan Award for Architecture, "Superkilen"

¹⁶ Hofmeister *Kobenhavn*, 51

Constitutional Court of South Africa

Building a Democracy Through Architectural Storytelling



Figure 1: Image of Johannesburg taken from the top floor of Protea Hotel, to the far left of the image, one can see the lanterns of Constitutional Hill

Our democratic Constitution is at the heart of our triumph over oppression and division. It is the bastion of our victory over a system that caused extreme deprivation, hardship, and suffering; a system that caught oppressor and oppressed alike in a web of ceaseless conflict...Transforming a notorious icon of repression into its opposite, it will ease the memories of suffering inflicted in the dark corners, cells and corridors of the Old Fort Prison. Rising from the ashes of that ghastly era, it will shine forth as a pledge for all time that South Africa will never return to that abyss. It will stand as an affirmation that South Africa is indeed a better place for all.¹

- Nelson Mandela

In the City of Gold, where colonialism still bears an enduring imprint, Johannesburg has become the home of the first governmental building built post-apartheid in South Africa. In the site of a former prison fort, that once held political prisoners like Mahatma Gandhi and Nelson Mandela, now resides South Africa's highest court.

Objectives of Research:

4. Analysis of the **Constitutional Court of South Africa**, envisioned to rebuild society in the aftermath of colonialism.

Contextualization of Qualitative Design:



*Figure 3: Image of Freedom Park in Pretoria, with ceremonial site honoring the eleven official languages of South Africa
Source: Auhtor*

Johannesburg is South Africa's economic capital and largest city, with a population of over 6 million people. Its horizon is crowned by the Northwest Gauteng Mountain Range, the township of Soweto to the West, and Pretoria, the country's governmental capital to the Northeast. For over five decades South Africa was under apartheid rule, separating South Africans into three categories: black, white, and colored (mixed). Prior to this, South Africa went

through centuries of colonial rule from the Dutch during the 17th, 18th, and 19th centuries, and later the British Empire. Johannesburg was known as *the City of Gold* for its large gold deposits found along the Witwatersrand escarpment in the 1880s. Due to the rapid development of the mines, British prospectors claimed the discovery and used this to back their overthrow of the existing Dutch governing bodies from the eastern Cape frontier³. Because of the the Witwatersrand Gold Rush, Johannesburg quickly became South Africa's largest colonial settlement, and is the country's largest metropolitan area to this day.

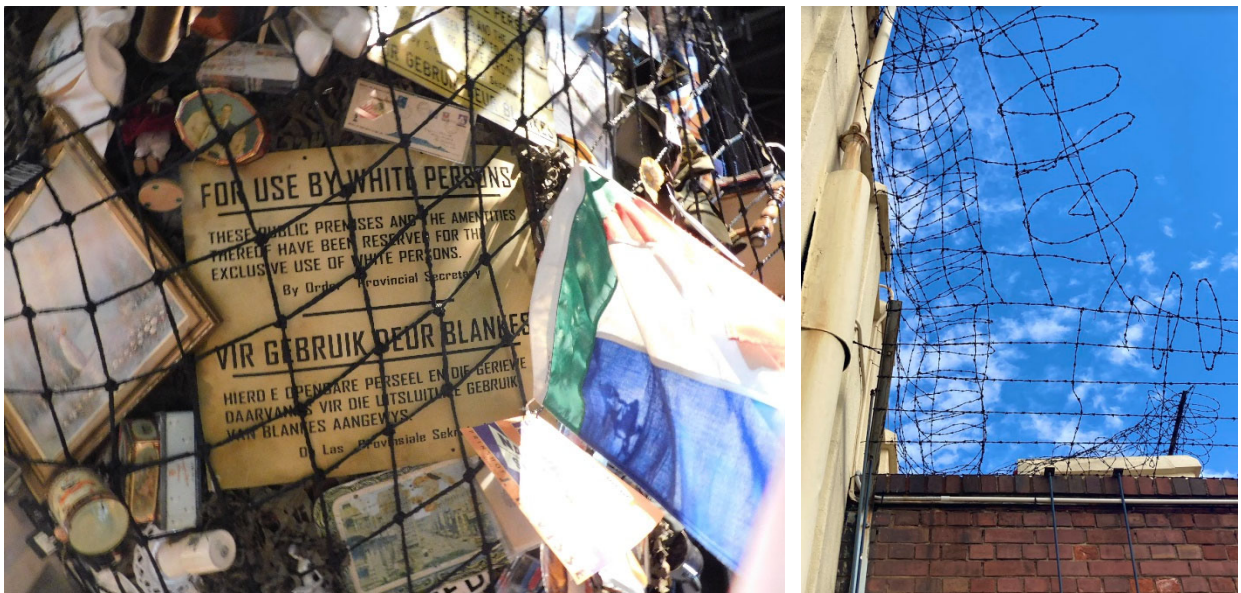


Figure 4(left): Exhibit at Freedom Park with remnants from the apartheid era. Figure 5 (right): Barbed wire at Number Four Prison on Constitutional Hill from Apartheid era. Source: Author

In 1950, when apartheid was put officially into law (as it was widely practiced in the country prior to this) with the Population Registration Act, it dictated the spatial order of everyday life, from

the quality of education to the legitimacy of citizenship and the rights to residency as Black South Africans.

Because of the close correlation between apartheid legislation and city planning, post-apartheid space in South Africa remains very affected by the patterns of organization and the forms of the apartheid city.⁴

In the 1960s, when the Civil Right Movement was happening in the United States, human rights abuses in South Africa were also recognized on the global stage. The United Nations General Assembly denounced the apartheid and South Africa was forced to withdraw from the Commonwealth⁵. The atrocities committed during apartheid continued on for another thirty years until 1994, with the first democratic presidential election in the country, and the first Black South African president, Nelson Mandela.

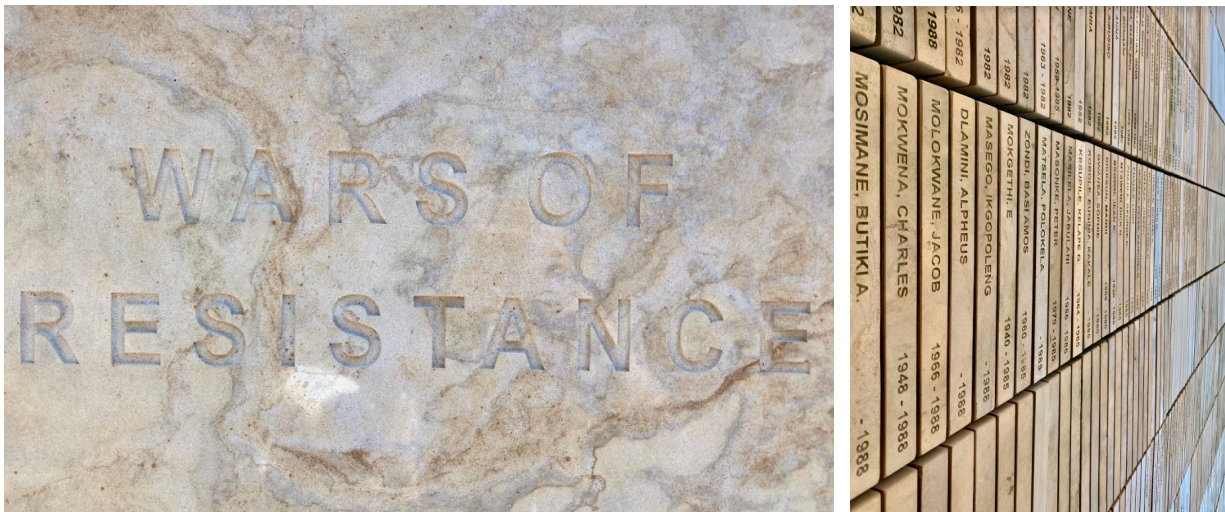


Figure 6(left) and 7 (right): Wall commemorating the lives lost in the battles against apartheid, displayed at Freedom Park, Pretoria, South Africa. Source: Author

Post-apartheid, architects in South Africa were enabled to design the built environment to tell a new story.

State-sponsored competitions, new government policies, globalization, tourism, new modes of urban competitiveness, the collisions and confusions of urban restructuring; these have all located architecture at the heart of the project to re-imagine our

[South African] national identity and present it with unparalleled opportunities to re-imagine itself - what is, how it operates, what it builds and how it looks.⁶

With an interim constitution adopted in 1994, and the official constitution ratified in 1996, the incumbent eleven judges of the court were tasked with selecting a site for what would be the first government building erected post-apartheid, the constitutional court. The selection of this first new commission gave prominence to ensuring the people's rights, highlighting the newfound freedom, and honoring the many who gave their lives. The judges chose the site of the Old Prison Fort, one of the oldest places of incarceration and human rights abuses in South Africa.⁷ Celebrating the democracy's ten-year anniversary, in 2004 the Constitutional Court of South Africa was inaugurated.

Architecture that Goes Beyond Aesthetic:



Figure 8: View of the Old Fort Prison in Constitutional Hill Precinct in Johannesburg, South Africa.

Source: Author

The Constitutional Court is located in what is now known as the Constitutional Hill Historic Precinct. The historic site holds the Old Fort, Constitutional Square, the old Women's Jail, the Constitutional Court, the Great African Steps, and the Number Four Prison (Fig.9). The selection of the site is one of the core elements in telling South Africa's unique story of struggle and democracy.

Former South African Justice Sachs described the group's conviction: "We chose that site because of the intensity of the memory and the meaning of constitutional justice for fundamental human rights. We fiercely resisted the idea . . . of just getting rid of the site. [Others] were saying, 'It's a site of pain, it's horrible, it's a vicious nightmare of memories of the past—get rid of it.' And we said, 'No.' We need to tell the story of the journey from darkness to light . . . to capture that vicious energy and turn it into positivity . . . to convert swords into ploughshares."⁸

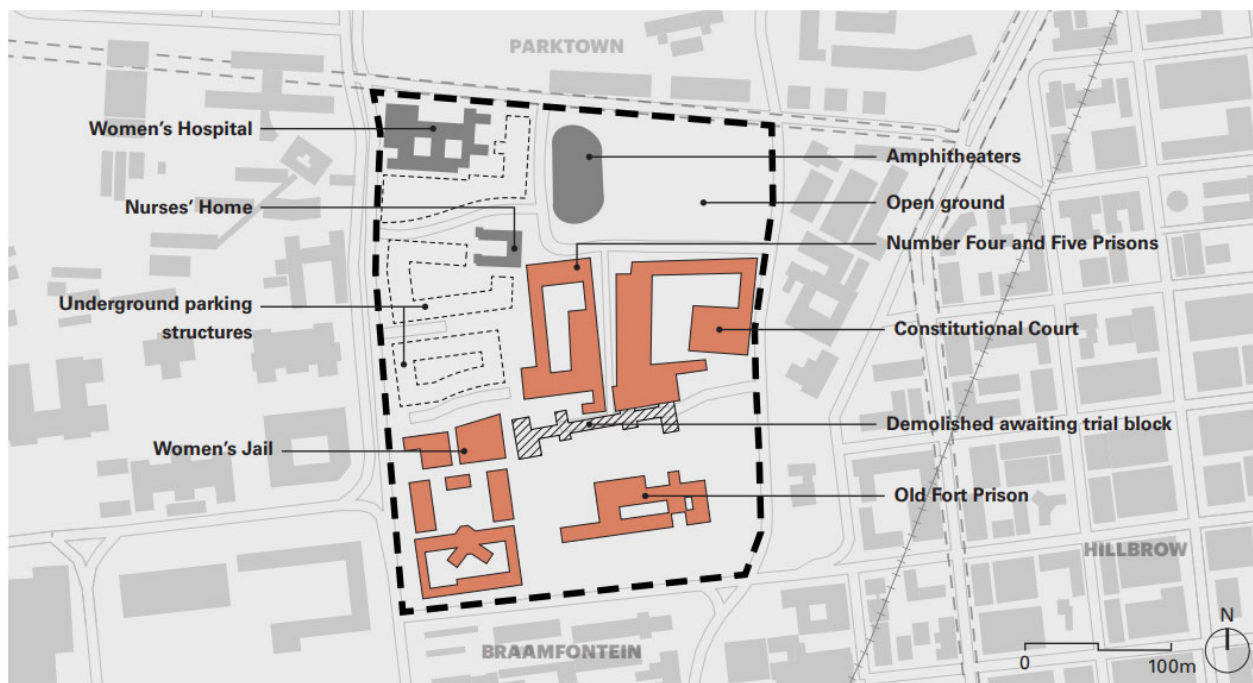


Figure 9: Plan of the Constitutional Hill Historic Precinct in Johannesburg, South Africa.

Source: Mass Design Group

Thus, by taking autonomy over their past, the architects and judges sought to create their own architectural language, developed through a postcolonial lens that did not seek precedent from the institutions of the Global North. Rather, the architects of the court chose to

question how a new democratic nation can “grapple with the challenges of public remembrance in the context of collective trauma.”⁹ In developing a design concept for the building that would house the highest law in the land, they chose to represent a traditional African form of an elder congregation, which meets seated beneath the shade of a tree within the village. Therefore, the court’s mantra and architectural metaphor became Justice Under A Tree. The designers of the court also used this as iconography, making it the Constitution’s symbol, representing not only the traditional practices of local decision making, but also instilling that all South Africans are sheltered by the protection of equal rights beneath the tree.



*Figure 10: Logo design by the architecture firms that became the official symbol of the Constitution in South Africa
Source: Constitutional Court*

The goal of the precinct was to create a link between the past and the future through three interrelated missions: connect the new Constitutional Court to historic sites of pain; preserve,

conserve, and restore history on the site; and use the site to spur urban regeneration.¹⁰

With this site came many challenges: the government at the time did not considering preservation as a top priority for investment, while preservationists were opposed the idea of repurposing the space for anything apart from a pure museum. The Constitutional Court took on its unique character through adamant insistence, steps put in place for the site to become an economic stimulator, and reassurance that any demolition that took place would recycle the material to become parts of active democracy.

Meanings attached to place cannot be understood apart from their spatial location in the urban landscape and from their historically specific temporality (or specific moment in time).¹¹

The precinct preserved the Women's Jail, which serves as an apartheid museum, showing the separate conditions of white and black women within its walls. Additionally, the former jail houses gallery spaces, and human rights offices: We the People South Africa (a non-profit advocacy group), the Commission For Gender Equality, and a pro bono family law attorney's office. The Old Fort, originally built to defend Dutch settlers during the gold rush and later used as a prison, is now a series of large exhibition spaces, preserving Nelson Mandela's cell and many of his writings. Other exhibits demonstrate the stories of individuals whose voices were left underrepresented in the fight for freedom from apartheid. The complex of the Old Fort also has a children's daycare facility, boutique café, outdoor venue space, and a private recording studio. The Number Four Prison, adjacent to the Constitutional Court to the West, preserves a portion of the men's

prison where black and "colored" men were held and exposed to egregious atrocities and forms of humiliation. This is where every tour of the precinct starts today, with travelling exhibitions held within the isolation cells, and permanent documentary screenings shown in former prison blocks. The walls of this space remain as they were at the times of apartheid, with the writings of men held in this prison, tallying the days and scratching out their names.



Figure 11: Image take from the preserved Number Four prison, with view of the Constitutional Court. Source: Author

From within the Number Four prison today, one can see the symbol of the Constitutional Court, breaking up the skyline.

In 2006 the Constitutional Court of South Africa was given the SAIA (the South African Institute of Architects) Excellence Award in Architecture, setting the precedent for post-apartheid design. While travelling to the site, I conducted analysis of how the architects integrated, through new construction methods and cultural awareness, an architectural language that demonstrates national resiliency post-apartheid.

Synergy Between Built Environment and Human Experience:

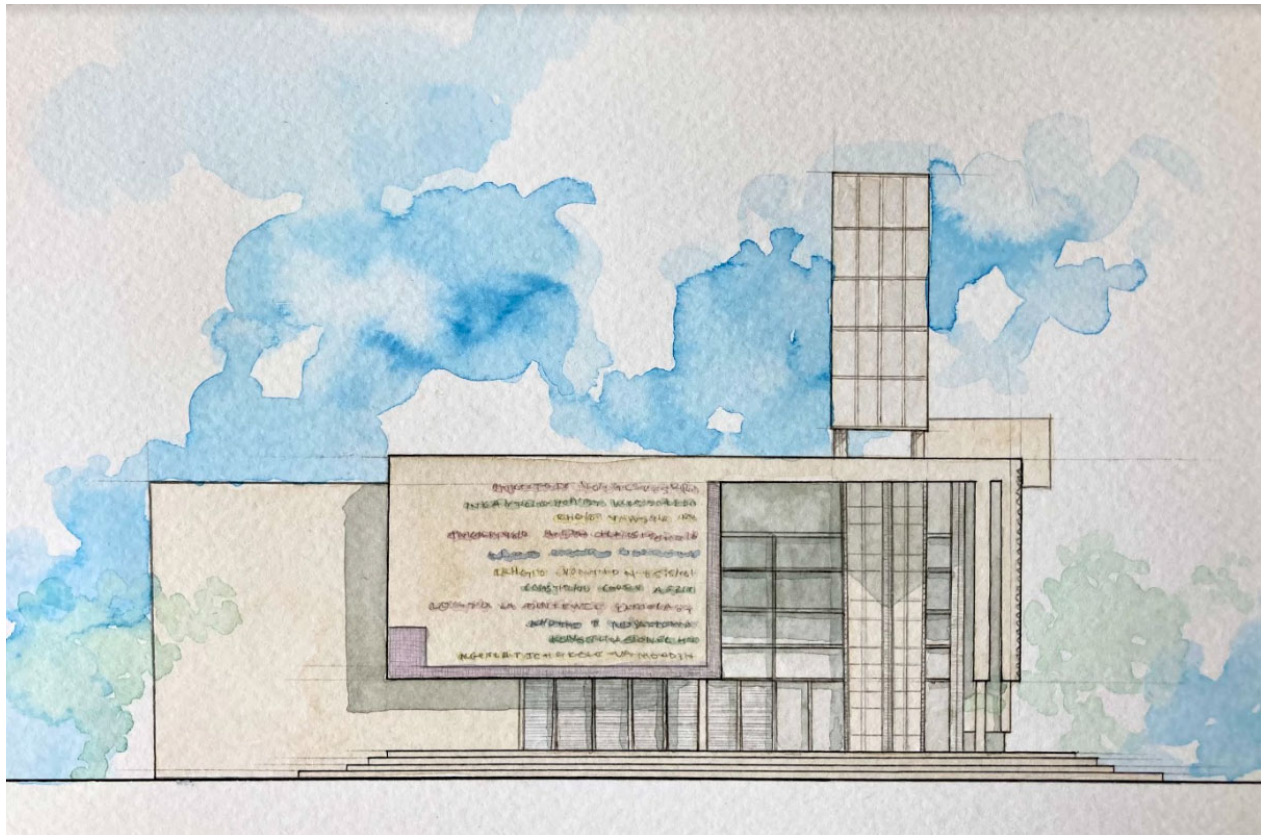


Figure 12: Pen and ink hand-drawn elevation of front façade of Constitutional Court, with watercolor wash. Source: Author

Justice Under a Tree

In 2004, South Africa celebrated the ten-year anniversary of democracy in the country by inaugurating the Constitutional Court building. The building, being the first government building erected

post-apartheid, held significant weight in symbolizing the assurance of a free South Africa, and architecturally had to encompass the Constitution's Bill of Rights for all. "Light on a Hill" was the title of the winning entry the design of which was chosen to stand as the people's court. The architects sought to design a new building, one that symbolized the decolonization of the Court, one for a new democracy, an architecture that renewed South Africa in the light of the constitution. The building consists of two parts, the first being the foyer, court chamber, and art gallery; the second being administration, the judges offices, conference spaces and constitutional library collection.



Figure 13(left)&14(right): Images of the handcrafted wooden doors to the court foyer with the 27 rights listed. Source: Author

When one approaches the Constitutional Court, there is an immediate embrace of materiality and a storied past. With laid brick

patterning the promenade towards the entrance of the Court (Fig. 2), and the remaining four staircases of the trial blocks where black men awaited sentencing from the notorious Number Four prison serve as a reminder of what the site once was. A colonnade of indigenous oak trees prompts you towards an asymmetrical building façade. To the left, "Constitutional Court" can be read in the eleven official languages of South Africa in an assortment of colors. To the right, a twenty-nine foot tall timber doorway, hand carved with the twenty-seven rights enshrined in their constitutional Bill of Rights, both in writing and in sign language, with Braille inscribed into the door handle (Fig.13&14).



Figure15: View of one of the concrete beams at the entrance of the foyer with judges handwriting. Source: Author

The concrete beams that line the foyer are engraved with the handwriting of the incumbent judges during the building of the court,

each in their native tongue, all of which translate to the three core principals of the court, “human dignity, equality and freedom.” The writing of Justice Yacoob, who is blind and has never seen his own writing, along with graffiti found in the former prison cells, was the lettering style chosen to inspire the signage used throughout the building¹², rather than the Euro-centric roman lettering often seen on public buildings in the Global North.



Figure 16: View of the foyer to the Constitutional Court with wire chandeliers, dappled carpet and slanted pillars Source: Author

As one passes through these colossal yet warm timber doors, one enters a space that feels inviting, a contrast to traditional state buildings typical in the Global North where they often feel intimidating, or not to human scale. South Africa’s Constitutional Court reveals itself

through transparency, light, and color. The idea of *Justice Under a Tree* is translated architecturally through eighteen tilted columns adorned with mosaics done by a local artist, red representing the clay earth towards their base, with blues and grey-greens towards the ceiling, representing the leafy openings to the sky (Fig. 17&18).

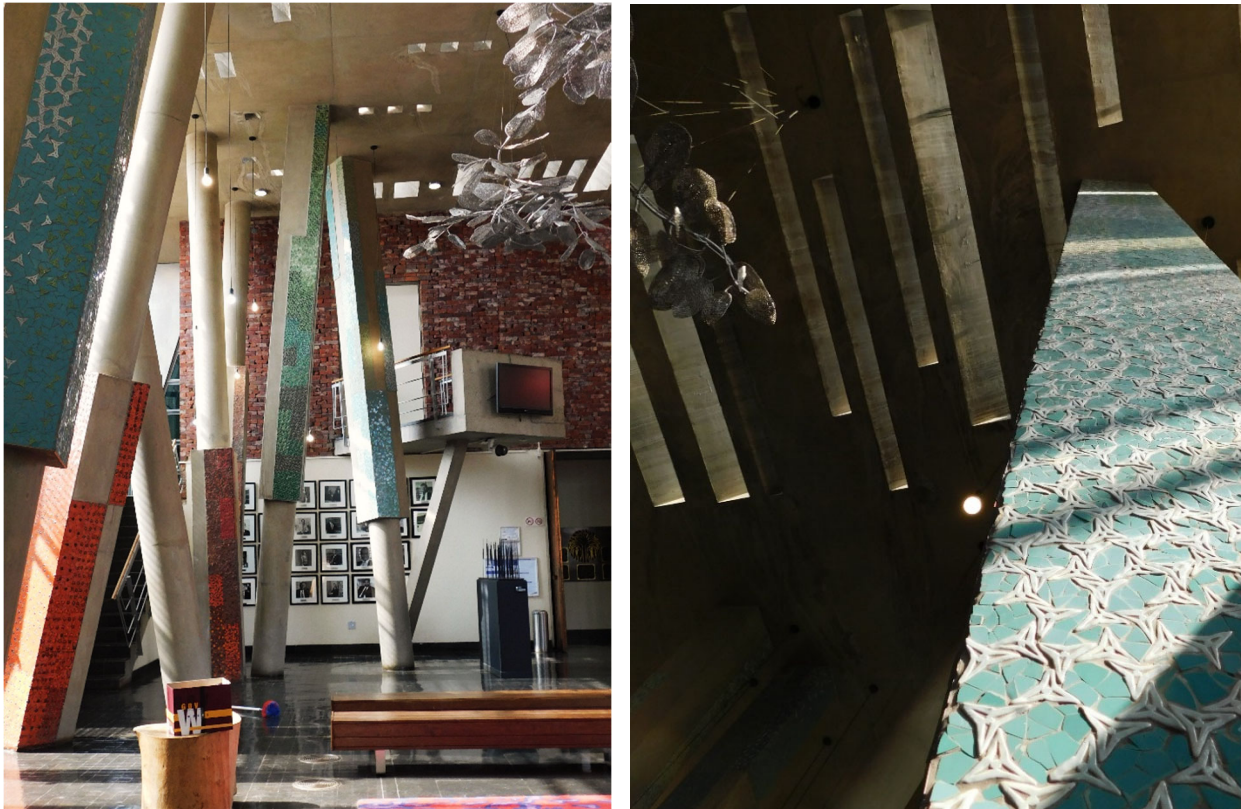


Figure 17(right): View on slated mosaic columns and lighting conditions. Figure 18(right): Close up on mosaic artwork and ceiling punctures, Source: Author

The Mosaics themselves contain shapes that symbolize seed pods, thorns, and leaves (Fig.18). Where the columns meet the concrete roof, there are punctured openings that allow light to move across the floor throughout the day and dapple the Court with sunlight. The carpet, with a handwoven pattern taken from paintings of a prominent South African artist, emulate the speckled light that passes through the openings of a leafy tree. As one looks up, they can see the handcrafted wire chandeliers that filter the light coming from these

punctured openings, further instilling the canopy of trees within the foyer. To the right of the entrance is a curved wall with five-hundred and twelve stained glass openings that transition towards wide floor to ceiling window openings¹³ that allow for transparency within the court and fully immerse the space in its surrounding environment.



Figure 19: View of far-right corner on the foyer, showing the pre-existing trial block stairwell (the arched opening). Source: Author

Along this wall to the right of the lobby, a stairwell from the old awaiting trial block is embedded in the building (Fig.19), incorporated as a reminder of South Africa's journey from oppression to democracy.¹⁴ All of the stairwells from the former prison remain on the site in their original positions, now acting as pillars of light for the entire Constitutional Hill Historic Precinct. They are crowned

with lanterns that let light in during the day, and act as light boxes in the night (Fig.20&21).



Figure 20(left) and 21(right): Images of the preserved trial block stairwells and lanterns installed on top

Source: Author

The Court chamber is the heart of the building just beyond the foyer and is open to the public. The wall to the right of the chamber now takes on a different kind of transparency, one that emphasizes equality, and acknowledges their unique struggle for democracy. As one follows along this wall to the right-hand side from the public entrance, one can feel the exposed brickwork with a certain grit and roughness. These very bricks were the ones salvaged from the demolition of the Old Prison Fort building. Their presence in the Court chamber typify how South Africa's fight for democracy was built on the sacrifices of others, instilling these bricks with a new purpose, supporting the weight of the people's court. Passing through the chambers is a narrow sliver of windows that are just at eye-level

with those in the room, yet simultaneously are at foot level with those beyond the wall, outside in the square.



Figure 22: The Constitutional Court Chamber, will eleven judge seats and historic bricks.

Source: Author



Figure 23: Image of narrow window along the brick wall of the court chamber

Source: Author

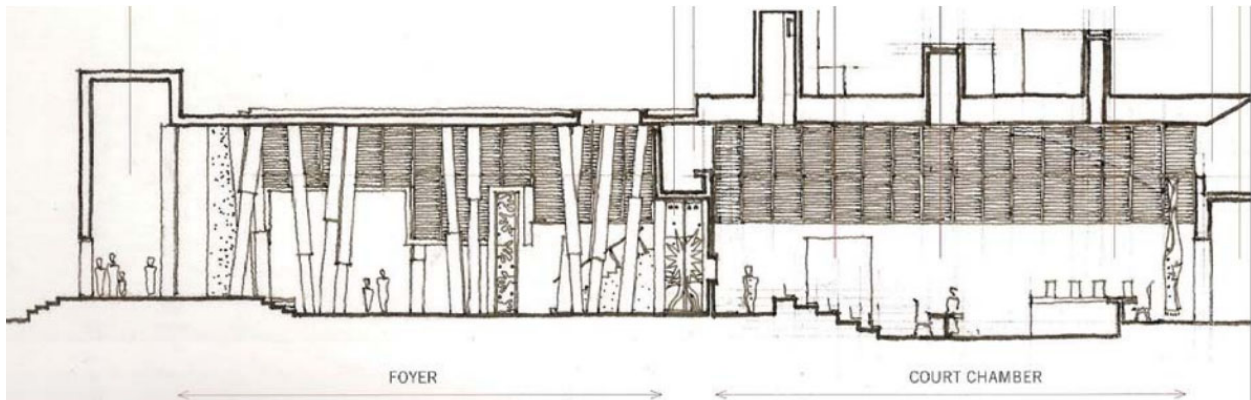


Figure 24: Section drawing demonstrating grade change from entrance to court chambers.

Source: University of Pretoria

The narrow window seen in figure 23 only allows those from within the courtroom to see the feet and shins of the passersby, acting as the great equalizer because you cannot easily discern someone's sex or race from this vantage point. The seats of the eleven judges do not

raise higher than that of the plaintiffs, nor is anyone seat prioritized over the other. Traditional Nguni cattle hides represent each judge's chair, all different, and yet similar. From the floor to the ceiling, *Justice Under a Tree* continues to reveal itself through architectural detailing. The floor is enveloped in yet another unique carpeting pattern that simulates the dappling of light through trees, with whites, deep purples, and blues (Fig.25).

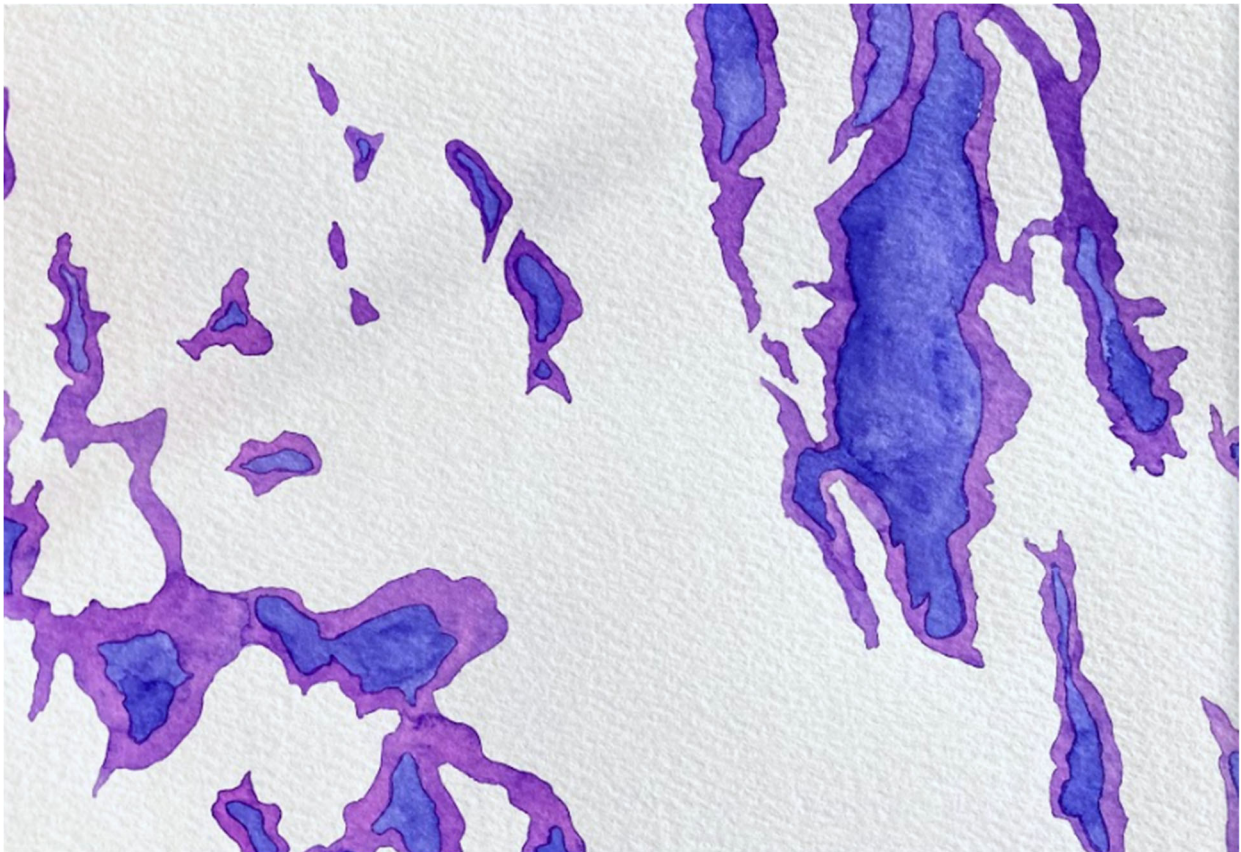


Figure 25: Watercolor painting of carpeting pattern found in the court chamber

Source: Author



Figure 26: Image taken from the press box of court chamber, displaying ceiling punctures and natural lighting. Source: Author

The ceiling holds large and deep punctures openings to skylights in a seemingly random pattern (Fig.26). The thickness of the openings emphasizes the weight of the room yet does not depart from its relationship to human scale. The warmth of the brick works in contrast to the cool and deep shafts of light that illuminate the courtroom. One can ascend through the space and have a more intimate relationship with these deep cutouts on the ceiling via the pressbox. From this

vantage point one gains a birds-eye-view of the proceedings, further translating the ideals of transparency within the court (Fig.26).

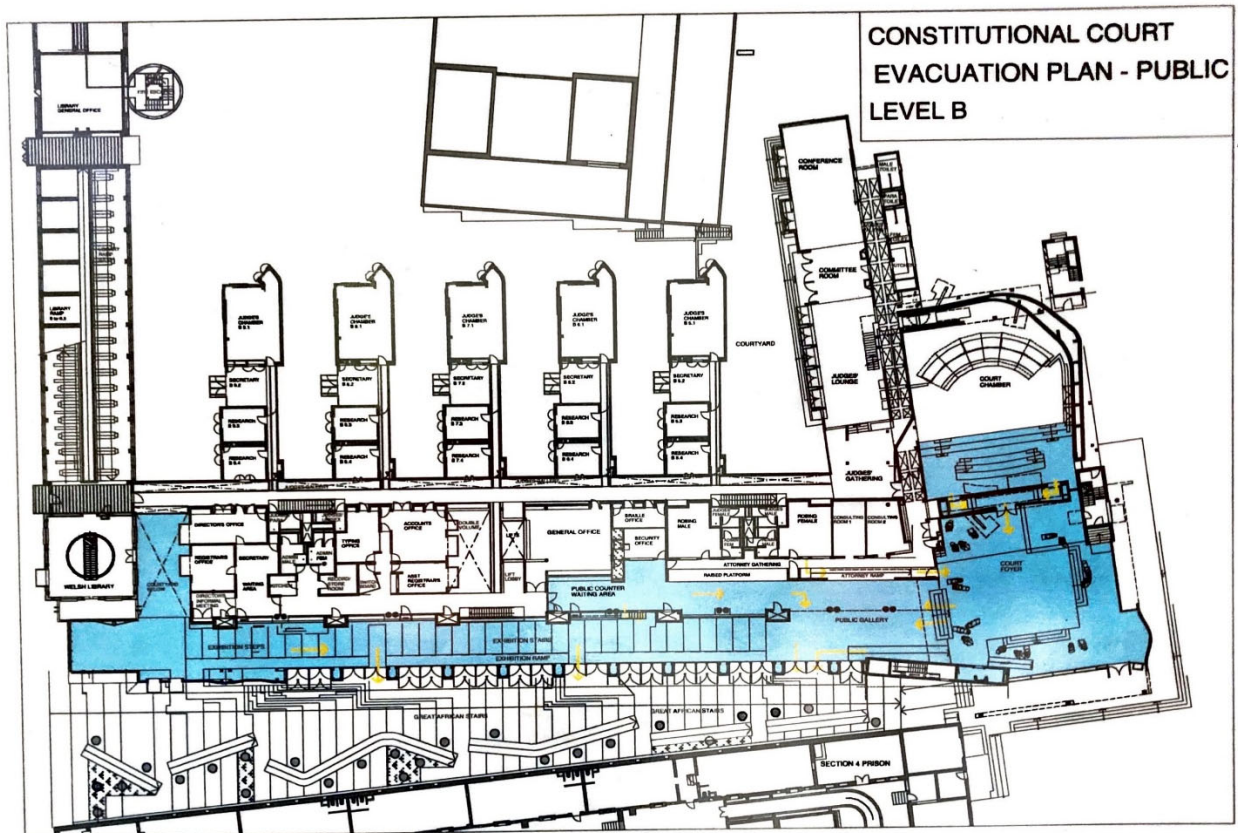


Figure 27: First floor plan image showing public access spaces and gallery hall to the west. Source: Constitutional Court

Descending back down into the foyer from the pressbox, the court's art collection is housed in a galley space that extends downward towards the north of the building. On the western façade of the gallery is a sun screen made up of movable bronze plates, each of which contains a story. The architects chose to illustrate the stories of locals they had interviewed and etched them onto the bronze. Their stories protect the building from deterioration, yet allow the light to shine through and illuminate the interior steps (Fig. 28&29).



Figure 28(above): Close up image of illustration etched into bronze plates of sunscreen wall.

Source: Author



Figure 29: Image of the Great African Steps and western façade of gallery and sunscreens.

Source: Author

Just beyond the gallery wall is a view of the Great African Steps (Fig.29&30), which lead from Constitution Square (the plaza at the

entrance of the court) to the ramparts of the Old Fort and Number Four Prison. The bricks used to form the steps are the same brick used within the court chamber, the ones that remained from the former awaiting trial blocks. In the image below (Fig.30), the exterior face of the court's gallery resides in conjunction with old stone wall of Number Four Prison and the steps act as a divide - a walkway between the past and the future.¹⁵



Figure 30: View of the Great African Steps from the North, at the end of the block.

Source: Author

The galley is a long hall that spans the length of the building; from the main entrance at the public square, to the end of the block and meets the street. The space gradually steps downward with the grade of the site, yet the ceiling height maintains, so by the time

one reaches the end of the gallery, it becomes a triple height space. The art collection is integrated into the architectural design of the space, with art competitions going out throughout the nation to install permanent pieces such as doors, light fixtures, murals, and sculptures. The artwork in the court goes beyond purely aesthetic purposes, it provides a visual connection between art and justice for the public entering the highest court in South Africa.¹⁶



Figure 31: Northern end of gallery from the foyer of the Constitutional Court, aligned with the grade of the Great Africa Steps adjacent to the gallery. Source: Author

As former South African Justice Albie Sachs argues: Art and justice are usually represented as dwelling in different domains: art is said to relate to the human heart, justice to human intelligence. Rationality is sometimes seen as inimical to art, and passion as hostile to justice. Our building shows how art and human rights overlap and reinforce each other. At the core of the

Bill of Rights and of the artistic endeavor represented in the Court is respect for human dignity. It is this that unites art and justice.¹⁷

The collection displays themes that are central to the court, ideas surrounding transition, social justice, cultural diversity, identity, tradition, and reconciliation.¹⁸ Once one reaches the end of the gallery, they enter into an open-air-courtyard space that blurs the boundaries between what is indoors versus what is outdoors (Fig.32).



Figure 32 : Enclosed courtyard with permanent art installments at the Constitutional Court

Source: Author

The alcove provides a peak into the judges enclosed garden spaces and the Constitutional Court Library to the left, with a view to the sky above. There are two permanent art installations within the space, to the left, on the side adjacent to the library, are eight slabs of

black granite, each with tally marks done by artist Willem Boshoff. These marks represent the number of days prisoners from the Rivonia trial were sentenced to prison for speaking out against apartheid in 1964.

Nelson Mandela 11 Jun 1964 -- 11 Feb 1990 (9,377 days)

Ahmed Kathrada 11 Jun 1964 -- 15 Oct 1989 (9,269 days)

Walter Sisulu 11 Jun 1964 -- 15 Oct 1989 (9,269 days)

Raymond Mhlaba 11 Jun 1964 -- 15 Oct 1989 (9,269 days)

Elias Motsoaledi 11 Jun 1964 -- 15 Oct 1989 (9,269 days)

Andrew Mlangeni 11 Jun 1964 -- 15 Oct 1989 (9,269 days)

Govan Mbeki 11 Jun 1964 -- 5 Nov 1987 (8,548 days)

Dennis Goldberg 11 Jun 1964 - June 1985 (± 8,030 days)

The polished marble acts as a mirror, showing the reflection of the viewer in the imprisonment of the accused, and continuing the active dialogue between the past and the present in the Constitutional Court (fig.#). In the center of the space are Nelson Mandela's final words from this trial, before he was imprisoned for twenty-seven years. The inscription states:

It is an ideal which I hope to live for and to achieve. But if needs be, it is an ideal for which I am prepared to die.

Architecture for This Moment:

At the Constitutional Hill Precinct, the design of the buildings provide opportunity to communicate the history of the nation. It demonstrates the power of place in the social construct of collective memory. The Constitutional Court of South Africa was built at a time

when South Africa needed healing, but ran the risk of backlash by keeping a tool of oppression instead of dismantling it. Yet, through respect for its own past, the court engages visitors to participate in the remembrance of nationwide trauma while simultaneously leading the way to a brighter, more democratic future. The site today does not have all the economic regenerative properties as its visionaries had hoped, with few independent and local businesses taking up the allotted retail spaces. Though the nature of how the site was developed is not entirely to blame, Johannesburg, like much of South Africa, continues to be a product of colonialism in a postcolonial era of unrelenting globalization and economic inequities.¹⁹

Behind every city plan, architectural project, and physical modification of the existing urban fabric lies a utopian belief that deliberate interventions inevitably result in collective improvements to the cityscape...²⁰

It maintains its core functions as a place of governance and attracts tourists (much like the United States capital), and during the school year provides a safe space for children to pass through and wonder on their way to and from school. It serves as a place of learning and connection for the generations that came after the apartheid. The Constitutional Court of South Africa itself is a welcoming public space, whose every detail feeds into the ideals of the new ethos in South Africa's nationhood. And though architecture alone cannot heal an entire nation from decades of trauma and inequality, it can demonstrate a nation's ambition for progress and highlight the resilience of its people. The court paved the way for many other public projects that came after it: government buildings, monuments,

parks, public markets, and housing projects. These initiatives continue to this day.

The old city and the new city rises on its ruins - not gradually, but in a burst, suddenly - as the butterfly emerges from the cocoon of the caterpillar.

- Le Corbusier²¹



Figure 33 : View of the Constitutional Court taken from the vantage point of the Old Fort

Source: Author



Figure 34: View of the Court's exterior from the East end of the plaza, approaching the entrance Source: Author



Figure 35: The foyer of the court from the entrance to the gallery hall, facing South.

Source: Author

¹ South African Government, "Address by President Nelson Mandela at the announcement of the winner of the architectural competition for the design of the new Constitutional Court building, Johannesburg," accessed December 23, 2022, http://www.mandela.gov.za/mandela_speeches/1998/980408_concourt.htm

² Mass Design Group, *Purpose Built Case Study- Constitutional Hill Precinct* (S.D. Bechtel Jr. Foundation, 2017), 2.

³ Noëleen Murray, Nick Shepherd and Martin Hall, *Desire Lines: Space, Memory and Identity in the Post-Apartheid City*, (Routledge, 2007), 5.

⁴ Murray, Shepherd and Hall, *Desire Lines*, 5.

⁵ Britannica, "Opposition to Apartheid," accessed January 4, 2023, <https://www.britannica.com/topic/apartheid/Opposition-to-apartheid>

⁶ Murray, Shepherd and Hall, *Desire Lines*, 7.

⁷ Mass Design Group. *Purpose Built Case Study*, 5

⁸ Mass Design Group. *Purpose Built Case Study*, 9

⁹ Robyn Autry, *Memory, Materiality, and the Apartheid Past*, *Contexts* 9, no. 3 (Sage Publications, Inc. 2010), 46-51.

¹⁰ Mass Design Group. *Purpose Built Case Study*, 12

¹¹Martin J. Murray, *Taming the Disorderly City - The Spatial Landscape of Johannesburg after Apartheid*, (Cornell University, 2008), 5.

¹²Brand South Africa, "Celebrating the South African Constitutional Court," accessed December 17, 2022, <https://brandsouthafrica.com/34139/celebrating-the-constitutional-court/>

¹³Constitutional Court of South Africa, "The Building - History of the Site," accessed December 16, 2022, <https://www.concourt.org.za/index.php/about-us/the-building>

¹⁴Brand South Africa, "Celebrating the South African Constitutional Court"

¹⁵Constitutional Court of South Africa, "The Building"

¹⁶Constitutional Court Trust "The Collection - About the Court Art Collection," accessed December 27, 2022, <https://ccac.concourtttrust.org.za/the-collection>

¹⁷Constitutional Court Trust, "The Collection"

¹⁸Constitutional Court Trust, "The Collection"

¹⁹Murray, *Taming the Disorderly City*, 10.

²⁰Murray, *Taming the Disorderly City*, 46.

²¹Murray, *Taming the Disorderly City*, 47.

Architecture and Social Responsibility

Establishing Community Resiliency and Identity Through Architecture in
the Wake of Extenuating Circumstances



Figure 1: View of plaza at the entrance to the Constitutional Court facing West
Source: Author

This summer, something became apparent to me throughout all the sites I visited: architecture alone cannot accomplish social resiliency and promote equity, but rather a conglomeration of local government entities, economic incentives, grassroots organizations, city planners, local participation, and shared common interests are *all* needed to work in concert. At the sites I saw, this cooperation alone could be considered an accomplishment, considering the multitude of perspectives present, and how divisive the issues at hand may be.

Successful architecture and development is a collaborative effort that is often not the easiest way to practice design:

Our apparent skepticism of the efficacy of beauty as a medium for greater good does not imply the corollary of the promotion of ugliness... It may be that the connection between beauty and betterment is so taken for granted that the motivation to make the world a better place is surreptitiously replaced with the more simple, and more controllable, motivation of making beautiful stuff, in the belief that architects can do good by doing what they do best, namely designing delightful things.¹

My research also revealed how this system of collaborative practice still needs work, but can be effective. Architects and designers should be at the table when addressing global crisis. This research demonstrated from a regional planning scale down to a park bench just how impactful our built environment is.



Figure 5: A bench from Portugal in Superkilen, whose tiles fell due to environmental conditions, not vandalism Source: Author

In Medellín, though the first library building failed, it spurred the development of a citywide initiative to provide access to public

resources through architecture. The practice ultimately proved so effective that the local government is now revisiting the failed library project because of its successful social implications in other sites across the valley.



Figure 3(right)&4(left): Coliseum for the South American Games by PUI program
Source: Author

In Johannesburg, the Constitutional Hill Historic Precinct is promoting democracy and collective identity, taking up space in an entire city block. This space gives voice to those who were lost, and serves as a "beacon of light" within its urban fabric. It is rooted in its context, and creates a link between Pretoria and Johannesburg, erasing the distance between the governing bodies and those they serve, the people. In Christchurch, the city rallies behind a building that signaled healing after a natural disaster shook its community to the core. It transcended architectural norms in order to create a lasting impact and demonstrate resilient practices. And Superkilen facilitates interconnectedness between different groups of people

through shared objects in a park, helping residents meet one-another in a space that celebrates diversity through its details. It is in these multifaceted approaches to architecture that we gain a further understanding of how change in the built environment not only makes a physical difference, but can also stir social, environmental, political, and cultural change.

Spatial agency shows how negotiation, tenacity, imagination, participative spatial encounters, and ones own understanding as a morally responsible actor, might together lead to a different and more ethical understanding of spatial practice²



¹Awan, Scheider and Till, *Spatial Agency*, 37.

²Awan, Scheider and Till, *Spatial Agency*, 32.

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