

BRIDGING THE DIVIDE

by

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ABSTRACT

Planning, policy and design have neglected to strategically address informal settlements, now home to one third of the world's population and commonly subjected to inadequate housing, and infrastructure. These communities have naturally grown for centuries, developing after colonization, slavery, industrialization and now capitalism. These settlements can be recognized today as their own townships - a city within a city, disconnected from the commodity driven market of urban centers and the associated social constructs.

Specific to Trinidad and Tobago, the social, political and physical divide between the formal and informal have heightened as squatter communities are increasingly at risk of eviction as a result of urbanization and lucrative investment opportunities. This thesis therefore presents an alternative to current clearance proposals by blurring the boundary of these communities and bridging social disparities through historical and cultural traditions of the Steel Pan.

While architects have narrowed the focus of the profession to serve the privileged and the commodity driven free market, this thesis intends to explore the contextually based needs of the informal, enabling a systematic growth through bottom-up planning and needs based design. Building upon literature and case studies with a focus on policy, infrastructure and associated social impacts, the project offers a design intervention projecting a century's worth of growth and needs into a network of permanence and social belonging.

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THESIS INTENT

Architects have long been fascinated with informal settlements, using them as inspiration for first-world development projects or as sites to easily criticize, wipe clean, and rebuild. More recently, architects have addressed the impossibility of simple fixes to their infrastructural needs by proposing strategic, surgical, and incremental changes. What all these approaches lack, and this project address, is the growing potential of these settlements and their permanence amongst cities. The forecasted growth of urban centres now stands at the doorstep of many informal communities - risking eviction or containment considering them as otherly creating a binary social construct.

Having foresight to combat this social and physical disparity will enable communities to exist amongst the formal - recognized and integrated into the regulated system. Here it is argued that the livelihood and rightful ownership of squatter communities should be respected and maintained, giving individuals security of tenure and the associated potential for economical growth and social wellbeing amongst the broader community. Janice Perlman's research on Rio's favelas was summarized as follows; "They are not socially disorganized, but they are excluded .They're not culturally backward but they are stigmatized. Not economically parasitic but they are exploited."¹

In response to this ongoing physical and social divide, an informal settlement within Port of Spain Trinidad and Tobago is studied as a model community to combat current clearance proposals. It is argued that the social, political and physical divide between these communities can be bridged through the historical and cultural traditions - specifically the steel pan. As such a 'Pan Yard' designed for informality can serve as a catalyst for congregation through adaptability and porosity.

¹ Perlman, Janice. The Myth of Marginality - Urban Poverty and Politics in Rio De Janerio 1976.

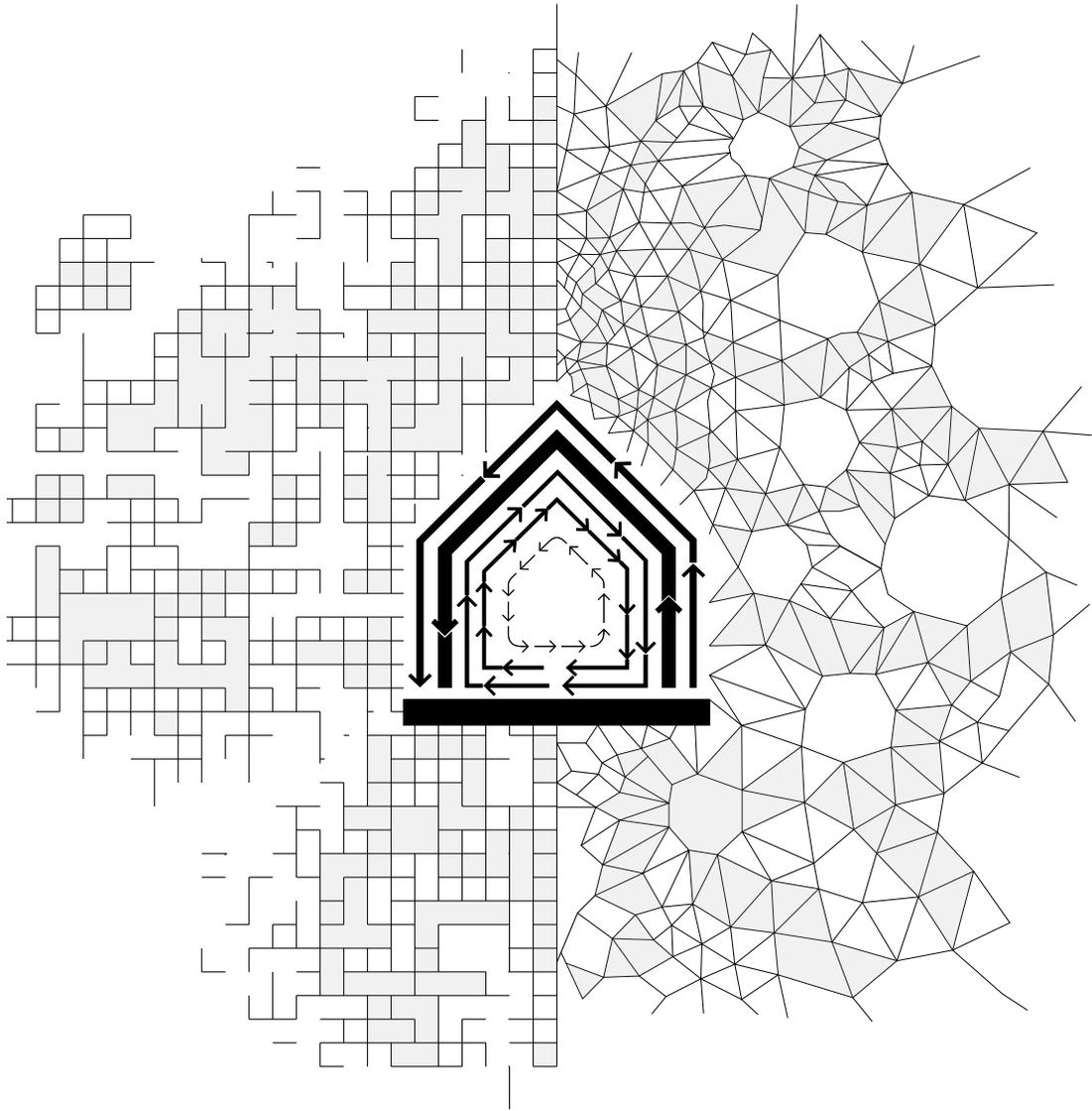


Fig. 1 - A reinterpretation of Stewart Brands's diagram of housing layers. He fails to address the formal or informal ways in which people modify their home over years or immediately to suite their needs.

“We do not believe informal means ‘lacking form’. It implies, for us, something that arises from within itself and its makers, whose form has not yet been recognized but which is subject to rules and procedures potentially as specific and necessary as those that have governed official, formal city making.”

- Alfredo Brillembourg and Hubert Flumpner - Urban Think Tank



Tijuana, Mexico & San Diego US. border

Globalization

The twenty first century marked a significant moment where the world acknowledged the unprecedented negative impacts inflicted on planet earth by mankind. The main contributors to this topic of climate change include population growth, urbanization and consumerism - the headlines of news papers, journals, books and magazines, affecting everything and everyone in some way. All intertwined and irreversible, it is crucial to address the variables which adversely influence the most costly changes to our environment and wellbeing - the first, population growth. The world's population today (2018) is estimated at 7.6 billion and projected to cap at 10 billion by 2050, a two third increase by that of today, yet marking a decreasing growth rate from previous years². According to the world bank organization, the global powers of the world continue to project a declining population growth with increased urbanization rates. These nations include the United States, Russia, Europe, and London who have condensed over 70% of their population into urban regions, while maintaining a steady decline in growth rate since the 1960s³. In contrast, 'Developing Nations' within Latin America, Central America, the Caribbean and Africa (to name a few) have an climbing growth rate of 3% per year with an overwhelming portion of the population moving to urban settlements. Mike Davis explains this as, "the scale and velocity of Third World Urbanization, utterly dwarfing that of Victorian Europe. London in 1910 was seven times larger than it has been in 1800," in contrast to Brazil, Mexico and parts of Africa, "each approximately forty times larger than they were in 1950"⁴. This ongoing reality can be attributed to cultures, politics, literacy and economic conditions, but has inevitably become an overwhelming burden on the urban fabric. Oliver Leech credits this as "being a regional epidemic, with cities in less developed countries buckling under the strain of their new inhabitants while the developed world has reached a point of equilibrium"⁵. Unable to match this increasing demand of affordable housing and infrastructure, the surplus of locals and refugees are forced to the peripheries, adding to the currently '200,000 informal settlements and 1 billion informal residents worldwide'.⁶

2 World Bank Group, *World bank open data*, <https://data.worldbank.org/>.

3 Ibid. <https://data.worldbank.org/>.

4 Mike Davis, *Planet of slums*. (London, New York: Verso, 2006) 2.

5 Oliver Leech, *Hidden rules*, (M.Arch: Bartlett School of Architecture, 2013) 2.

6 Ibid., 3.

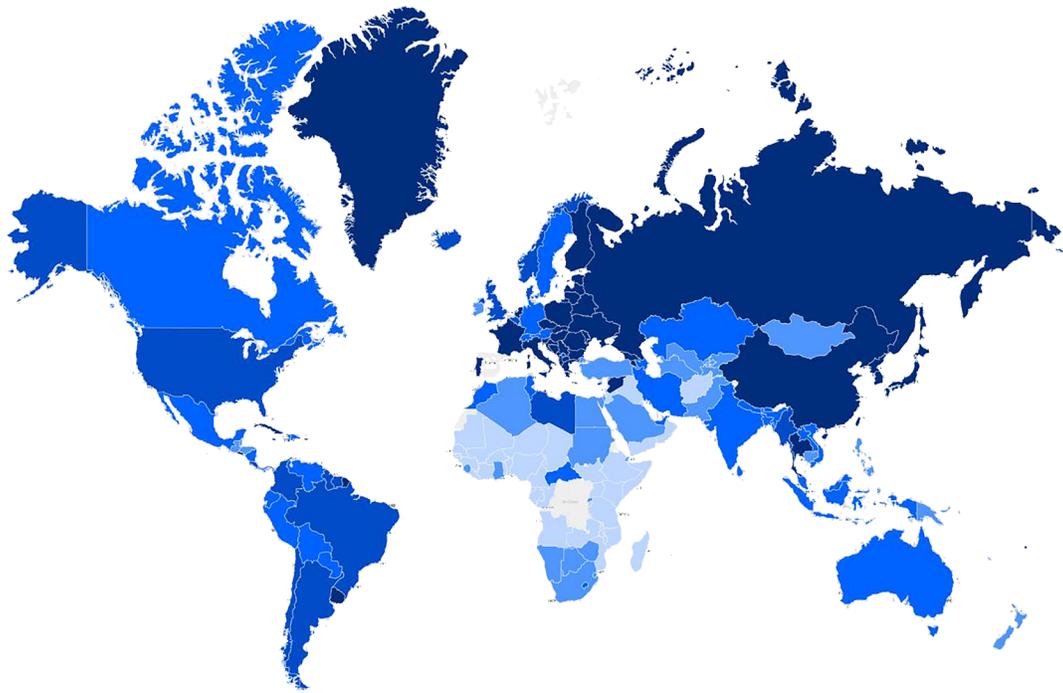
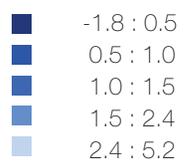
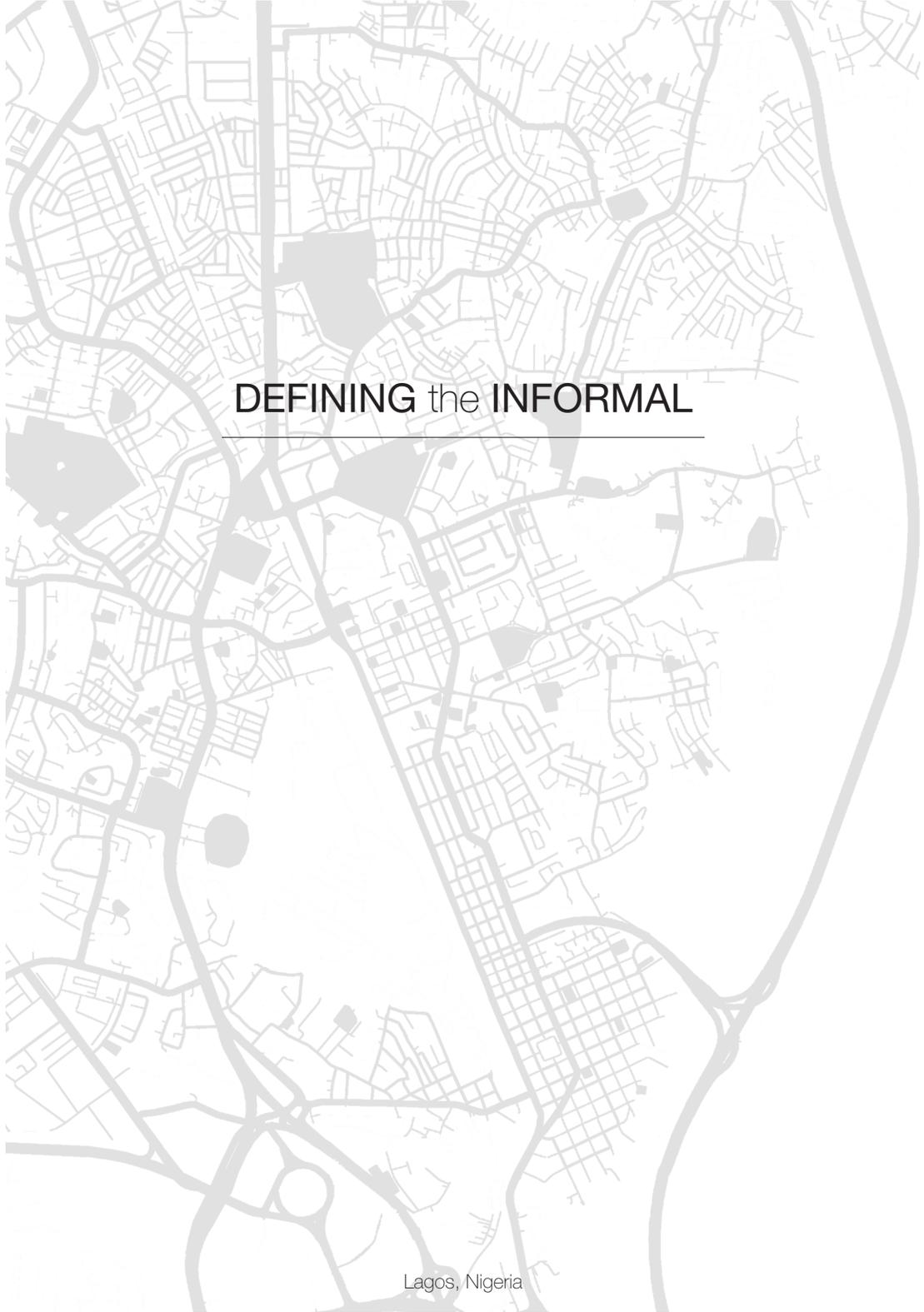


Fig 2. 2016 Population Growth (annual %)(World Bank Organization 2016)





DEFINING the INFORMAL

Lagos, Nigeria

Oxford Dictionary:

A place where people decide to live and build temporary shelters, often followed by more permanent houses. Sometimes informal settlements are supplied with water, electricity, etc. and people can become owners of individual pieces of land.

OECD: (Organization for Economic Corporation and Development)

1. Areas where groups of housing units have been constructed on land that the occupants have no legal claim to, or occupy illegally;
2. Unplanned settlements and areas where housing is not in compliance with current planning and building regulations (unauthorized housing).

UN Habitat:

Informal urbanism is defined as the production of urbanization independent from formal frameworks and assistance (if they exist) that do not comply with official rules and regulations. Informal urbanism emerged as an alternative path of city construction in the wake of massive migration from rural to urban environments and the lack of affordable housing and serviced land for some social groups.⁷

These definitions identify opposing views on the topic of informality. The UN Habitat and Oxford dictionary take the socialist stance, identifying the human need for shelter resulting in self support. The OECD in contrast identifies this occupation of land as illegal - though this blanket statement is ill-founded as many squatters have rightful ownership based on legal rights. As it pertains to Trinidad, squatters are to be recognized and given security of tenure through a deed of lease if he individual can verify their occupation of the land for 20+ years.⁸

7 UN-Habitat, *Streets as Tools for Urban Transformation in Slums*, (Nairobi: United Nations Human Settlements Program), 4.

8 Republic of Trinidad and Tobago Act no. 25 of 1998, Public Law 235 Vol. 35, (1998):.

An Informal History

The migration of masses to cities incapable of matching the demand in housing and infrastructure has brought life to the informal settlement - desperate for shelter, safety and social security. Typically pushed to the outskirts of the formal, or taking refuge in abandoned buildings like Torre David, settlements become communities and in some cases evolve into cities. Thriving microcosms of commerce, housing and social belong, entirely self regulated and self built. Commonly referred to as slums, ghettos, and unplanned settlements, a social stigma and disregard from a political and social level has been created. These developments though have become a place of opportunity where the city cannot deliver, with an estimated 40% of the informal population categorized as middle income citizens, pushed to appropriation from the lack of affordable living conditions created in the regulated formal housing market.

In the most drastic cases, this displacement from the central urban contexts, has led to sites located on 'hazardous' lands, near "riverbanks, sandy and degraded soils, near industries, dump sites and flood prone zones"⁹. As a result these areas are disconnected from the infrastructural ties to the city, providing basic needs such as clean water, sewage and electricity. This disadvantaged lifestyle has specifically affected women, children and disabled people, with lower opportunities for education, higher pregnancy rates and unskilled youth, reducing their likelihood of entering the labor market. Furthermore, settlements remain at risk of eviction, as the formal fabric creeps closer, making land more valuable and susceptible to clearance and gentrification. Without security of tenure and the rightful ownership of land these homes continue to be temporary in built form and in the mind of the squatter, conscious of the reality of eviction without notice. This therefore raises the ethical question where social values are challenged by the capital market, which have historically been successful for the right wing movement, arguing against the negative and stereotypical assumption of the informal.

Removed from contextual connections and personal livelihoods it is easy to assume that relocation will benefit the dweller - bringing additional justification to redevelopment and its economical benefits. Uprooting families though has not always proven to be beneficial as

9 UN-Habitat, *Slum Almanac*, 4



Fig. 3 - Makoko is an informal settlement partially built on stilts hovering over a lagoon off the coast of mainland Lagos, Nigeria. The estimated population in 2012 was 85,840.



Fig. 4 - Aerial view of Pampa de Comas Barriada, Lima in 1962. (Photo: Alberto Rojas, Architectural Design 1963)

displacement from employment and education can be worse than a leaking wooden shack. Thus leaving these already struggling families in a continued and worsen state of poverty and segregation.

A generalization though cannot be made on the conception and life of informal settlements, and more importantly, recognizing the diverse groups which now inhabit these communities. It is also false to generalize that informal settlements are ghettos, ridden with crime, drugs and sex when in fact it is prevalent in both the formal and informal. On the contrary, community members have notably praised the warm sense of community amongst their neighbors¹⁰, support the numerous accounts of entrepreneurship and communal habits identified in *Shadow Cities* by Robert Neuwirth - contrasting the coldness of suburbia and empty condominium hallways.

Though seemingly 'unplanned', there is a definition and rule to the chaos of the informal. As Oliver Leech puts it, "informal does not imply a lack of purpose, lack of organization, a lack of intention, or spontaneity, but it does still suggest a lack of regulation and an irregularity."¹¹. This is the notion of the Non-Plan, allowing self regulation within constraint, defined by streets and property lines for ownership and functionality. This movement conceived by Cedric Price, Reyner Banham and Paul Barker challenged the blanket approach of imposing form and aesthetics from above, arguing for a bottom up mentality with community participation. The opposing debate though praising the imperial power, arguing that the authoritarian rule is unquestionably beneficial to the masses, regardless of the cost. This raises the ethical question of human rights, removed and replaced at the whim of authority with no acknowledgment and consideration, for the benefit of impression.

This thesis therefore stands firmly on the side of the settler, praising their voice and their neighborhoods, retaining its livability and character, in proximity to the life they have made. The project will honor the land which is occupied and improve upon the existing to offer more to its dwellers. Combating their unstable reality by implementing an architecture of permanence and urgency which support sustainable growth and the dynamic capabilities of these otherly communities through urban design and modes of communal interaction.

10 Lara Day, Diana Jou, *Kowloon Walled City*, (The Wall Street Journal, 2018).

11 Oliver Leech, *Hidden rules*, (M.Arch: Bartlett School of Architecture, 2013), 8.

“My practice in San Diego has been primarily engaged with the politics of land use, provoked by the realization that no advances in housing design can be accomplished without advances in the transformation of urban policy”

- Teddy Cruz



Port of Spain, Trinidad



CASE STUDIES

London, England, The United Kingdom

For the purpose of this study, it is crucial to critically examine the attempts made by governments, NGOs, activist and architects to improve informal settlements and the resulting effects it has had on the community. Like any city, these neighborhoods are comprised of 'city' blocks defined by roads, and alleyways between houses, expressed and realized in obscure ways with adverse effects on the life and growth of the community. In the case of the formal economy, it continues to thrive on the top down structure, mobilized through the wealth of its inhabitants. These cities are driven by function and efficiency, managed by governing powers and realized through private and public investment. The opposite can be said for informal economies, thriving as a community through self regulation and improvement but struggling for agency as they are far removed from resources which ultimately impact the safety and well-being of its inhabitants. These juxtaposing economies living as neighbors will be assessed in their most extreme cases to understand and compare the resulting impacts on the people, country and economy. Of precedent include the Kowloon Walled City, Hong Kong, representing the authoritarian rule of slum clearance and an idealized image, versus the ideologies of John FC. Turner and his bottom up approach of Housing by People. Infrastructural studies will also be explored for the internationally recognized successes of Medellin's Metro Cable and the UN's street-led approach. Lastly, the housing scale will be studied through the work of Alejandro Aravena, Teddy Cruz and notable architects making strides in the field of the informal.

Between 1957 and 1965, John FC. Turner worked throughout the informal settlements of Peru, later returning to the United States to realize that his vision of communities relative to his experience, plagues even the first world imperial powers and their citizens. For Turner, inhabitants of a city must be given autonomy of their environment as housing is a complexity which cannot be standardized as a one size fits all. He goes on to emphasize, "housing is not what it is but what it does in people's lives"¹², calling for a shift in the governing structure of resources to enable communities to develop a connected, sustainable and healthy city. Turner sees this as his overarching thesis, arguing that autonomy is the only way to achieve satisfactory goods and services as the heteronomy of corporate and government organizations neglect to consider the individual. Here, I will summarize, and challenge these ideas in light of 50 years of precedent since this book was written and the focus of this thesis toward a resilient and connected settlement through adaptation of infrastructure.

Accordingly, *Housing by People* is structured by thoughts, expressing the problem of housing in the 1950 & 60s', stunted by governing authorities, yet finding hope in the principles to be retained in the practice of housing by people. These challenges continue to oppress settlers in the formal and informal housing market, subject to mass production with a capitalistic market value. Efficiency is idealized for the greatest return on investment, or the equity and productivity of the socialist state - inevitably inhibiting the investment of the user. The concept of household is iterated in the ideas of Turner, departing household from housing as this is the product of the bureaucratic heteronomous system, versus the personally crafted household. Romanticizing the autonomous housing market, of varying standard, low in cost but questionably high in value. He compares this to the standardization of the automobile and the mass produced housing, overlooking the "complex functions of the household"¹³. He goes on to say, "The larger the organization that builds and manages housing, the tighter the fit, the greater the mismatch of housing and households, the lower

¹² John FC. Turner *Housing by People*, (London, England: Marion Boyars Publishers Ltd, 1976).

¹³ *Ibid.*, 50.

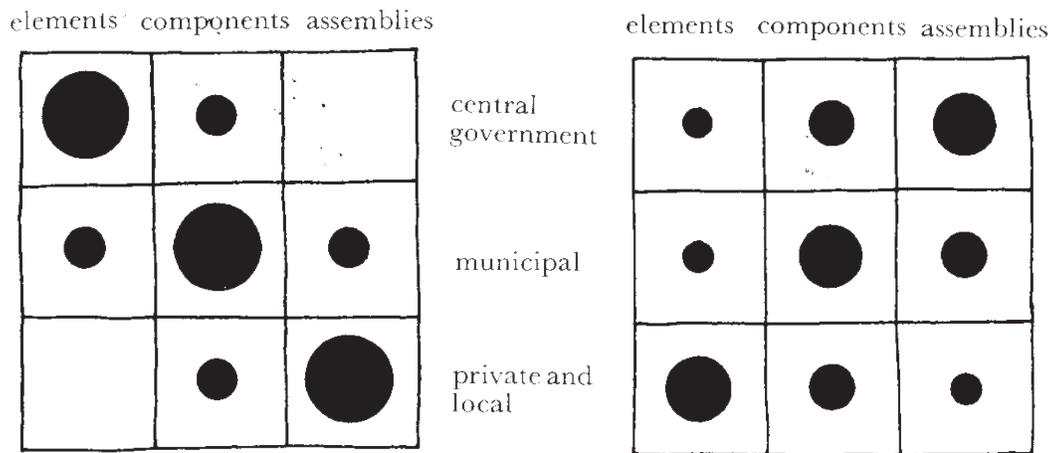


Fig. 5 - Stewart Brand's interpretation of the current top-down distribution of management for city planning versus a bottom up approach.

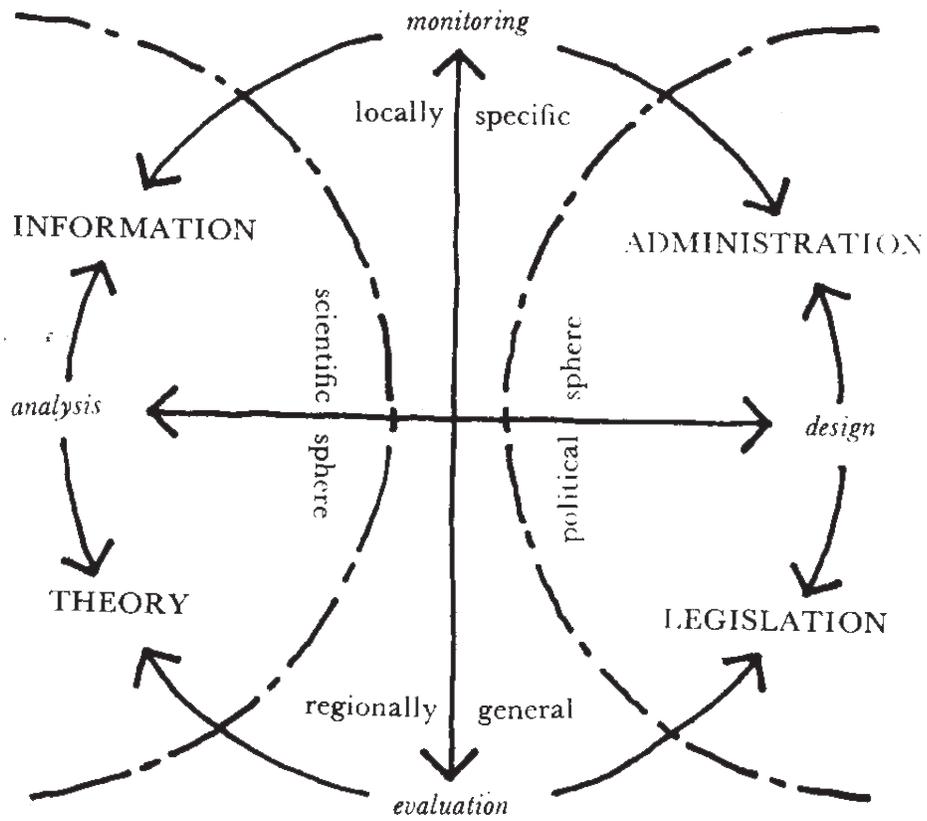


Fig. 6 -Turner, John FC. "Distribution of Action & Activity." Diagram. London, England: Marion Boyars Publishers Ltd, 1976

the effective demand.”¹⁴ Therefore, the concluding beliefs of Turner is that housing is not merely about shelter, and its practical variables are planning and policy to enable effective autonomy.

The grey area between heteronomy and autonomy is a vast majority of people who may prefer a defined strategy - a model which is not currently used and therefore becomes the dividing factor. To believe that all people want to build their own home is idealistic and ignorant to the fact that people living in cities (formal and informal) are slave to the some economy and global system. With more than half the world's population living in these metropolitan areas, and a third living in informal settlements, the question remains, why can't these communities mobilize into desirable communities? Squatters in the informal settlements typically reside in these communities as they cannot access affordable housing, jobs and resources, resulting in a self-driven and built community. The effort toward self preservation and identity is noble and should continue to influence the housing market but not to the demise of the standardized housing market. Though identity is lost, tenure, security and shelter is gained, a success far beyond the dreams of the 1 billion inhabitants on earth regressing to the nomadic world where we build and live off the land. A balance must be met, to enable communities and individuals in an incremental approach, comparing and combining the ideas of Turner, Hong Kong and fifty years of trials and tribulations.

14 John FC. Turner Housing by People,

Kowloon Walled City | Hong Kong

Planning & Policy

Kowloon Walled City in Hong Kong was once a densely populated squatter settlement, comprised of interlocking towers climbing 10-14 stories, forming a seemingly impenetrable wall for 200 meters long and wide. Reaching a population of 33,000 inhabitants, the Walled City was a self sufficient microcosm of factories, commerce and communities, living amongst lawless lifestyles of drugs, prostitution and violence - a city within a city. Its reputation was widespread, regularly cited in movies, books and a Japanese Theme park where it's memory lives on since its demolition in 1992¹⁵. The history of Kowloon Walled City reaches back to 1197 where its initial program housed the management of Salt Trade during the Son Dynasty¹⁶. Passed along through dynasties and wars, the City became a convenient settlement for refugees in the 1950s when the Republic of China was declared by Mao Zedong. This demand for housing drove continued development, by order of the government which would last for the next decade until the height limit was met, forming the walled city we remember today. In 1986, after decades of crime and trafficking, the government orders the eviction and demolition of the City with no prior acknowledgment to the community. On the day of radio announcement, authorities seal and search the Walled City to survey the grounds and its inhabitants, tallying a number far less than expected. In the following years residents vacated the building, supported by a compensation program offered by the government to residents and business owners¹⁷. Households relocated to public rental or temporary housing supported by the government while others purchased housing and made private arrangements aside from government support. It's final days of light in April of 1994 marked the end of Kowloon Walled City, now transformed into a park, juxtaposing the life of this oasis.

15 Lara Day, Diana Jou, Kowloon Walled City, (The Wall Street Journal, 2018).

16 Ibid.,

17 Ibid.,



Fig. 7 - Kowloon Walled City, Hong Kong, just days before its demolition in 1992. The network of towers were 10-14 storeys tall

The approach by the government to secretly plan and evict the residents of the walled city raises the question of ethics to be argued against benefit. Though residents were offered compensation and afforded the time to vacate the premises, it can be argued that community consultation is necessary before concluding decisions in a recognized 'Republic State'. Considering the constant support from the government to continue development, it is clear that a neglect for resident well being and safety was not addressed early enough to make progressive changes leading to demolition as the most effective means of improvement. This makes certain the need for planning and policy in light of projected growth, to maintain and encourage a healthy housing environment. To its acknowledgment, the City created a sense of community and thrived regardless or in spite of its shortcomings as recognized by residents.



Fig. 08 - Building footprints of KWC and the paths of travel to navigate ones way through the maze.

*"The bad thing about the demolition is we went our separate ways. It was impossible for the government to rebuild a village and to put all the people together. The thing that I've missed the most? It's still the relationship with my neighbors. Nothing was more special than that. My neighbors were nice - it was easier for us to sit down and chat in the past. Today it is difficult."*¹⁸

Tsang Kin-fun housewife (Years lived inside: 29)

*"I was happy about the demolition. We've never been able to apply for public housing, since we were designated as owning property in a Walled City and not qualified."*¹⁹

Lau Kam-chiu, electrician (Years inside: 40)

*"I feel like if we can create something on this site, perhaps a recreation of some part of the Walled City, we can actually make it into a tourist spot. This will help us to preserve the memory of the Kowloon Walled City, if we do it right. This can be a great business opportunity for this community, for all the businesses around here."*²⁰

Albert Ng Kam-po, pastor (Years Inside: 17)

18 Lara Day, Diana Jou, *Kowloon Walled City*.

19 *Ibid.*,

20 *Ibid.*,

United Nations Street Led Approach

Infrastructure & Urbanism

In 2012, the United Nations (UN) published a comprehensive document identifying the concept, strategy and practical implications of a 'slum' assistance plan. This plan is focused on streets as an essential 'Tool for Urban Transformation in Slums'. The ethos of the strategy is to enlighten planners, governments and designers to engage in these neighborhoods as a lucrative market, which is currently disengaged from the greater metropolitan areas. It is widely recognized as emphasized previously, the wasted potential of space and people that currently make up a third of the world's population. Of this group, 40% are considered 'non-poor', identified through data and surveys collected by the UN-Habitat in 2012.²¹ This suggests that these governments have failed to provide accessible market housing, forcing working 'lower class' citizens to reside in 'slums' as identified by the UN. For consistency in light of this thesis, slums, as referred to by the UN will be addressed as Informal Settlements, recognizing the varied economic, social and contextual variations of these communities. The underlying commonality is the neglect or 'lack of political will' to challenge the trend of these growing populations. This segregation in approach and policy continues to retain the social stigma and physical divide between the formal and informal.

The approach led by the UN recognizes an incremental development strategy to empower the community, aligning with the ideals of local and national customs in an effort to improve the physical, social and economic integration of informal settlements. These improvements are intended to directly mobilize its citizens through access to jobs, health and security. This concept is materialized in the streets, recognizing the absence of recreational facilities or anything of the like - unpaved streets and alleyways are a place of congregation, commercial enterprise and a political space. Here, the UN recognizes the potential for establishing the currently poorly defined streets by widening, brightening and defining these arteries. Acting as a conduit into the city, services become viable, branching out into newly created streets, diverging from major roads which curate identifiable neighborhoods and potential lots. The UN explicitly outlines 14 principles for this 'street led' approach, which include:²²

21 UN-Habitat, *Streets as Tools for Urban Transformation in Slums*, (Nairobi: United Nations Human Settlements Program) 46.

22 *Ibid.*, 37.



Fig. 09 - Exposed and dry drains where children play are not uncommon in the informal

1. Integrated **citywide planning**
2. **Implementation** in phases
3. Improved Urban **mobility and connectivity**
4. Fostering **economic growth**
5. Creation of **citizenship**
6. Development through strategic **participation and partnerships**
7. Optimization of density and promotion of mixed uses
8. Enable urban layouts through land **readjustment**
9. Laying the basis for the provision of **security of tenure**
10. Supporting **safer cities**
11. Providing **alternatives to forced relocation**
12. Planning for **disaster risk reduction**
13. Ensure a steady **flow of funds** from a variety of resources
14. Making slum upgrading **responsive to gender and youth as well as to children, the elderly and the disabled.**

This document establishes a baseline of assumptions to formally manifest this thesis, utilizing the ongoing data collection and the incremental developments completed thus far. The street-led approach addressed here considers the most challenged settlements around the world, with immediate and life threatening conditions. The settlements referenced include towns within Haiti, India, Indonesia and Brazil to name a few - highlighting the countries most commonly noted for their scale, density and divide in economy. This thesis will assume the pre-existing infrastructure of the principles noted by the UN - with the exception of - 1) fostering economic growth, 2) optimization of density and promotion of mixed uses, 3) enable urban layout through land readjustment, and 4) supporting safer communities. These 4 principles are loosely considered and warrant further consideration, contextually specific and politically relevant as recognized in this non-prescriptive approach. The question therefore remains, can a prescriptive approach to slum upgrading through streets and acupuncture points be widely implemented in the form of land zoning and readjustment, to create a safer community which improves economic viability?

Medellin | Columbia

Infrastructure & Urbanism

Medellin, Colombia was internationally recognized in the 80's and 90's as "one of the most dangerous cities in the world"²³ but is now at the forefront in its region for urban planning and design as a tool to combat crime and poverty. Ripe with social and economic violence spurred by drug trafficking, the government, led by Mayor Sergio Fajardo launched the 'Integral Urban Project' to recapture the poorest areas of the city "previous dominated by communist groups, paramilitaries or drug smugglers"²⁴. The project positioned itself in three major planning and architectural projects including, The Integral Urban Project (PUI), the Land Use Plan (LUP), and the Master Plan for Green Zones (MPGZ)²⁵.

The first was the PUI which established a gondola, now called the "Metro Cable", bridging the highest terrains of Medellin's informal (and poorest) dwellings to the formal city near the river. Prior to this transport system the commute into the city exceeded an hour which has now been reduced to 10 minutes. This connection has thus offered increased employment opportunities and by extension altered the housing market. Furthermore, the areas adjacent to the stations have been revitalized including parks, libraries and schools with exemplary design and formal gestures as a symbol of "New Medellin" as expressed by Fajardo. Addressing the challenge from the root of the problem the projects have been positioned around his model "Medellin, the most educated".

This recovery of derelict pockets directly speaks the goals of this project, as it surgically addresses key challenges in the community and contributes to the social belonging of a space. The fact that architect has altered the perception of neighborhoods in neighborhoods like these sheds light on the opportunity for designer and planners to address and plan according to the needs of the informal. Where this project fails to address and this thesis sheds light, is the building fabric which surrounds these urban projects. This spacial agency created in medellin will adverse and successfully draw dwellers to settle and thus the built fabric of the dwelling must now be addressed.

23 John Drissen, *The Urban Transformation of Medellin Colombia*, (Architecture in Development, 2012).

24 Ibid., 3.

25 Ibid., 3.



Fig. 10 - La Biblioteca España (Architect, Giancarlo Piretti, 2007)



Fig. 11 - Metro Cable



Fig. 12 - Parque Biblioteca Pública León de Greiff (Architect, Giancarlo Mazzanti, 2011)

Teddy Cruz and Fonna Forman are amongst the few architects leading the discussion on informal settlements and its role in the present and foreseeable future. Operating out of San Diego, California, their eyes keenly observe and reinterpret the landscape of the border crossing with Mexico, just 20 miles south into Tijuana. Their research and interventions are done under the title of 'City Lab' focusing on the concept of nations and communities beyond borders, working as a collective at a local and international scale. "The point is," says Cruz, "we've gone from hyper collectivity to hyper privatization, and nothing in between"²⁶. Their manifesto was clearly outlined in an article with the metropolis magazine in 2017, focusing on the need for a shift in social norms, political accountability and challenging obscure and outdated zoning policies. Within these broad headings they itemize needs for blurring borders, taxation for equity and elevating calculated densities for 'social and economic exchange' toward 'sites of leisure and consumption'²⁷. This inspiration is conceived at the most active border crossing in the world, the US-Mexico border. Here on a daily basis thousands of immigrants move North whilst the excess waste from the US consumer society moves South. This flow of products has made Tijuana a haven of ingenuity and reuse of products, from garage doors and tires to houses, fully intact or demolished. For Cruz and Forman, this unique character of the people and their community is the driver of their practice and a theory for growth.

Their most recent intervention explored the ideas rooted in their manifesto, through tried yet novel concepts in a project titled "Casa Familiar - The Performance of a Small Parcel". This design utilized an existing lot with two overarching mandates: "re-defining density as an amount of social exchanges per acre and redefining housing as a system of economic and cultural interactions"²⁸. In this example they focus on one site, subdivided with specified zoning constraints, each supporting the other and the whole. Here, the first

26 Tanvi Misra. *The Border is a Way of Reinforcing Antagonism that Doesn't Exist*, (City Lab, 2017).

27 Teddy Cruz and Fonna Forman. "Enough Preaching to the Choir". (Metropolis, 2017).

28 Misra. *The Border*,.

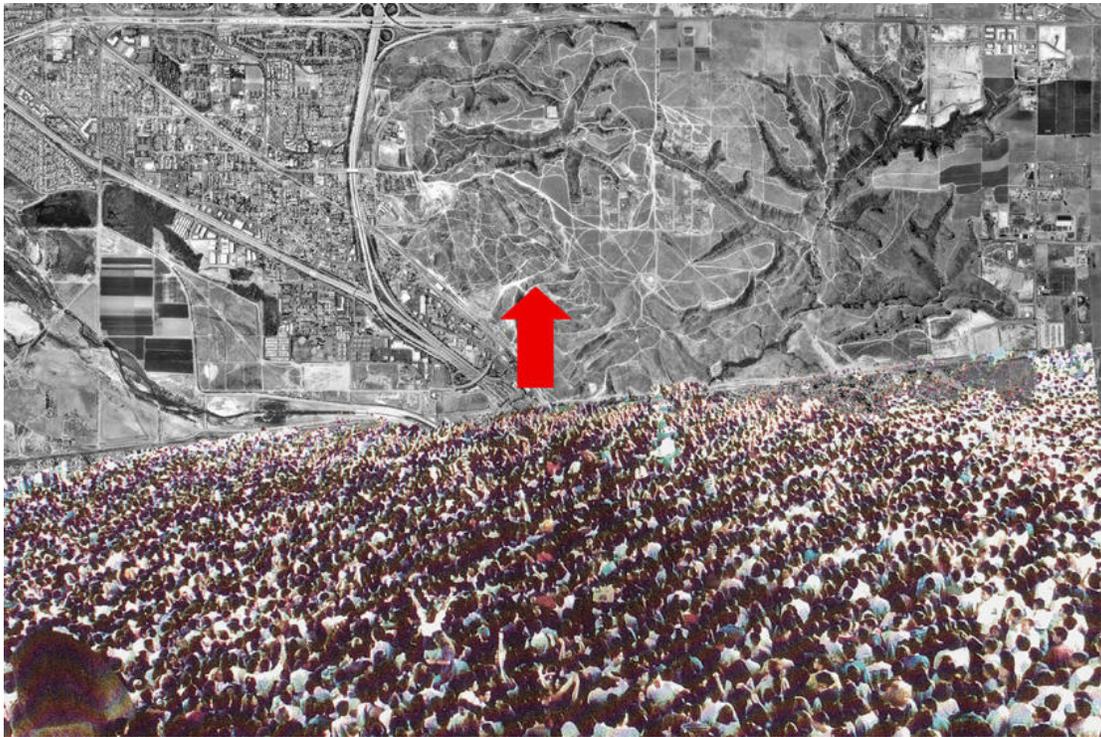


Fig. 13 - Masses moving North from Tijuana into San Diego.

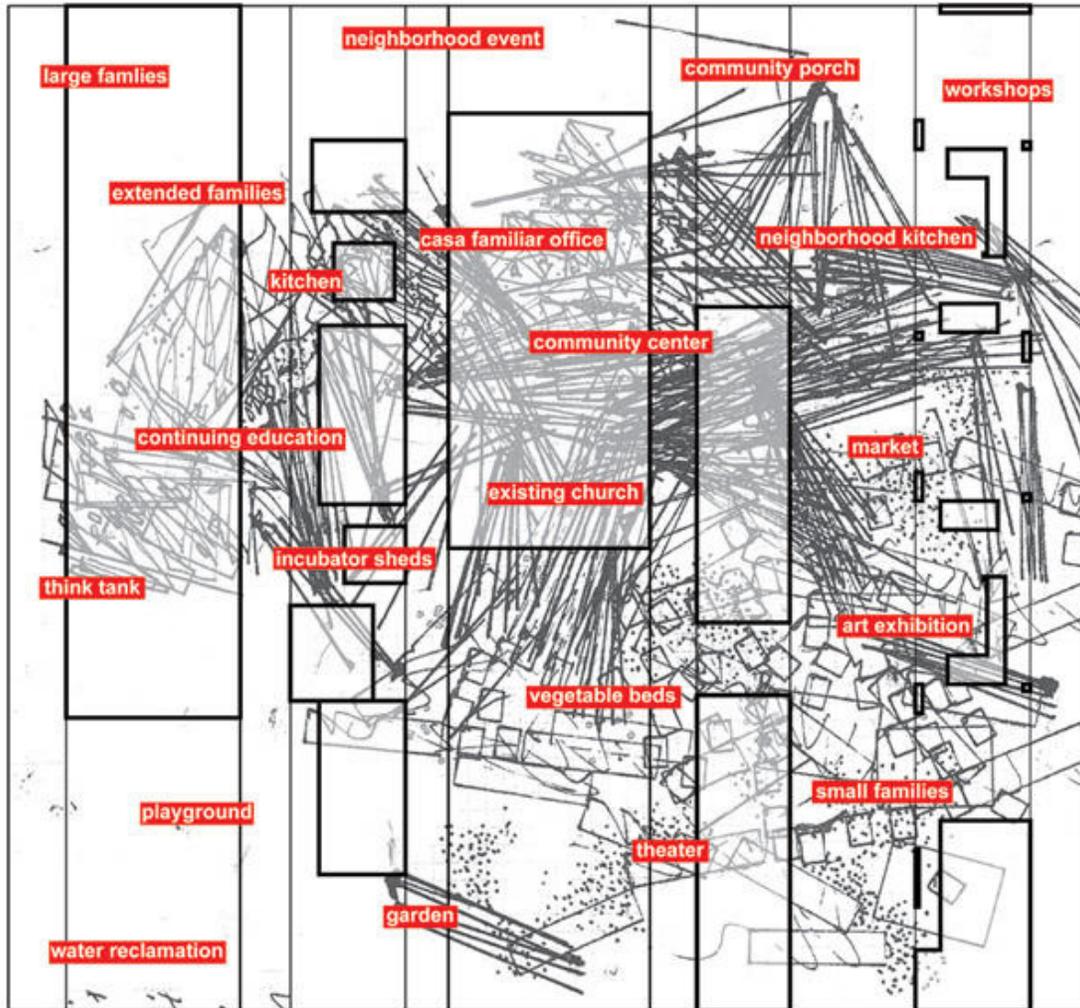


Fig. 14 - Tracking circulation of people in a mixed use space

move is the acquisition of a parcel of land upon which a building of dominance exists (like a church) or should be built. This focal point of the parcel grounds the surrounding uses, as a supporting function and part of a whole. The next step implements “the incubator” - small open shelters, fitted with services and intended to be fixed as communal assets with a diversity of uses including, markets, kitchens and the foundation upon which people can build upon and inhabit. This first phase of housing is compact and dense, intended for single parents homes, young adults and children. The third phase integrates a live work housing facility, retaining activity and education on site throughout the day in varied form, supporting the exposure and education of arts to children. The fourth and final phase of development creates multi-generational housing, hosting extended families in a building sympathetic to growth as parasitic living²⁹.

This microcosm of work, social activity and habitation is meant to create a grounded unit of vibrancy, easily compounded for miles into a network of productivity much like any formal city. Easily reconfigured and incrementally grown as needed, each lot feeds the network as a plaza of diversity and integrated living. Defined by streets, these ‘parcels’ grow within constraint, retaining operational needs for service and circulation whilst creating an opportunity for secure tenure. The plan also considered the reuse economy upon which Tijuana is built, implementing the incubator as the new foundation in support of the old, to which is new to the user. This therefore maintains the character and livelihood of the community but fails to respond to the growing population and economy. Arguably, this design remains static, relying too heavily on the current model of growth which inhibits the community - resembling a disorganized suburb rather than a thriving city.

29 Misra. *The Border is a Way of Reinforcing Antagonism that Doesn't Exist*’.

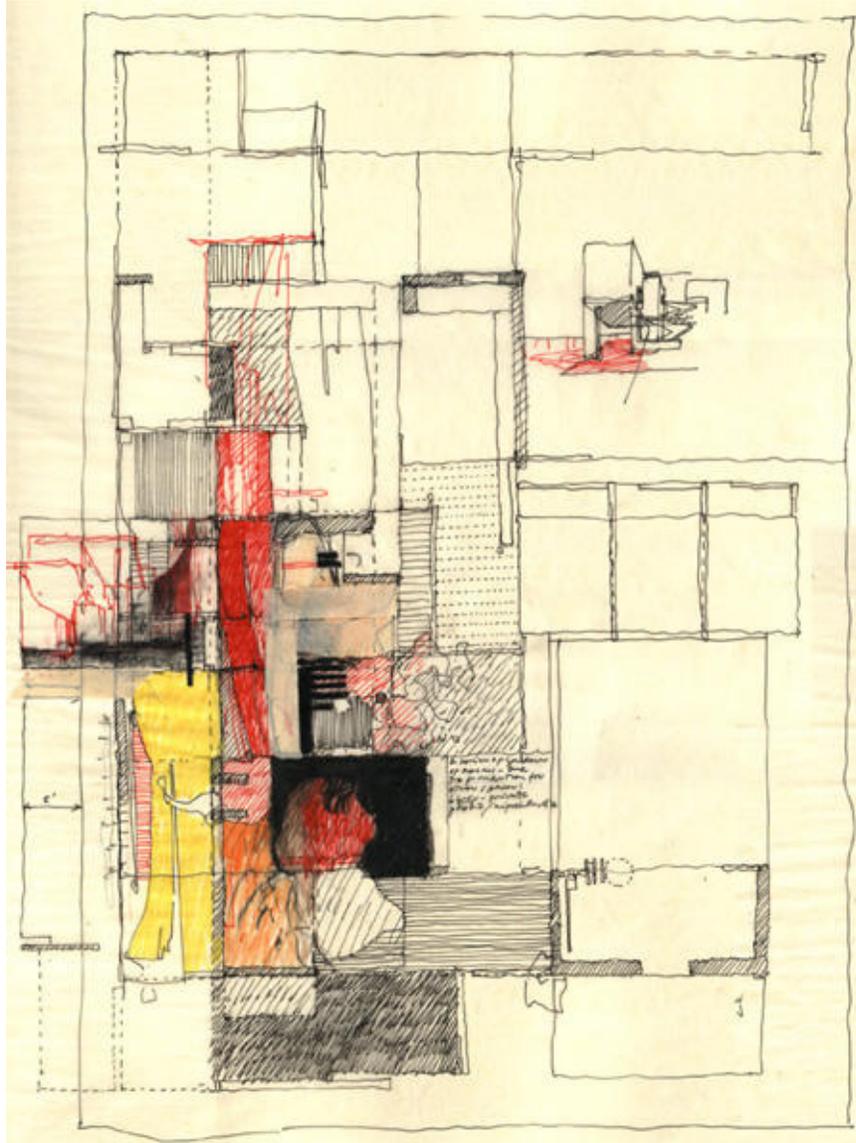


Fig. 15 - Early working drawings of Living Rooms at the Border considering the multifunctional network of spaces and fabrics.

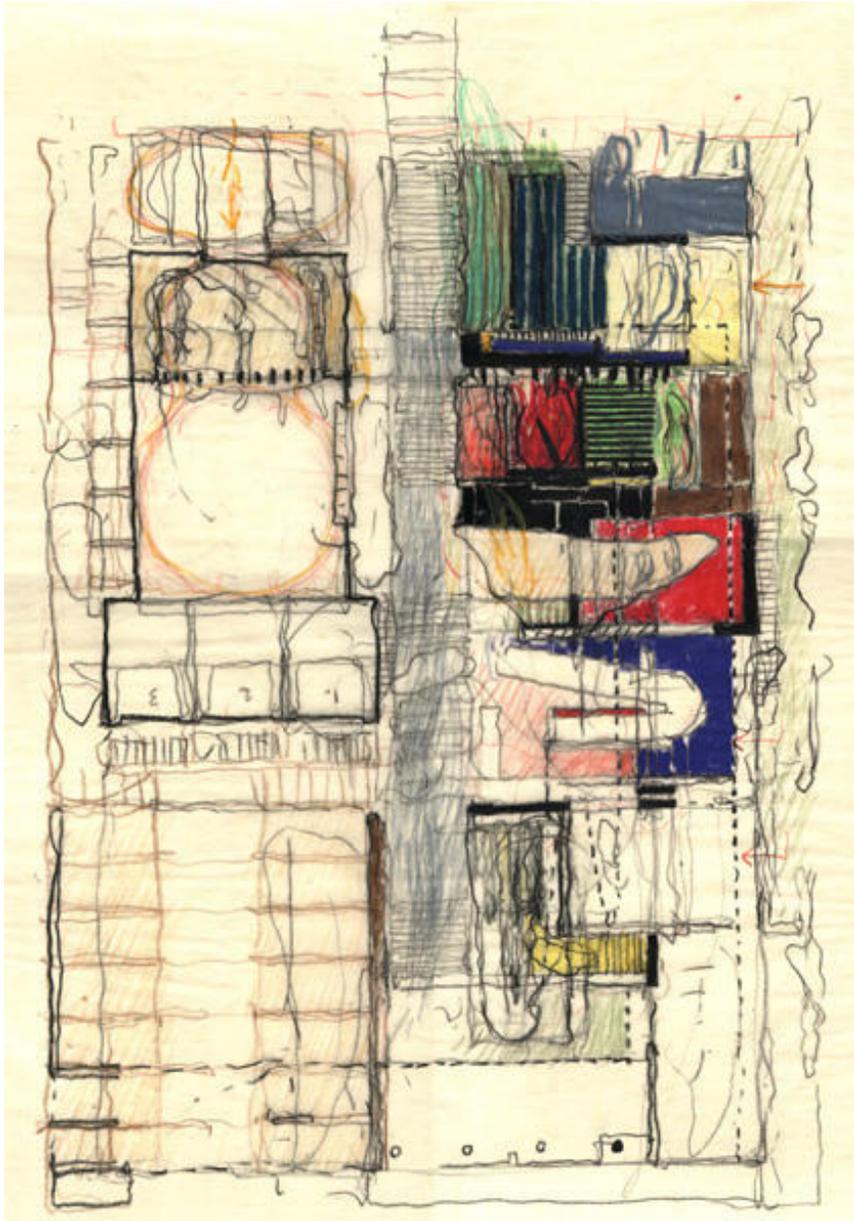


Fig. 16 - The second iteration of the conceptual designs for living rooms at the border, refining opening and built context relative to flexible space.

Parallel House | Elemental

Housing

Elemental is a Chilean architecture firm lead by Alejandro Aravena, the 2016 Pritzker Prize winner for sustainable development, recognizing their work ongoing in supportive housing. In his book explaining their firm's trials and tribulations, Aravena references what he considers to be the two most influential moments for supportive housing, where famous architects at the time gathered to design a "model neighborhood", he says, "I am committed to writing the third chapter"³⁰. The first neighborhood was Weissenhof Siedlung designed by Le Corbusier, Mies van der Rohe, Pieter Oud and Hans Scharoun in 1927³¹ which has gone on to be recognized as a style of modern architecture of the twenty first century. The second was Previ Lima built in 1971 and designed by Kurokawa, Kikutake, Maki, Charles Correa and others, a generation of avant-garde architects³². Today Previ Lima presents a paralleled world where the initial built form juxtaposes, yet fundamentally supports its neighbor. This metabolist vision of a growth based architecture, made possible through its inhabitants is the key driver in the work of Elemental's Parallel Home and Half House. Here they recognized the waste of detached homes, the constraints of row housing and the instability of multistory buildings. These explorations define and outline their mandate toward affordable housing as "the establishment of families in a consolidated urban area, incremental construction without deterioration, safety and economy of expansion and design with community participation. Building upon the metabolist movement, Aravena channels design efforts toward communities rather than the developer, empowering the community by laying the foundation, departed from capitalism and focused on participation.

The pilot project for the Parallel House was Quinto Minroy, located outside of Chile in an urban informal settlement. With capital support from the government, Elemental was contracted to rebuild one hundred homes on the existing footprint which would eliminate the need for displacement from jobs and family in search of affordable land. This required temporary housing for the duration of the project in addition to rallying community support from an audience continuously skeptical of political drivers. Budgeted at US\$7500 per unit,

30 Aravena, Elemental, (Germany: Hatje Cantz Verlag, 2016) 32.

31 Ibid., 32.

32 Ibid., 33.



Fig. 17 - Parallel Home - Alejandro Aravena



Fig. 18 - Half House - Alejandro Aravena

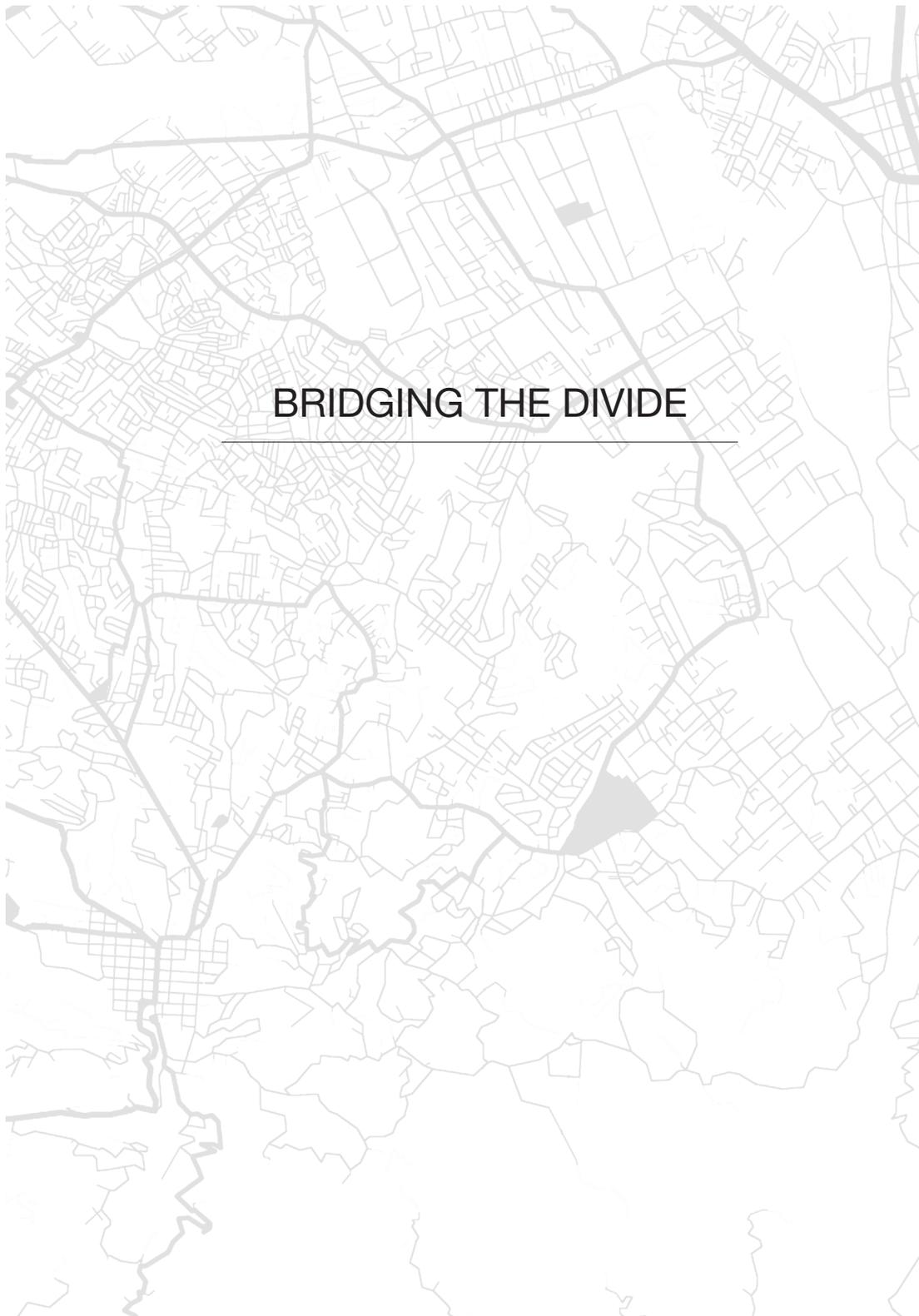
they concluded that a building for \$750,000³³ would house all residents with room to expand, increasing the economic viability by finding a middle ground between desires versus realities. The final form would establish a built-up first floor acting as the foundation of the 'towers' and 'pores'. The 'towers' were the formally built masses, 3 meters wide, by 6 deep and 5 high,³⁴ creating half of the whole. The whole would be completed when the adjacent 'pore' is built up, expanding horizontally, allowing each household to double in size. After construction of the primary buildings, a handful of residents opted to build out their home immediately, which presented an exemplary piece for the community in techniques and considerations. This DIY strategy required heightened communication between the architects and community members, labeled as 'workshops' focused on the basics of 'expansion', 'facade treatment' and 'community planning.' After the project was completed and built up to capacity, it was noted that less than 30% of residents participated in the act of construction but rather opted to contract the work to experienced individuals³⁵.

The re-ignition of metabolist ideas in social housing has presented an opportunity to deliver superior housing which can grow and become a home, affording communities an asset typically beyond their reach. The metabolist were right in believing that human needs are constantly evolving but were wrong in thinking that housing is a disposable commodity. As we've seen in Tijuana, the possibilities of reuse are endless and present an opportunity build upon a solid foundation in a careful and conscious manner toward the whole. Every piece of the puzzle must enlighten and embrace the next, supporting community and growth. Here, Alejandro Aravena and his team step toward this goal with rigor and intention succeeding in the delivery of a home, retaining their location and actively including the community.

33 Alejandro Aravena, *Elemental*, (Germany: Hatje Cantz Verlag, 2016) 104.

34 *Ibid.*, 112.

35 *Ibid.*, 174.



BRIDGING THE DIVIDE

The Premise

The contextualization of each case study is essential in understanding the social and political framework of communities and understanding how architecture and planning have made effective strides within the realm of informal urbanization. Building upon this research and built work, this thesis is a design response to the informal settlement of Sea Lots in Port of Spain, Trinidad. Sea Lots is currently home to 2000 inhabitants³⁶, most of whom have been squatting on the land since 1984³⁷. These occupants are therefore the rightful owners of the land which their house occupies, with privilege to infrastructure and support from local authorities. Nonetheless this community has been denied these rights through a 'deed of lease', giving them 199 years of ownership which is due to ongoing discussions of clearance and redevelopment. As such this thesis acts to counter the current clearance strategy, building upon the existing community, creating a complimentary urban strategy and establishing a central node for the community.

36 Dover, Kohl & Partners, ACLA Works, Jenifer Smith Architects, East Port of Spain Development Corporation. Strategic Redevelopment Plans for East Port of Spain (DRAFT). Trinidad and Tobago: Government of the Republic of Trinidad and Tobago, 2012. 72.

37 Department of Land & Surveys POS. Port of Spain Aerial Image, 1962.



Fig. 19 - Aerial Image of Sea Lots, Trinidad



Fig. 20 - Aerial view of Port of Spain in 1962

A Brief History of Port of Spain

Looking at the history of Trinidad, the political divide goes back to the 1700's when the island was claimed by the Spanish, eradicating most natives (Caribs and Arawaks). Later the country would be taken by the British and exploited for its fertile soil for the harvesting of sugar cane. These years of slavery, dividing the nation between black and white continue to scar the social dynamic within communities. This segregation continued after the emancipation of slavery in 1834 where the now freed slaves fled to the nearby hills east of the St. Ann's river commonly known as the east dry river, settling as craftsmen and vowing never to return to the fields³⁸. This population has now dominated the capital city and is home to the working class but rarely benefits from the economic wealth of the nation to support infrastructural needs.

The East Dry River (EDR) is a collection of six communities which vary in physical appearance but can all benefit from surgical improvements to support these growing communities, as recognized but the East Port of Spain development corporation³⁹. It is crucial to note the difference between EDR and Sea Lots as they not only vary in scale but also in recognition. EDR has a total population of 31,000 residents versus 2000 in Sea Lots. EDR can also be recognized as the oldest informal settlement and its density on the hills makes extensive redevelopment proposals unlikely. As such, most residents have benefited from receiving their secure tenure unlike residents of Sea Lots who have received a "Certificate of Comfort", recognizing their presence on the land but no legal ownership.⁴⁰

What unites these communities though is their local building vernacular. A collection of self-help housing built through the needs of shelter after emancipation. These semi-permanent materials have allowed for the progressive permanence of the built form staying true to local materials and environmental conditions.

38 Strategic Redevelopment Plans for East Port of Spain (DRAFT). Trinidad and Tobago: 12.

39 Ibid., 12.

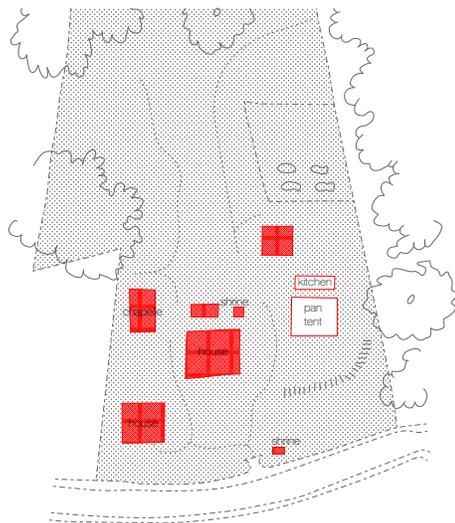
40 Republic of Trinidad and Tobago Act no. 25 of 1998, Public Law 235 Vol. 35, (1998): .

Cultural Integration

Seemly irregular and informal relative to gridded streets in the city, the EDR community 'replicated villages they left behind in West Africa.'⁴¹ Old folk communities would populate their homes, shrines and kitchens around the 'tent' now known as the 'pan yard' where they would play the banjo and drum. Forbidden to play their native African drum for fear of revolution, the emancipated slaves used bamboo until discovering the unique qualities of pots, pans and biscuit tins ultimately resulting in the finely tuned steel pan used today made from a 55 gallon oil drum. With over a dozen pan yards in EDR today, communities emanated from these centres and are still recognized as a common ground for all.

The modern take on pan yards has created a moving spectacle as seen in figure 25. Here the years event called panorama brings thousands to spectate and judge, surrounded by all the cultural traditions of Trinidad. This instrument and its historical roots are therefore seen as a means to bridge divided communities and will later be integrated in the intervention.

41 Strategic Redevelopment Plans for East Port of Spain (DRAFT). Trinidad and Tobago: 203.



"On one or two occasions, I went to the little gatherings of the Africans and their children at Dry River. This settlement was formed by a portion of the early African immigrants, within the first few years of emancipation, when the first planters attempted to supply the dearth of labor by importations of laborers from abroad. The immigrants left the estates and settled in the vicinity of Port of Spain on small plots of land to which they had no legal right and which they now cultivate for their support. They retain many African usages and are little removed from the wild life of their native country. Their houses are mean, formed chiefly of mud and thatch. Amongst them stands a large shed devoted to night dances and to the noisy music of the banjo or drum."

- Andrew T. Carr

Fig. 21 - African settlement - Rada Community, Layout of Compound 1890. Belmont, Port of Spain Source: Caribbean Quarterly Volume 3, No. 1



Fig. 22 - Historical image of the first steel pan orchestra with an affluent audience.

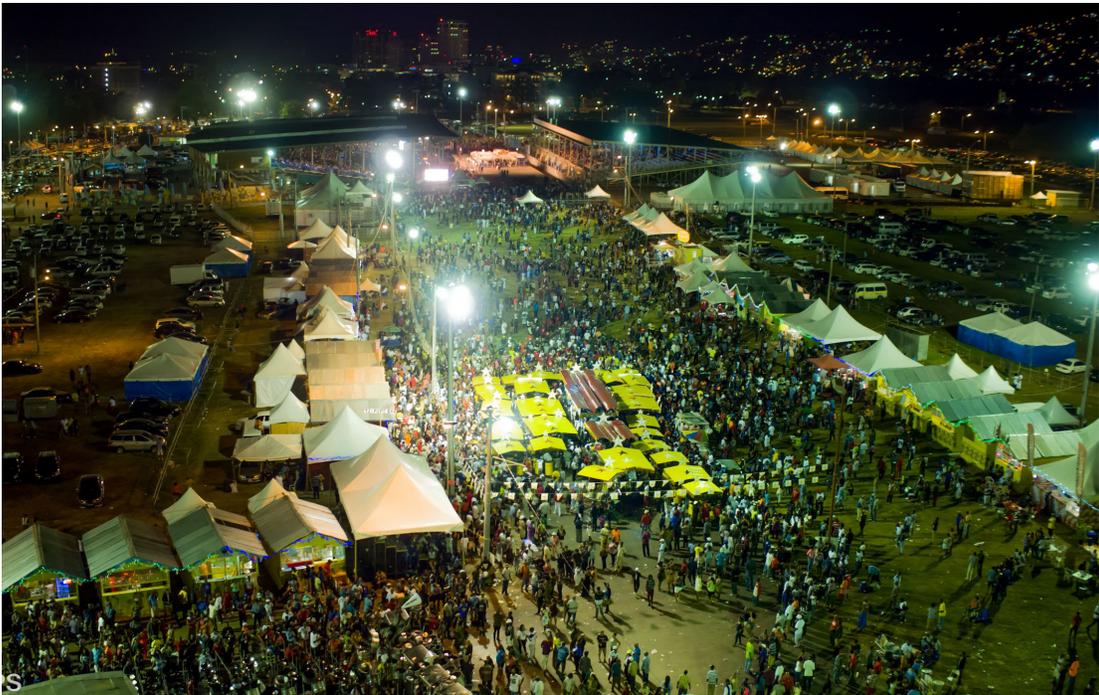


Fig. 23 - Modern tradition of the steel pan festival - Panorama 2018

Current Proposal

In 2012 a preliminary report was drafted by architects, planners and government organizations for the improvement of the East Dry River and Sea Lots neighborhoods. This report was never publicly published and was offered to the author of this text in support of academic research. As such, the publicly available imagery is used to speculate on the implications of the proposed interventions as it relates to this thesis. Figure 25 is the most jarring of the proposals, presenting a blanket of neo-colonial middle class housing and mixed use areas, clearing the current squatter/informal settlement of Sea Lots and the nearby factories. This development would build upon the vision of Port of Spain to beautify and intensify the use of the coastline in support of a diversifying economy toward the tourism industry outlined in the Vision 2020 plan⁴². This shift is crucial as the value of the oil and gas industry has plummeted, the primary economic driver of Trinidad and Tobago.

The proposal began with site visits for the design and planning team lead by the East Port of Spain Development Corporation (EPOSDC), highlighting areas of interest and focus. Following this a hands on design charrette engaged over 50 members of the community to ideate and design within groups. This led to a list of recommendations, opinions and ideas on the improvement of the community which the design team would incorporate into the subsequent proposal. This proposal can be referenced in figure 26. Highlighted in color are the areas of intervention - to note is the extensive intervention in the lowest left portion of the image - Sea Lots. This is unlike the above communities with micro interventions throughout. Also, the illustration of Sea lots in figure 25 & 26 show a strong difference as the informal housing cluster evident in figure 26 appears to have been removed in the illustration above. We can therefore assume that the clearance of the relatively smaller coastal community of Sea Lots was rendered insignificant against the broader vision of the city. But why can't we live alongside these local communities?

42 ibid., 19.



Fig. 24 - Dover Kohl & Partners development proposal for Sea Lots



Fig. 25 - East Port of Spain development plan by Dover Kohl & Partners in affiliation with Hall Planning & Engineering, Urban Advisors, UrbanAdvantage; and pioneering local firms, ACLA: Works, Jenifer Smith Architects and Dr. Roy McCree from the University of the West Indies



Fig. 26 - Collection of images taken during the field study completed in September 2018.
Description: (top left) - block versus wooden structures along the coast. (top right) paint factory creating jobs within the community. (middle left) - basketball court. (middle right) - community amenities. (bottom left) - government fisheries creating jobs within the community. (bottom right) - coastline view to the central business district.

Field Study & Interviews

Upon learning about the proposal the direction of this project narrowed to border condition between the existing and proposed community. Rather than starting with a clean slate, moving current residents away from jobs, education and their livelihood, this became an opportunity to integrate two communities singly differing in income but sharing the same passion for culture, and agency of place. This would therefore lay the foundation for bridging the divide between the formal (new community) and the informal (existing community). To understand what currently exists and the associated trends, interests and life style of the community, a field study in Laventille and Sea Lots was conducted.

Local NGO, Create Future Good, directed by Nadella Oya shared her knowledge and resources over two days during this field research. Create Future Good is a non profit organization built around the need for marginalized youth to have a better future through access to education, extra curricular activities and other needs identified by the group. This has resulted in after school programs, community clean-ups, murals and the improvement of parks to name a few. As a result Create Future Good and Nadella by association has earned a welcomed reputation in marginalized communities such as East Dry River and Sea Lots.

Through this connection, I was able to engage with residents in both communities including; parents, singles, young adults, police officers and even children. Furthermore, the opportunity to document the neighborhood through photographs paints a vivid description of the community and their spaces. Personally, living in Trinidad for 20 years, from birth through to tertiary education, I, like most of my friends and family had never been to these communities, and as such only associated these areas crime and violence, depicted by the media. Though it is true that there is a density of crime, this has spread elsewhere, outside of the identified informal areas. It can be argued therefore that the information fed to communities like the one I come from is crucial in breaking down the social barriers built around false assumptions of place. Through this social elevation, 'bridging the divide' argues for an inclusive nation which has economic and physical benefits. A catalogue of selected interviews can be reference in Appendix A. These interviews were not recorded for the comfort of the interviewees and as such as limited to specific notes.

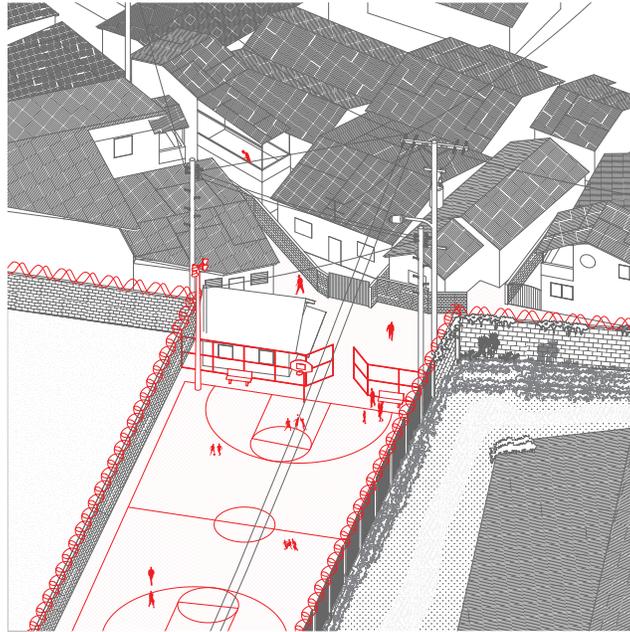


Fig. 27 - Recreational space including a basketball court and outdoor gym in a reclaimed alley between two factories acting as a passage into the community.

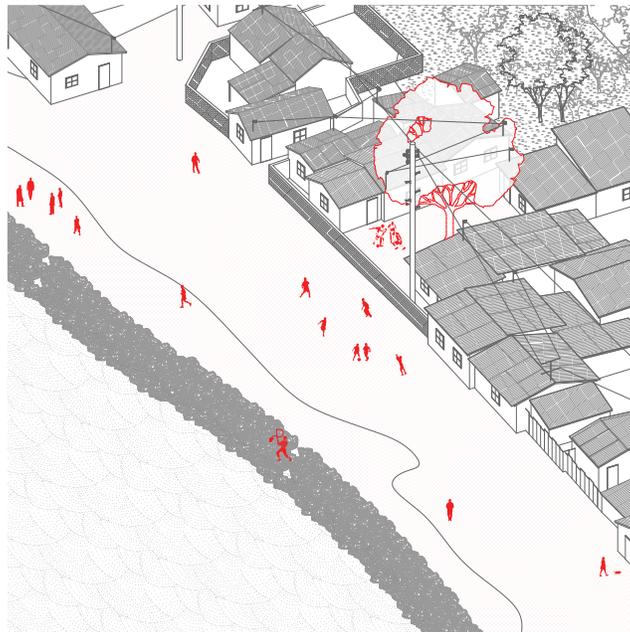


Fig. 28 - Homes adjacent to the natural coast and road in-between acting as the community recreational space.

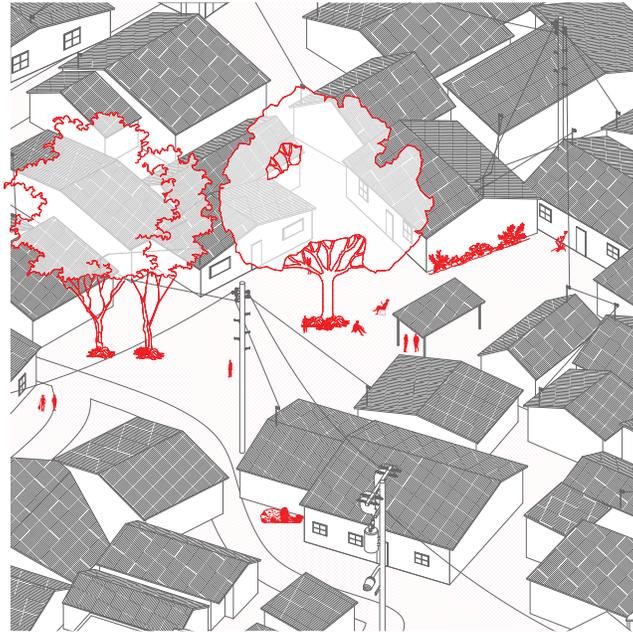


Fig. 29 - Homes are clustered around general spaces acting as a communal back yard.

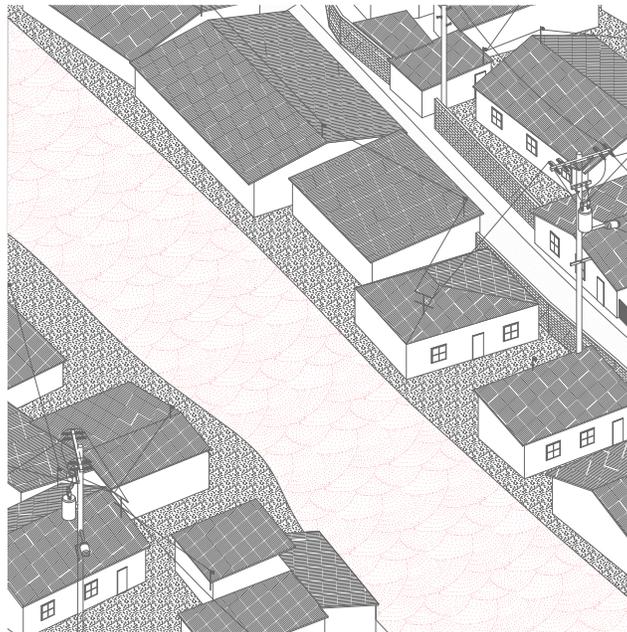


Fig. 30 - Sea Lots is divided by a narrow river which has no pedestrian or vehicular passageways creating a divided community

Phasing & Site Selection

Building upon the field research and analytical drawings, it was evident that the existing community thrives on the work create by neighboring businesses including Berger paints, the national fisheries and smaller commercial businesses. Residents as well have created family businesses which operate out of their home, from auto mechanics to convenience stores. The public spaces around these residential and commercial buildings also become the community recreational space, used in an ad-hoc manner, for sports, events, fishing and casual relaxation. It would therefore be ill-founded to remove all businesses overnight to make way for a new development as illustrated in figure 23 by Dover Kohl and Partners. This would not only remove the livelihood and livability of the existing residents but it would create a binary housing condition which would continue to divide the social well being between the existing and new community.

Understanding the need for density and beautification, vacant lands and abandoned buildings were surveyed as sites for development in the first step of a phasing process. This would allow the new community to be gradually integrated, also bringing agency to existing infrastructure and amenity needs. Figure 30 highlights in red the potential mixed use development on these underutilized sites which can be compared to the existing squatter community in grey. The hatched areas along the coast are also identified as protection zones some of which are mangroves. The preservation of these natural areas was identified in the DKP report and is therefore transfered to this proposal to maintain the integrity of the coastline considering the fact that Sea Lots occupies reclaimed land.

The second phase of the proposal toward bridging the divide further intensifies the use of this land as a mixed use development. Here it is recognized that increased property values and development incentives could encourage businesses to move. An effort to maintain some existing businesses, to preserve community jobs should also be considered relative to a maximum redevelopment limit which is shown in figure 31.

The Area identified in pink consistent in both figure 30 and 31 remains the selected size of recreational intervention as it acts as a border between the new, the old and nature.



Fig. 31 - Phase One - Vacant land and abandoned buildings are used for mixed use developments, bring density and a range of incomes. Infrastructure including pedestrian bridges between communities and the preservation of the mangrove is incorporated.

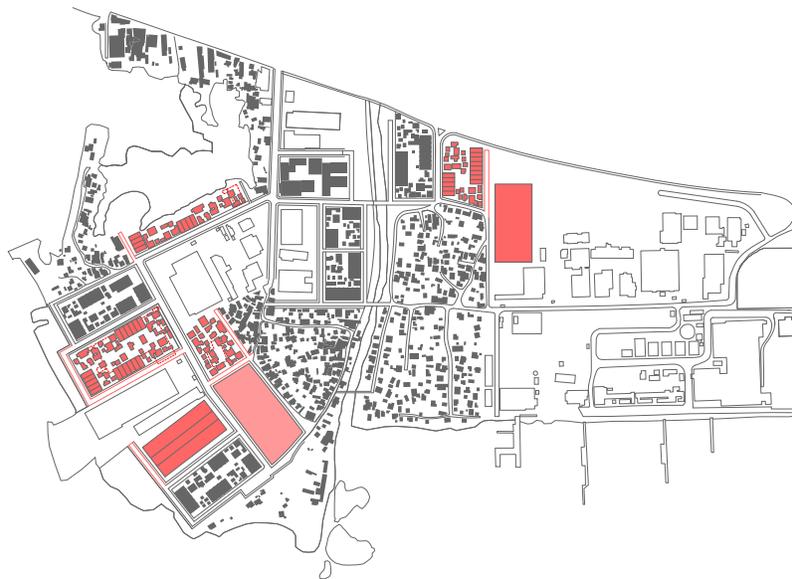


Fig. 32 - Phase Two - Maximum development should be considered relative to amount of jobs reduced amongst the existing dwellers.



Urban Planning

The proposed urban intensification previously outlined is further unpacked to understand its possible implications and benefits, physically and socially. Three residential and mixed use typologies were identified within Trinidad, Single family, mixed use multi story and irregular residential clusters (similar to that seen in the existing informal settlement). Through critical analysis of these urban considerations, the most appropriate grouping can offer a building fabric respectful of the existing community creating a non binary outcome of the new and the old.

The following are the typology groupings and their qualitative considerations:

- A - Single Family - This typology creates a singular entity enclosed by walls and disengaged with the community. This is also an underutilized land considering the house would have 2 residents on average throughout its lifespan
- B - Multi-unit 4 storey - This increased density and programmatic use brings life to the neighborhood beyond the dwellers of the space. The rigid form preferred by developers creates a strong juxtaposition adjacent to the existing informal community and therefore needs to be dissolved.
- C - Irregular residential - Taken from the existing context, these unusual housing clusters defy the normal of planning with the use of property lines and set back. It therefore creates communal spaces which were expressed as preferred spaces during the field study.
- B+C - Multi-unit + Irregular residential - This grouping creates a higher density and variation in land usage which is similar to that of the existing context. Here it is proposed that property lines would define housing clusters and allow adjacent public spaces to be reactively appropriated as needed.

For the purpose of this thesis, the urban exploration of unit typologies was left here, leaving room for continued speculation whilst laying a framework for community integration.

Fig. 33 (right)- Urban planning - Combinations of three development typologies local to Trinidad are assessed to identify the most appropriate development sensitive to the height and orientation of the existing community and the use of public spaces.

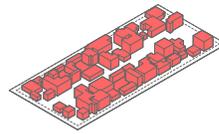
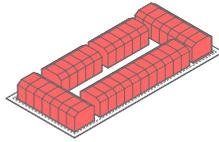
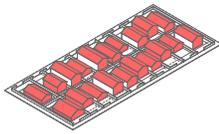
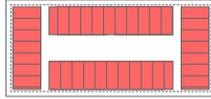
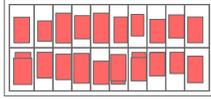
A
single family
residential



B
multi-unit 4 storey bld.



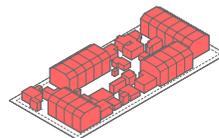
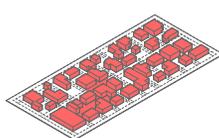
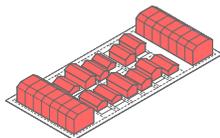
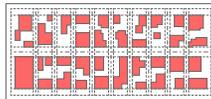
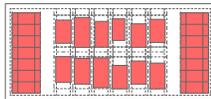
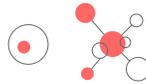
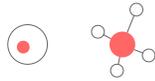
C
irregular residential
clusters



A + B
increased density and
shared space

A + C
property line regularize
informal clusters

B + C
higher density and
communal spaces



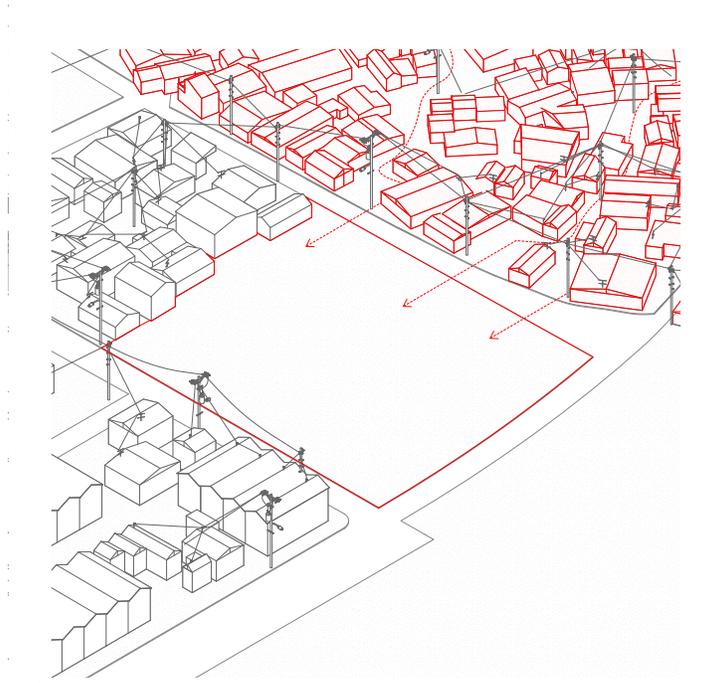


Fig. 34 - The existing informal community borders the site of primary intervention, bleeding into the programmed spaces

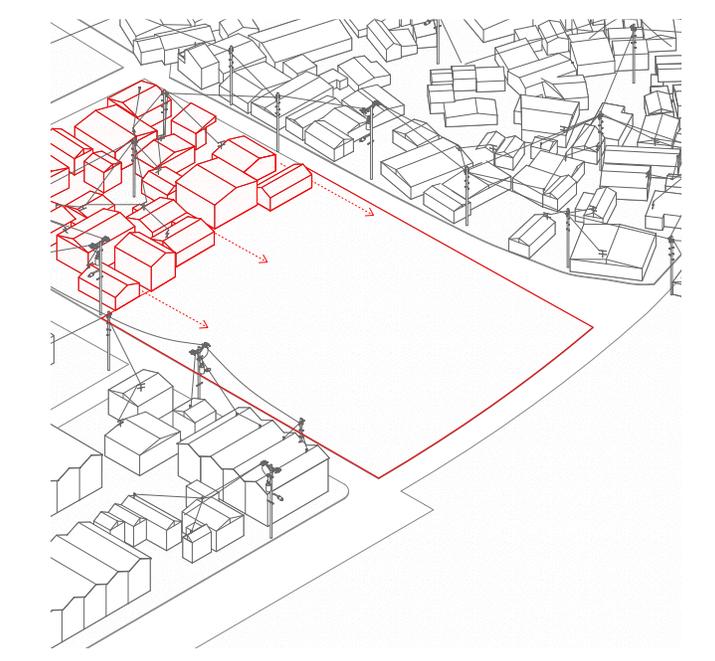


Fig. 35 - New homes directly share the public space with the building intervention.

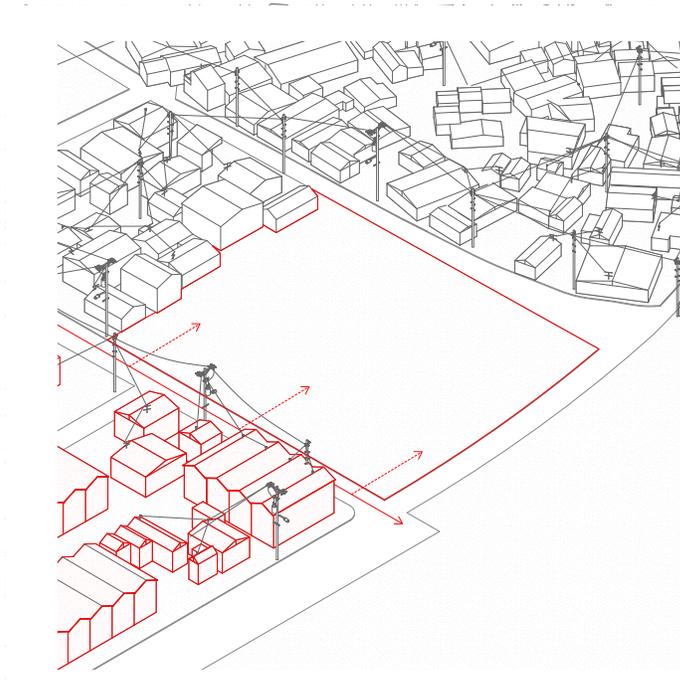


Fig. 36 - New mixed use 4 storey buildings adjacent to the primary vehicular route feed commercial activity and live into the site.

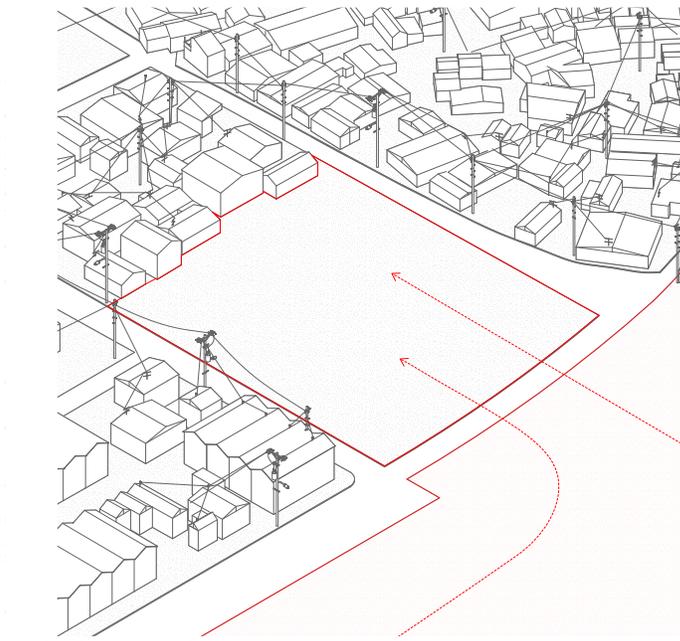


Fig. 37 - Foliage and natural landscapes are to be drawn into the site creating desire to move back and forth freely.

The Concept

Building upon the research from interviews, surveys, qualitative studies and mapping explorations, the concept for a singular built intervention which would act as a symbolic moment in the community was derived. Firstly, creating a moment in the community as a focal point which buildings would be situated around as seen in the Rada Community. Second, the clustering of program for a shared multi functional face. And third, the pushing and pulling of a surface to create moment of experience and interaction.

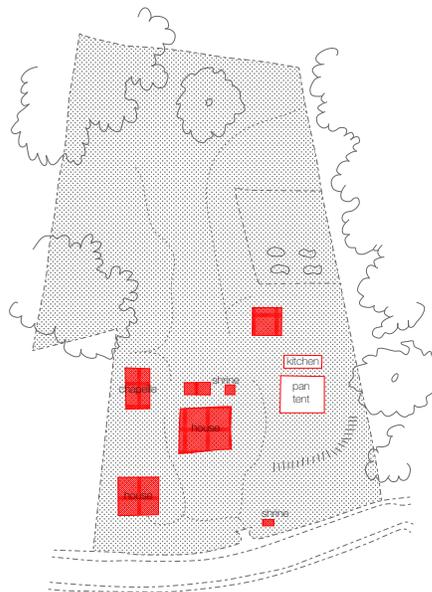


Fig. 38 - Rada Community 1890 - African Settlement

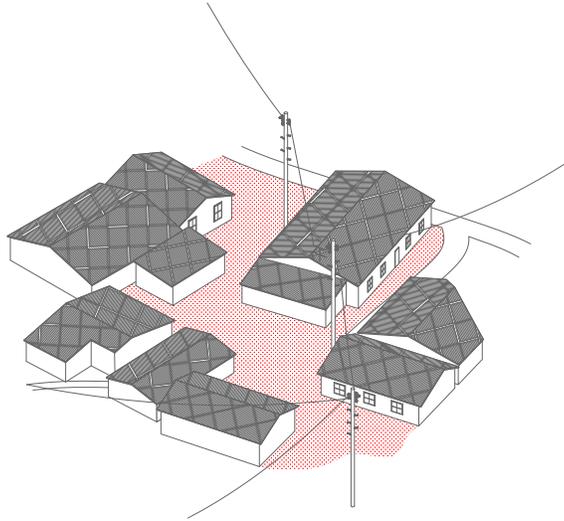


Fig. 39 - Housing clusters

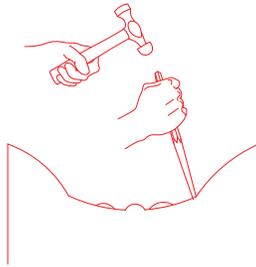


Fig. 40 - Making of the Steel Pan

Form Finding

Programs were based on the needs identified in the community engagement phase done for this thesis and by DKP. The resulting programs therefore included a school for music focused on pan with an associated maker-space and performance area. A kitchen and dining space to generate regular daily activity. A homework centre containing a small library and access to internet and computers to facilitate learning. And lastly, an auxiliary flex space foreseen as rent-able meeting rooms for the community or non profit organizations.

The an iterative process the final schematic realization of programmatic for was established. First, clustering the programs around a common space, then optimizing the massing into a juxtaposing circular element and finally identifying the real need for shelter with a porous flexible space below.

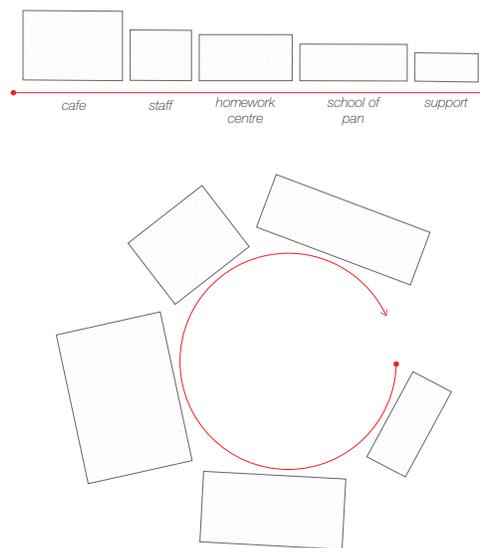


Fig. 41 - Clustering the programs

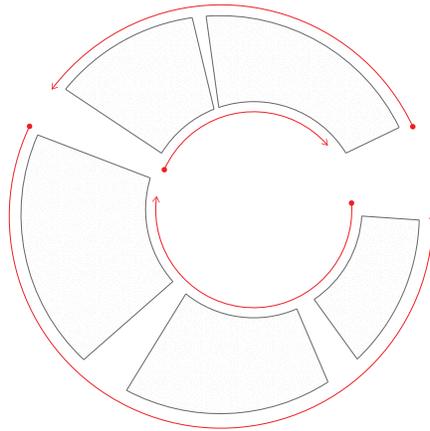


Fig. 42 - Optimizing the form into an iconic element

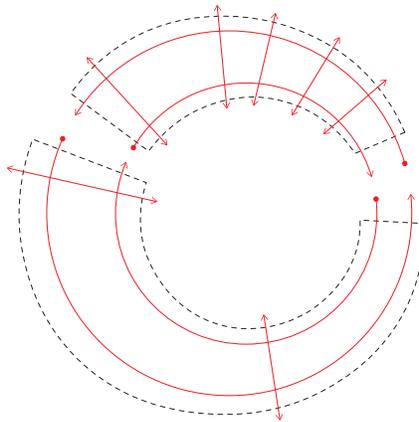


Fig. 43 - Creating a shelter with a porous mass

Site Response

Program massing - The kitchen and eating space is position adjacent to the main street and mixed use building to generate commercial activity.

Shelter - A light roof structure sits on the concrete walls oriented in a radial pattern directing focus to the central activity space. The roof also protects users from the elements in a warm climates and thus allow the porous programmed space to naturally ventilate.

Ground plane - paving patterns emanate from the walls beyond the extremities of the site to engage the context drawing people in.

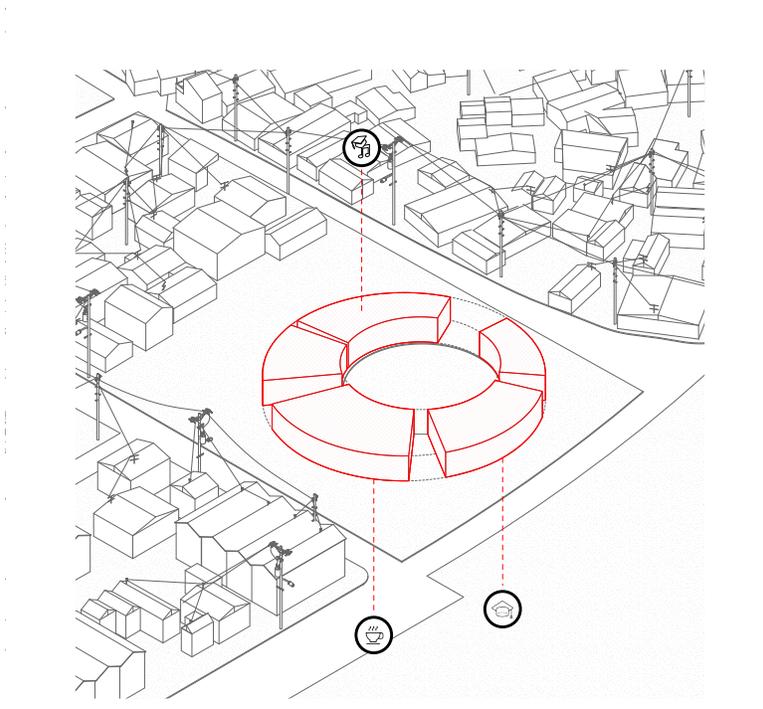


Fig. 44 - Program massing

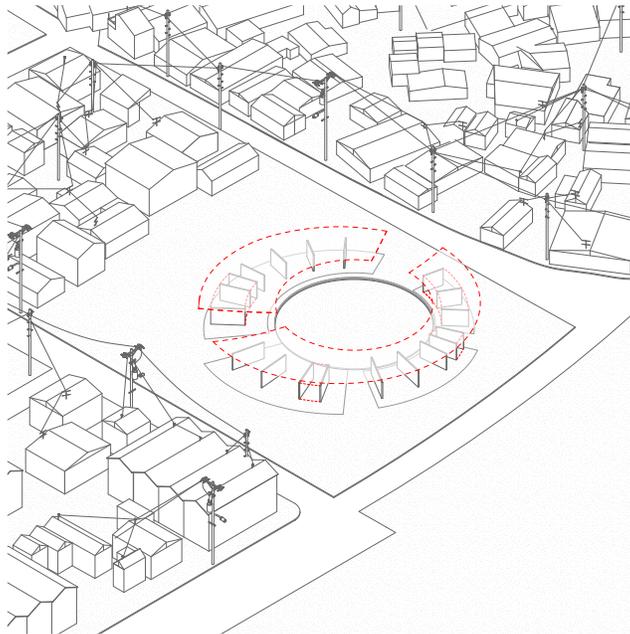


Fig. 45 - Walls defined in a radial pattern with a central focus

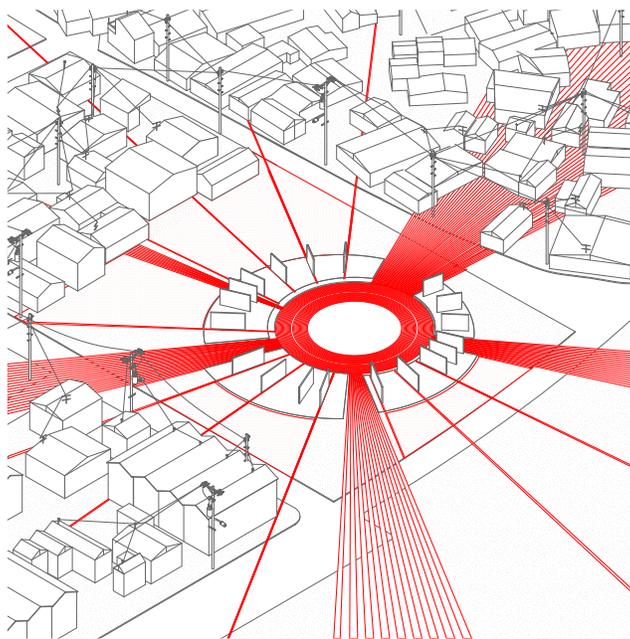


Fig. 46 - Paving patterns emanating into the community

Program Relationships

The temporality of this facility is considered by grouping the programs which create energy throughout any given day and time. The eating place and school support a daily schedule of meetings and classes from seniors morning classes to children's homework programs. The music school used three times a week on an evening creates thunder-some noise echoed by the adjacent flexible sports and recreational space. The pan yard and performance space bleeding through the school into the pop-up market on weekends. Each function continues to bring activity to the space or create quite moments amongst the whole.

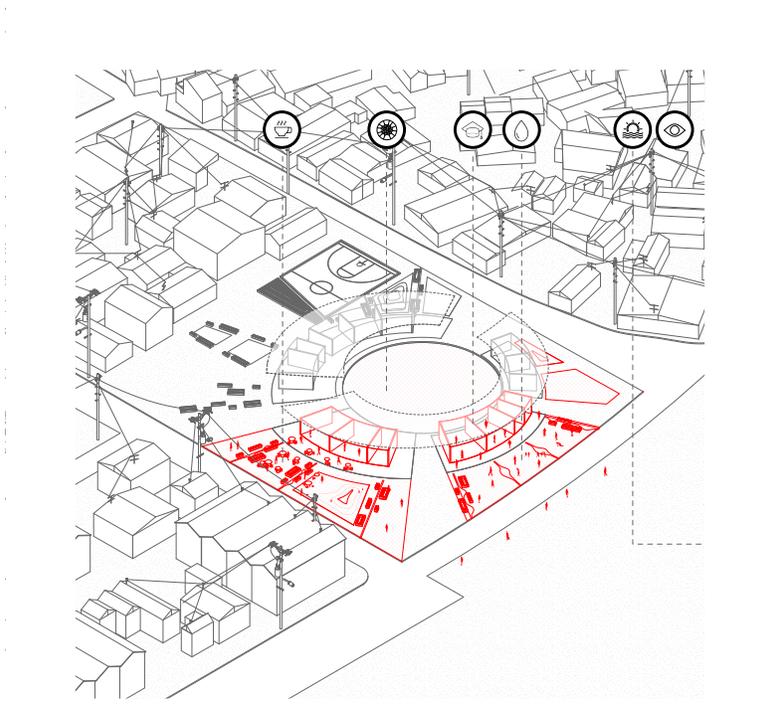


Fig. 47 - Cafe & School

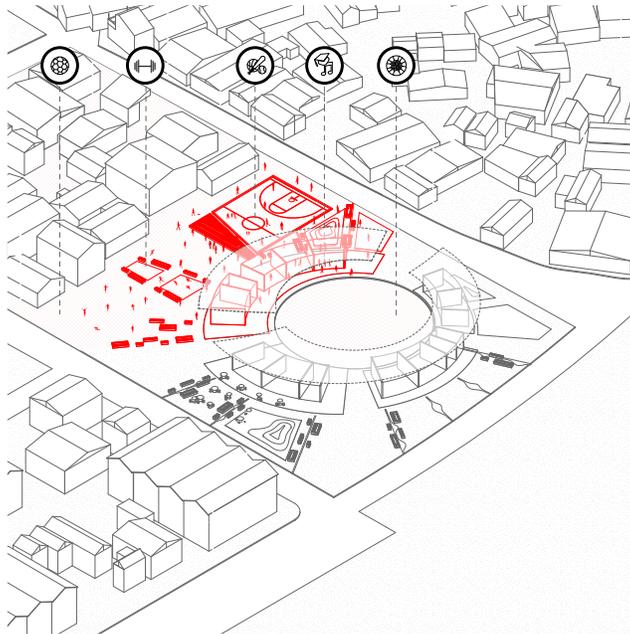


Fig. 48 - Pan workshop & flexible recreation space

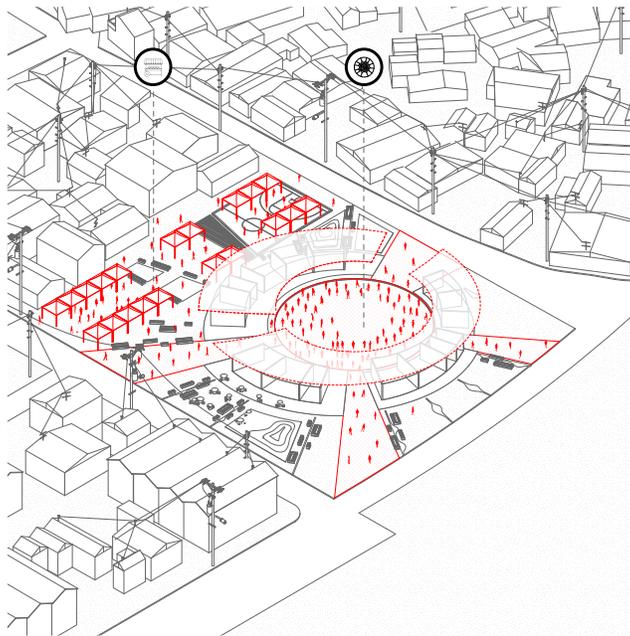


Fig. 49 - Performance & pop-up market

Detailed Relationships

The cafe bleeds into the exterior space of benches and grassy knoll mounds. Each bench place deliberately adjacent to trees but offset enough to afford interaction between groups. The school faces south, mostly exposed to the sun but awarded cool breezes from the sea, catching the mist from the splash pad at its door step, cooling the winds and creating a pleasant space for students. The maker-space for steel pans creates the most noise, bleeding into the energetic basketball court and outdoor gym zone. Each area seemingly part of the other, stepping from the rough concrete extremity to a smooth concrete finish. These transitions are purposefully similar but signify a define space when needed. This porosity and seamless flow create safety, multi-functionality and appropriation to fit each users needs.

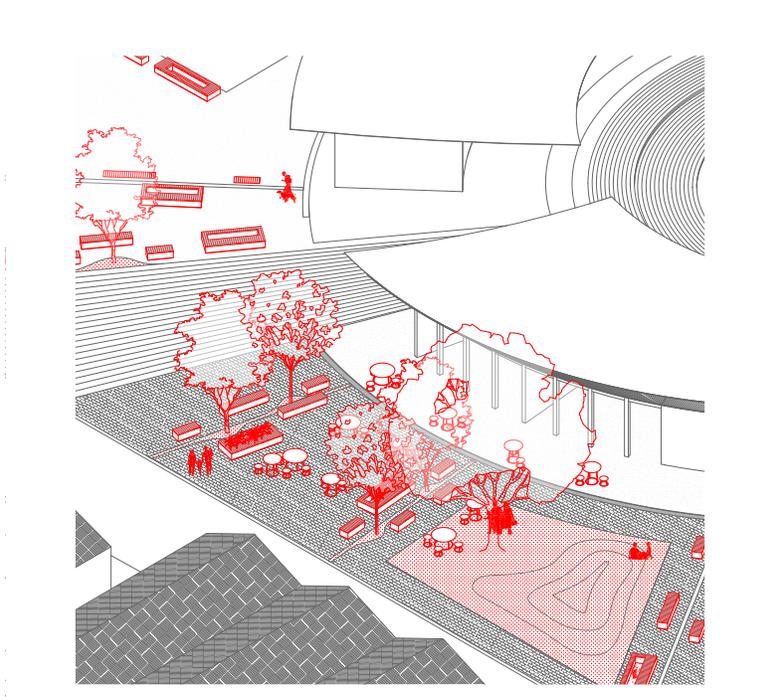


Fig. 50 - Cafe flexible exterior space

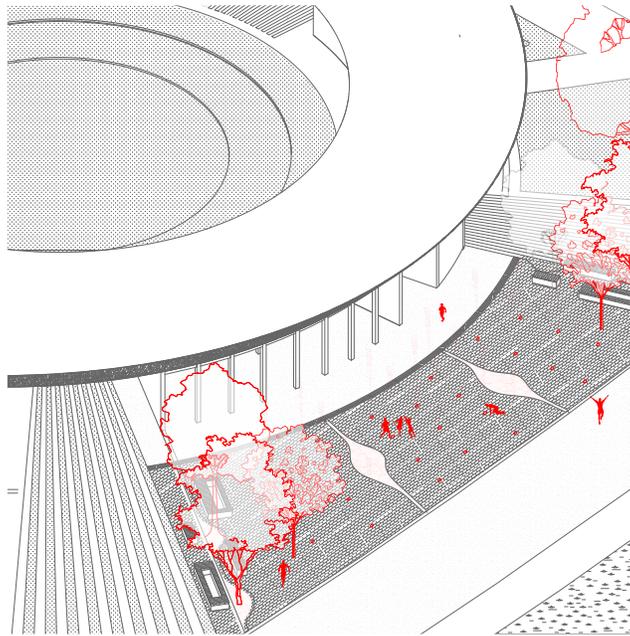


Fig. 51 - School and splash pad

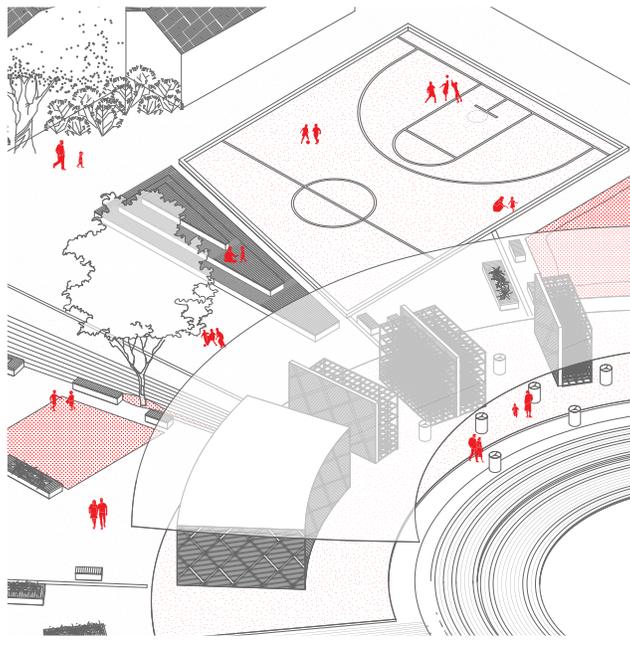


Fig. 52 - maker-space and recreation



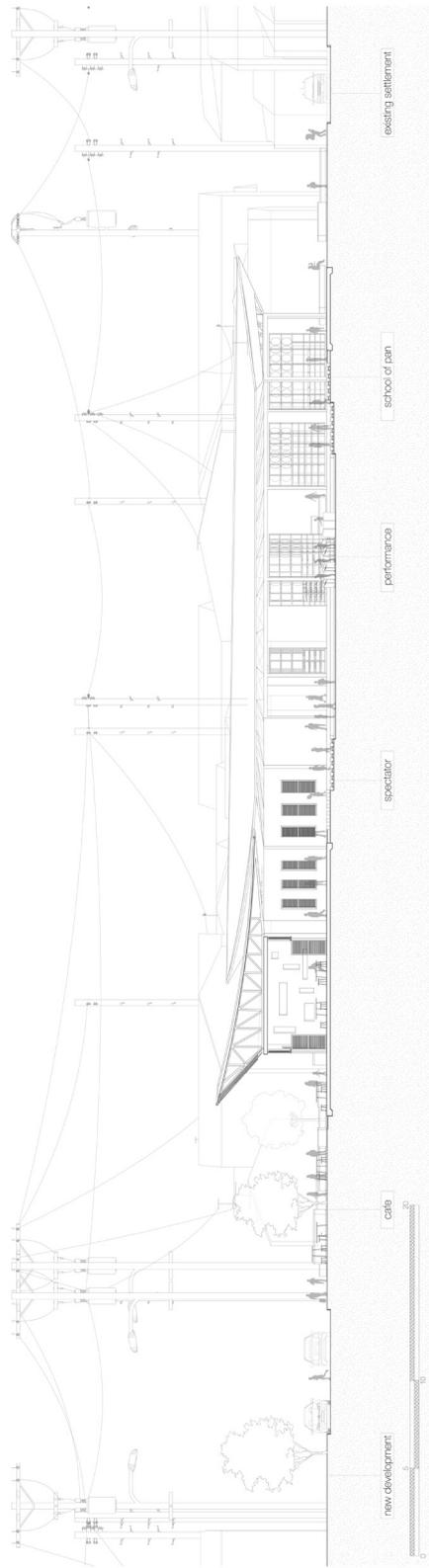
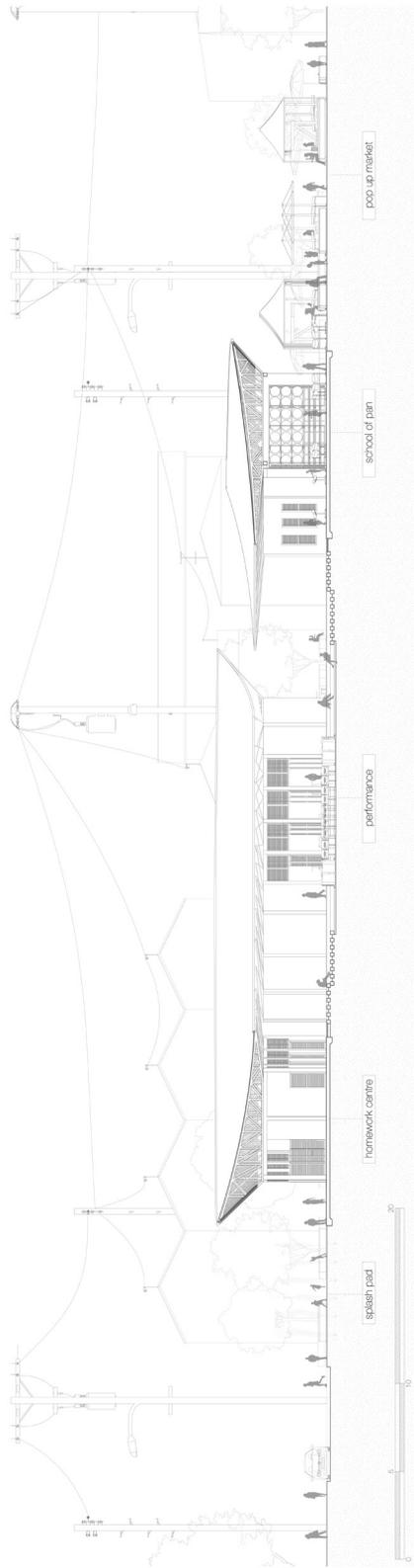




Fig. 56 - Entryways are defined with paving patterns below and wood cladding above, drawing the user into the large porous space.

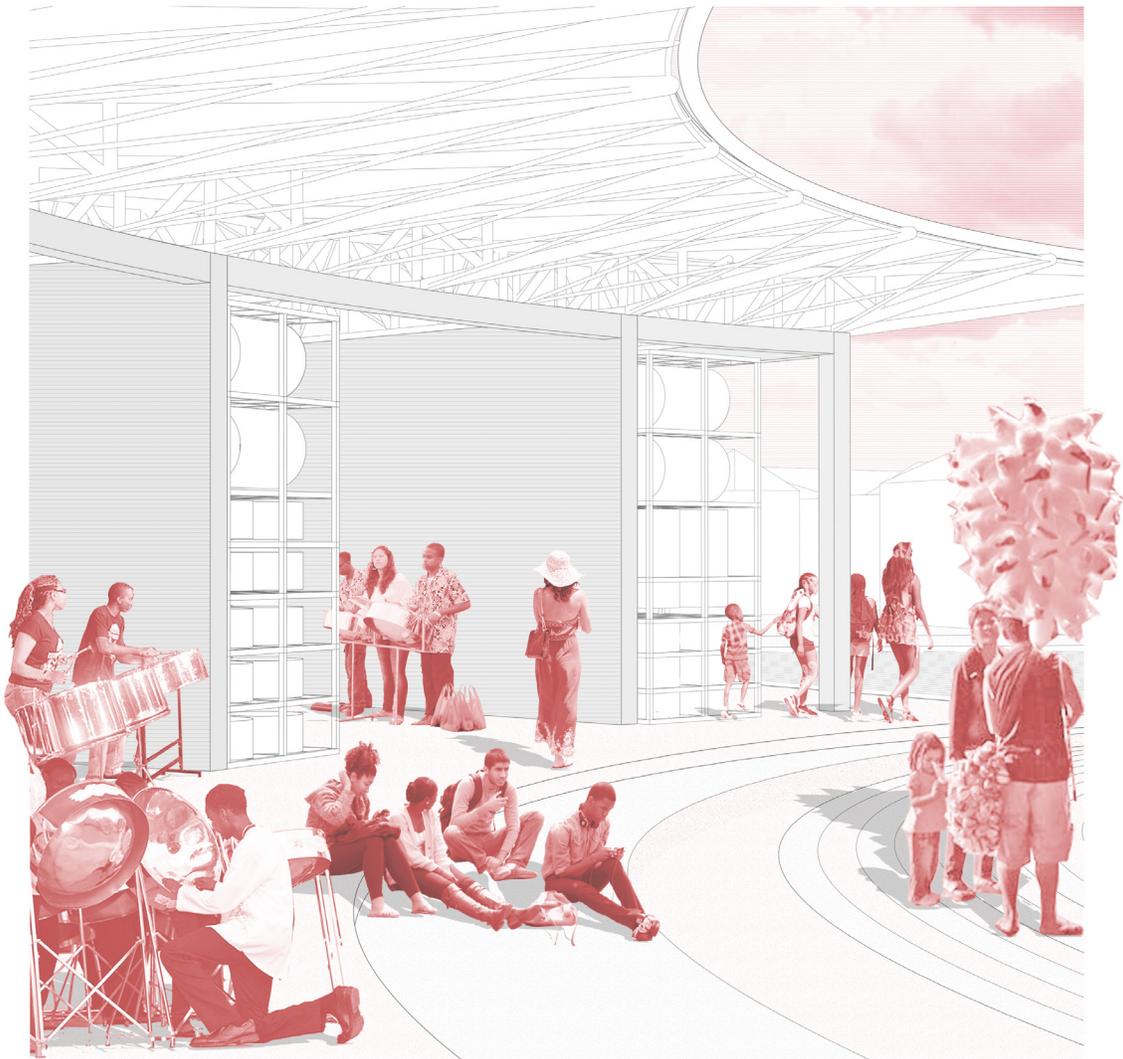


Fig. 57 - The marker-space for steel pans pay homage to the culture creating opportunity to make and learn the national instrument.



Fig. 58 - The large unprogrammed space to the north, sheltered by the building, offers room for recreational activity or spontaneous markets.



Fig. 59 - The kitchen and adjacent eating spaces are unfixed to allow for flexibility in furniture and use. This eating space should be recognized as a local amenity and not privileged to global chains.



Fig. 60 - The entrance from the informal settlement is just as grand and spacious as the others, welcoming the community into the performance area with views beyond.



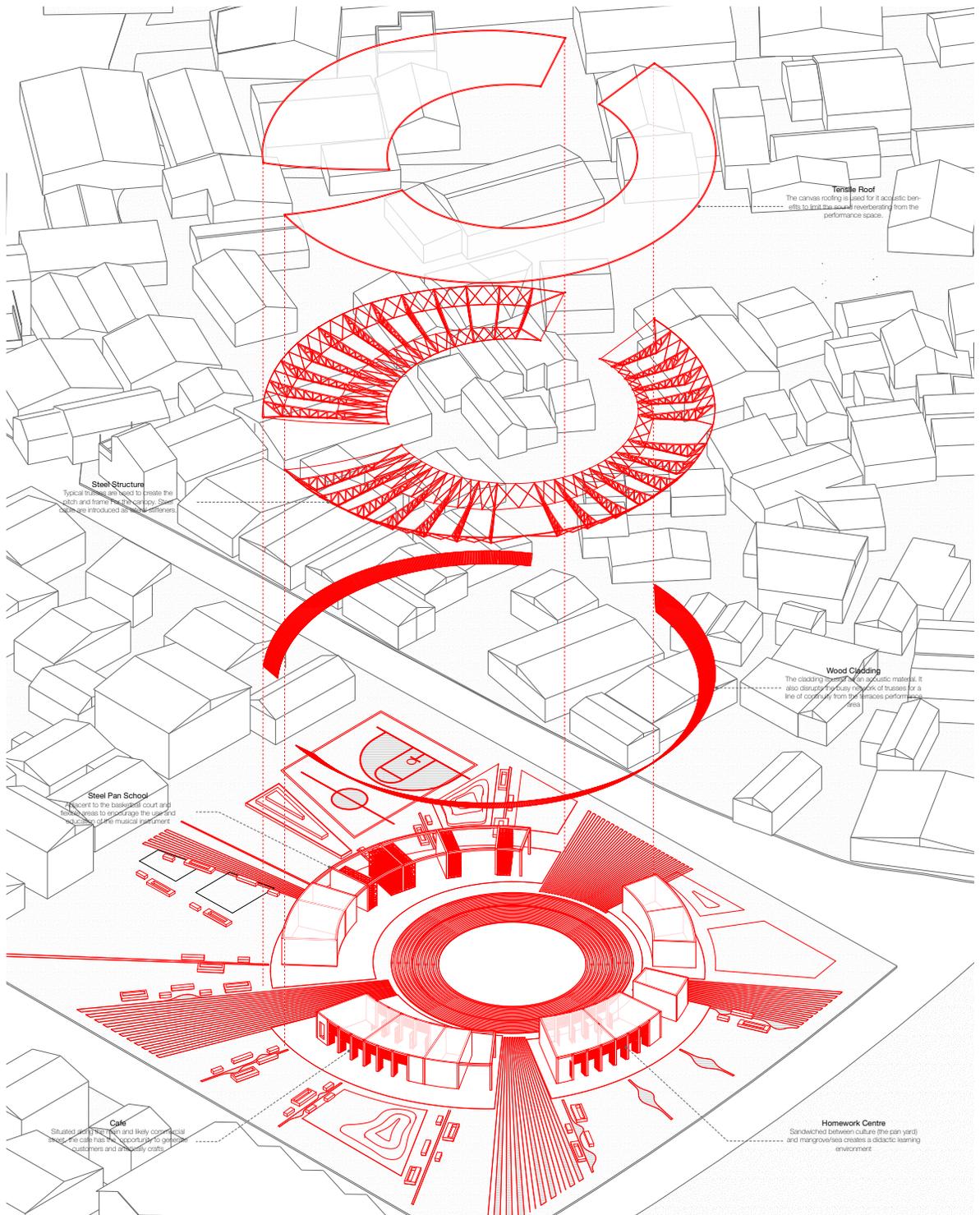
Fig. 61 - Community members and visitor sit amongst the farmer's market eating fresh food while positioned adjacent to steel pans stack high.

Conclusion

Informal settlements as it is defined here will continue to exist amongst growing urban centres, and our response to this as designers is a defining factor in creating relationships between people. If design can nod to the realities of a segregated world, while creating spaces of inclusion, cities can become more habitable environments within the formal and informal. This project identifies these misconceptions around the informal settlements of Trinidad which is created by media. As a result this reinforces these social disparities, but if we recognize modes of common interests, facilitated through program and design, architects can play a greater role in the threshold between these divided communities.

Reflecting upon the research and experience during this project it is evident to me that my ignorance of these communities is a result of uninformed and sometimes false information. A quote from Tracy Hutchinson Wallace from Habitat for Humanity TT. resonated with me, "These people have done nothing to be in this situation, they are born into it and if you have never had to worry about the your roof over your head then you are automatically at an advantage." This note and the work of Nadella Riley reminds us that the future is a result of today and the youth in these communities should not be judged and disadvantaged by a past which they had no control over but rather disregard these pasts to focus on the dialog of their future.

Bridging the divide aimed to create this dialog and confluence of programs which would support the education and elevation of the youth whilst affording opportunity for a multi-generational space. These can become the new borders, fighting against the walls being erected throughout cities which must be contextually re-imagined, drawing on a simpler past to make sense of the chaos today. Bridging the divide between communities starts with yourself, opening your mind to the unknown and opening up to your neighbor.



Teriile Roof

The canvas roofing is used for its acoustic benefits to limit the sound reverberating from the performance space.

Steel Structure

Typical trusses are used to create the pitch and frame for the canopy. Steel bracing is introduced as secondary members.

Wood Cladding

The cladding is made of an acoustic material. It also allows for the collection of trusses for a line of continuity from the terrace performance area.

Steel Pan School

Adjacent to the terraced court and rehearsal areas to encourage the use and teaching of the musical instrument.

Cafe

Situated adjacent to the rehearsal and likely commercial areas, the cafe has the opportunity to generate customers and display crafts.

Homework Centre

Sandwiched between culture (the pan yard) and mangrove/sea creates a didactic learning environment.

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