WHAT ELEMENTS CR(E)ATE INCLUSIVE PUBLIC SPACE IN WOODSTOCK?

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ABSTRACT

Many public spaces are underutilized and lack elements to invite social inclusivity. Design considerations (elements of comfort, pleasure, activity) and placemaking (the involvement of communities) can improve this disconnection. Advised by the architecture firm, theMAAK, this project aimed to address inclusivity in Woodstock—a neighborhood that subverted historical policies of racial segregation but is rapidly gentrifying under neoliberal capitalism. Informed by activity scans of public spaces, we installed themed temporary designs to test inclusivity in spaces of Woodstock. Observations revealed the following: spatial design and social engagement are equally important; community engagement is vital; and, scaling inclusive design is not appropriate given the uniqueness of public spaces.

MEET THE TEAM

Mbolle is from Pennsylvania in the United States, and was born in Cameroon. She's majoring in Chemical Engineering at WPI and wants to pursue working in the consumer goods field, focusing on producing good quality products. On campus, she is involved in the Black Student Union, African Students Association, National Society of Black Engineers, and Student Government Association. Her goal is to continue to strive for the best, conquer any tribulations on the way and not just better herself, but also use her knowledge to positively impact the communities in the US and in Cameroon.

Amparo is from Argentina and is majoring in Chemical Engineering at WPI. She is passionate about bioengineering and using science to solve problems. On campus, Amparo is the Vice-President of the Society of Hispanic Professional Engineers, striving to raise awareness about diversity and help her community grow.

Faye is from Rhode Island in the United States and is majoring in Architectural Engineering at WPI. She has a passion for understanding how detailed design influences those immersed in it. Throughout the IQP process, Faye learned a lot about what it means to work as a team, and how there is truly strength in numbers.

João is from Brazil and is majoring in Mechanical Engineering at WPI. He likes working in teams to tackle engineering problems in the world. On campus, he is on the executive board of the Brazilian Student Association and the Society of Hispanic Professionals, where he works to spread awareness about his culture. Additionally, he loves to travel and meet new cultures.

Alex is from Massachusetts in the United States and is majoring in Computer Science at WPI. Alex enjoys solving challenging problems and working on a team, hoping one day to be a software engineer or data scientist. During the IQP process, Alex was pivotal in facilitating discussion between the team and local Cape Town contacts.

Street art and Devil's Peak view from Woodstock (Robinson, 2016).

EXECUTIVE SUMMARY

Public space is intrinsically multidimensional; it is used by a great number of diverse people for various reasons. The true importance of public space lies in that it fosters the creation of a shared identity and sense of place, which leads to strong relationships within community members (Willis, 2018). Public spaces centered around good meaning should have the ability to support, facilitate, and promote social life in all its variety (Mehta, 2014). Unfortunately, these ideals of public space have been far from reality, with it being used as a tool for segregation and exclusion, as well as depicting inequalities based on race and economic status.

Woodstock has always been a vibrant and diverse neighborhood in Cape Town, but is now going through the process of gentrification, which is polarizing and dividing its community (Wenz, 2012). As a result, public spaces in the neighborhood have seen a decline and have become less inclusive and engaging. Our project tried to address this problem through collaborating with architecture studio theMAAK in the implementation of temporary public space installations that aimed to engage the community in their public spaces. To achieve this it was necessary to understand what elements create successful public space, and how the context around them, specifically in Woodstock, affects their use. In addition, we tried to implement placemaking strategies to bring people to participate in the renewal of their public spaces, fostering their sense of place and ownership of their public spaces. Figure 1 illustrates how the issues revolving around Woodstock and public space overlap to give context to our project.

Figure 1: Diagram showing the issues around Woodstock and public space that intersect to give context to our project.

The methods for this project included exploring and evaluating established and successful public spaces in Cape Town, as well as underused public spaces in the Woodstock neighborhood. For this purpose, we conducted activity scans consisting of detailed observations and scoring of public spaces under five main criteria: inclusiveness, meaningful activity, comfort, safety, and pleasurability (Mehta, 2014). These gave us a framework to compare Cape Town's popular public spaces with the less-frequented Woodstock public spaces. On the other hand, interactions with locals helped us understand how the unique cultural and social context of Woodstock influences use of public spaces, while at the same time developing community consent for our public space installations.

From our activity scans we identified three aspects of public space that, according to Mehta's scale, were lacking in Woodstock's public spaces: meaningful activity, comfort and pleasurability. Through our temporary installations we aimed to address these criteria while testing for different spatial elements that would attract more people to public space, as requested by our sponsor, theMAAK. With guidance from Max and Ashleigh of theMAAK and Mehta's scale we proposed four different themes for our installations: intrigue, pause, entrance and interaction. Each of these addressed meaningful activity, comfort, and pleasurability in a different way. The design constraint for these installations was the use of plastic milk crates, which provided flexibility and sustainability. Putting everything together we came up with the following designs (figure 2).

Intrigue

Intrigue contributes to the idea that people are drawn to something due to their curiosity. Intrigue is also relevant to Mehta's criteria because it contributes to pleasurability by way of adding interestingness and attractiveness to a space.

Pyramid

The construction of a pyramid was aimed to first introduce the crates in the space in an intriguing way. This shape strived to create initial interest in what was being put in the space and why. The pyramid was dynamic in that it was more interesting to look at than a simple bench, yet it could still provide seating.

Outcome

We observed multiple people looking at the structure as they walked by. We also observed young children from the neighborhood playing on the pyramid.

Pause

The idea of pause also relates to rest, in that people can enjoy a space if there is an adequate ability to slow down and stop to do so. This directly relates to the Mehta's comfort scale by way of providing seating.

Bench

The bench aimed to achieve the purpose of constructing seating to allow people to pause and enjoy the space. The slight step design was reminiscent of stadium bleachers, which fit well with the idea that people are out to socialize with each other and watch the street and their children play.

Outcome

We observed a few individuals looking at the bench while passing past Essex Square. We also observed one young girl sitting on the bench while she played with other children outside.

Entrance

The concept of an entrance into a space defines the movement into and through the area. This structure provides a sense of enclosure, which, according to Mehta, contributes to the pleasurability of the space. In addition, having a formalized an entrance to a space can define it as a formal public space.

Arch

The arch was constructed to test how an entrance alters the movement in the space. The arch would hopefully encourage people to perceive the space as somewhere they could enter and spend time. A defined entrance could add complexity to the space that was not experienced before.

Outcome

This arch gained a lot of attention from pedestrians. At one point, a group of teens were sitting on the sides of the arch. Otherwise, it was difficult to measure how it changed perceptions about the square.

Interaction

Activity that provokes interaction brings people into a space. An interactive component can prompt longer stays in a space and an incentive to return. Interaction adds to the range of activities in the space, which raises the value of meaningful activity on Mehta's scale.

Game

The building of a game came closer to what the community saw as beneficial for the space. One of the neighbors we talked to envisioned a play area for children and a garden in the square. The interactive nature could connect users with the space in a fun way.

Outcome

The game was very successful in that many kids were playing with it for an extended period of time. Some adults also showed interest. Overall, the game installation gave the space a more active purpose.
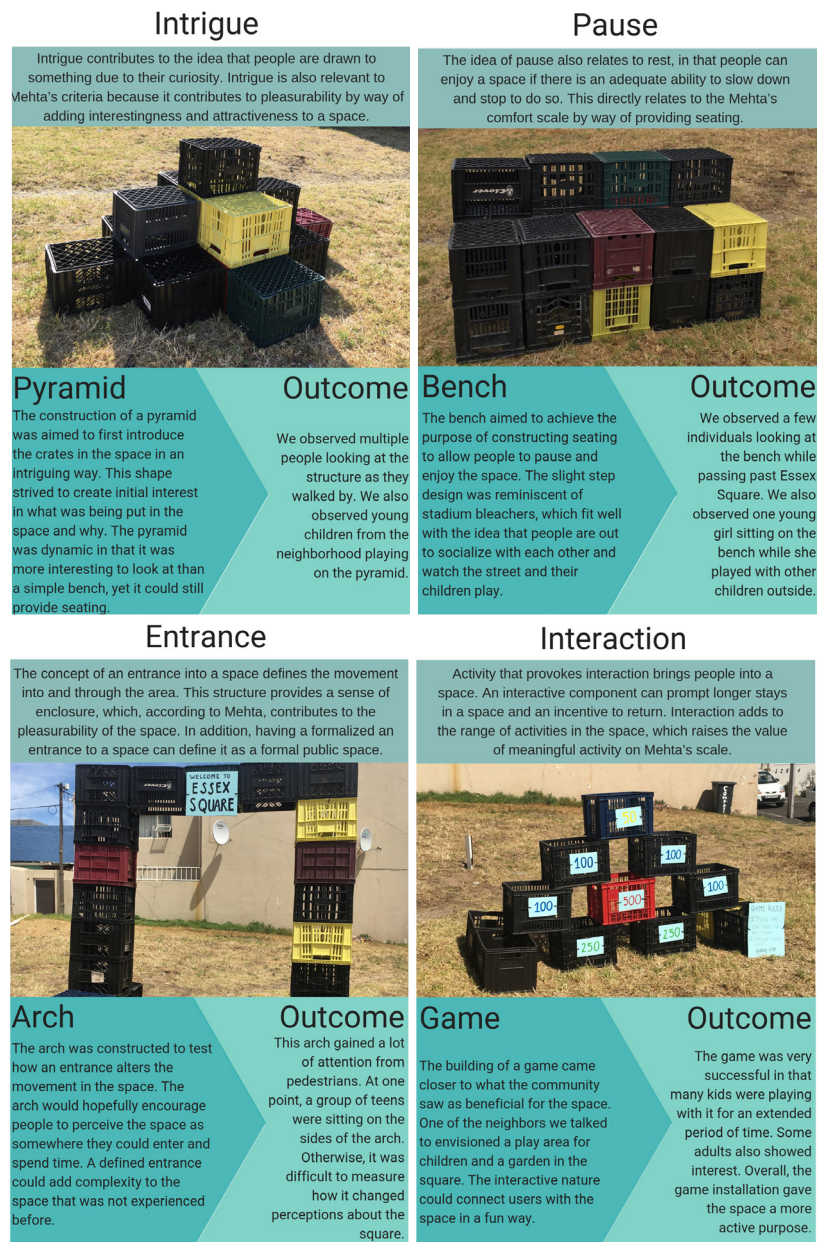
Figure 2: Public space installations by theme with outcomes.

Our final installation was a community gardening event, which included the successful elements from the previous installations and a meaningful activity requested by the neighbors. Applying the concept of placemaking, where the community participates in the decisions and development of their public spaces, we aimed to foster a sense of place and ownership of the space. Analyses of our activity scans and the observations of our temporary public space installations, we concluded the following:

- "Good" public space requires addressing combinations of Mehta's criteria, not just one element at a time.
- Community engagement, or placemaking, is a vital element in establishing "good" public space.
- Gaining community consent is crucial for installing change in public spaces.
- Public space cannot be generalized; creating "good" public space requires specific contextualized considerations.

When working with public space, it is crucial to gain consent and understanding from the community. By consulting with the neighbors and asking their opinions right from the start, we were able to create space that was accepted without resentment. However, it is important to note that public spaces are viewed and utilized in different ways by different communities, so they cannot be generalized. It is difficult to effectively alter these spaces because they are irregular by nature and there does not exist one approach that satisfies the needs of every area. Following this, what worked for our project in the Woodstock community may not apply to other areas.

INTRODUCTION

Public spaces allow community bonds to be created and strengthened, promote neighborhood growth, and foster diversity and inclusion. However, welcoming public spaces are on the decline. For example, in Famagusta, one of the most rapidly developed cities in Cyprus, public spaces lack safety, responsible personnel, adequate lighting, safe equipment, maintenance and cleanliness, variety of activities and facilities, and comfort, which discourages people from using them (Pasaogullari & Doratli, 2004). Similarly, in Zimbabwe, street furniture within public spaces does not cater to the elderly, disabled, or children and women (Muleya, 2016). Also, the lack of lighting excludes women from using public spaces during the evenings and at night, and the absence of seating makes it difficult for the elderly to enjoy public spaces such as parks (Muleya, 2016). Not only are public spaces not safe or comfortable, when they are created, they are often designed for the privileged and wealthy (Toloudi, 2016). In the United States, high-density cities such as New York have significantly less public park space than low-density cities such as Anchorage [4.6 acres and 2,397 acres per 1,000 residents, respectively] (Harnik, Martin, & Barnhart, 2015). In addition, lower-income neighborhoods are especially lacking in open public space. For example, a 2003 white paper by The Trust for Public Land calculated that Los Angeles's predominantly white neighborhoods had 32 acres of park space per 1,000 residents, compared to 1.7 and 0.6 acres per 1,000 residents in predominantly African-American and Latinx neighborhoods, respectively (Sherer, 2006).

Placemaking has emerged as a strategy to overcome this declining engagement with and in public spaces. Rather than waiting for a top-down approach from private contractors or government initiatives, placemaking is a tool for citizens to take ownership of their public spaces (Project for Public Spaces, 2018). For example, the transformation of Gillett Square in London employed the creative thinking of urban designers and the ingenuity of local businesses to repurpose a parking lot into a canvas for temporary activities. Here, kiosks were installed to increase social gatherings and personal connection to this previously underused public space (Sendra, 2015). *Ser Urbano*, a public festival in Caracas, Venezuela, involves a series of temporary installations in the city's public spaces, such as *Nolympics*, organized pillow fights and bubble battles, to empower the citizens to reclaim public spaces in the city and stimulate important discussion on the uses and possibilities of public spaces (Orozco, 2018).

Given its long-standing history of social and racial segregation, Cape Town has applied the concepts of placemaking to redefine public spaces that were once symbols of colonialism and the Apartheid government. Apartheid spatial planning policies resulted in several quality public spaces in areas designated for primarily White residents. According to an entry on FutureCapeTown.com, town planning in Black and Coloured[1] residential areas offered limited consideration for the upkeep and maintenance of public spaces, resulting in many Black South Africans developing an impression of public spaces as dirty and unsafe spaces, and therefore avoiding these areas (Our Future Cities, 2018). Despite this, the Victoria & Alfred Waterfront Mall, for example, is one formally White-designated area that has now been reclaimed as a space for social engagement and inclusion (Houssay-Holzschuch and Teppo, 2009). However, not all areas of the city have engaged in such transitions, and some areas, including the neighborhood of Woodstock, have experienced a rise in social segregation as a result of economic development and gentrification. While uniquely retaining racial integration throughout South Africa's colonial and apartheid past, Woodstock has recently become the home for various creative industries including game developers and startups. These creative industries have promoted an economic regrowth of the neighborhood, prompted structural redevelopment, and simultaneously altered the neighborhood demographics. The mid- and low-income Coloured families residing in weathered homes are now neighbors with, and being pushed out of their homes by, predominantly White high-earning professionals living in newly built apartments.

[1]Unique to South Africa, the racial category 'coloured' has a specialized meaning in that it denotes people of mixed racial ancestry (non-white), rather than those who are black, as it does in other parts of the world (Adhikari, 2017).

Ser Urbano's organized pillow flights in Caracas, Venezuela (Orozco, 2018)

This project engaged the diverse community of Woodstock with temporary, community conscious, and user centered small-scale public space installations, drawing on the concepts of placemaking to re-invigorate public spaces. This effort idealized the mission of local architecture and design firm theMAAK, which works actively to create architecture around the city of Cape Town. The organization was founded under the principles of social consciousness and community engagement, with the aim of enhancing under-utilized public spaces (theMAAK, 2018). TheMAAK accomplishes this by transforming spaces into hubs for community interaction, so that everyone can have access to quality design, regardless of their income (theMAAK, 2018). We worked with theMAAK to understand how the unique cultural and social context of Woodstock influences utilization of public spaces, and collaborated with the Woodstock community in the execution of temporary installations that promoted social engagement in public space.

Fairview Park in Woodstock, Cape Town

BACKGROUND

The demise of public space as a venue for social inclusion

Public space is intrinsically multidimensional; it is utilized by a great number of diverse people for various reasons. As indicated in *The Demise of Public Space* by M. Thomas, public space is an arena for social life, a meeting place for different groups, and "a space for the display of symbols and images in society, and as a part of the communication system between urban activities" (as cited in Mehta, 2014, p. 55). In this, public space fosters the process of creating a shared identity and sense of place that leads to strong relationships between its members (Willis, 2018). *Soul of the Community*, a study from the Gallup/Knight Foundation, highlighted that well utilized public spaces brought life to an area by fostering stronger communities, which in turn increased social development and sparked local economic growth (Rutherford, 2014). Moreover, public spaces are essential for democracy: they create a platform for community discussion, engagement, collaboration, operation, and learning. Public space creates a platform for public sphere, which allows private members of the society to come together publicly and challenge government and politics (Habermas, 1962). Public space centered around good meaning should have the ability to support, facilitate, and promote social life in all its variety (Mehta, 2014).

Historically, public space has existed very far from these ideals, and instead has been used as a tool for segregation. In India, public space is used to segregate people based on deeply inset hierarchical status (the caste system). Indian sociologist, Govind Sadashiv Ghurye (1969), explained how members of each caste could not use the streets associated with any other caste, promoting segregation. The *Plessy versus Ferguson* verdict in the United States in 1896 ruled that public facilities must be segregated under the "separate but equal" philosophy based on the color of your skin, yet the separated spaces were never truly equal (Hillstrom, 2013). In Virginia, a statute was produced that claimed seating would be segregated in "any public hall, theatre, opera house, motion picture show or any place of public entertainment or public assemblage" (McKay, 1954, p. 701). Similarly, South Africa faced legislated segregation due to the Group Areas Act[2] (Garside, 1993) and other segregation policies that insisted on segragated education, segregated systems of transportation, and segregated congregation. Systems of separation like these have plagued history and created divisions in public space that are still felt to this day. They completely contradict the true meaning of acceptance and companionship that public space is intended to create.

Figure 3: Unkept public space in Woodstock, Cape Town (Collison, 2018).

[2] The Group Areas Act was enacted in South Africa in 1950 and was established to assign specific urban areas to certain racial groups. Under this act, non-white citizens were forced to move out of areas that were deemed "White" and in many cases had to carry passbooks anytime they entered into a White only area. In conjunction with the Population Registration Act of 1950, which required all citizens to be classified based on their ethnic background, the Cape Town region was transformed from one of the most diverse cities in the nation to one of the most segregated (Garside, 1993).

Today, public space is being used to exclude people who are considered less desirable, such as the working-class groups and homeless. Government funds for maintaining and developing public space has been reduced enormously over the past few years. For example, in New York City, the staff working for the city's Parks Department has been cut by 40% since 2008 (Toloudi, 2016). This problem has been balanced by philanthropic donations; however, these groups tend to be selective towards their investments, focusing on cultural areas, like public museums and less open green spaces such as pathways and gardens (Toloudi, 2016). This creates a lack of maintained and beautiful public green spaces, which are mostly needed by people who do not have access to a personal garden or a countryside weekend home, thus creating inequality based on economic status. Moreover, there are many strategies used to prevent homeless people, and other 'undesirables' from staying in certain public spaces. For example, hostile architecture has been incorporated in many cities as a way to prevent people from congregating in public areas, including the use of spikes on large flat surfaces in Australia, which are used to prevent people from sleeping on them, see Figures 4 and 5 (Toloudi, 2016). Construction workers in San Francisco's Bill Graham Civic Auditorium started broadcasting construction noises during the night to get rid of homeless people sleeping at the building's steps (Toloudi, 2016). These examples show how the inclusive and diverse nature of public space is being corrupted.

Safety concerns are also keeping many people from being in public spaces, which contributes to less inviting areas. Safety is linked to the amount of use a space receives. Higher usage fosters more social ties and place attachment, which in turn provides more surveillance of the area (Shehayeb, 2008). In recent years there has been decline of the use of public space as community hubs, leaving them emptier; one of the main reasons there is a lack of safety (Making Cities Livable, 2018). This is due to the effort to keep 'undesirables' out of public areas, resulting in many parks and sidewalks remodeled without seating, shade, vendors, or other amenities that might encourage the positive public activity that discourages crime and disruption (Project for Public Spaces, 2007). Furthermore, some places lack basic safety precautions. For example, in Famagusta, one of the most rapidly developed cities in Cyprus, public spaces lack safety, responsible personnel, adequate lighting, safe equipment, maintenance and cleanliness, which deters people from using them (Pasaogullari & Doratli, 2004).

Figures 4 and 5: Spikes installed to discourage homeless use in London, England (ethicalpioneer, 2014).

There has been a rise in private-owned public spaces, known as pops, which physically look like regular public and open spaces, but do not provide the same freedom and openness for diversity and inclusivity. Garrett (2015) explained how people's rights at those spaces are reduced. When privatizing the area, the owners reserve the right to ban political protests and remove 'unwanted' people at their discretion. Not only does this strip people from their basic democratic rights, it also eliminates the space's natural diversity (Garrett, 2016). As put by Garrett (2016), pops are "dead spaces because the essence of conviviality, spontaneity, encounter and yes, that little sprinkle of chaos, have been stripped out." Furthermore, pops create a sense of self-policing on people's psyche while at the space; they feel like they are being observed and thus change their attitudes and behavior accordingly (Garrett, 2016). Public spaces can only serve their purpose for community strengthening and inclusiveness when they are truly public and include freespace – space offered to the public freely and generously to use as they wish (theMAAK, 2018).

Ultimately, there has been a gradual decline in the use of public space as monetary interests, safety concerns, and social discrimination take their toll on free-flowing public engagement. Public space has survived through the times of segregation and privatization in the past; however, public space needs to evolve if it is going to thrive in the modern era. Given that public space is a vital pillar by which human interaction is built, communities need to be creative in how they can maintain an all-inclusive area that promotes and provides social welfare for the entire community.

Figure 6: Company's Garden: inclusive public area in Cape Town

Placemaking as a strategy to make public space more inclusive

The importance of public space for communities needs to be recognized and valued by its members before any progress can be made. As architect Ben Willis (2018) said, "when we see public spaces as a physical extension of our rights, we begin to approach their true value to our society." The concept of placemaking was born under this light. The need for a collective effort towards reviving public spaces and spreading awareness of its importance and benefits to society is starting to push for an essential change.

Placemaking, or "the collaborative process by which we can shape our public realm in order to maximize shared value," serves as a tool to strengthen community relations through public space engagement (Project for Public Spaces, 2018). In other words, placemaking implies that the community itself recognizes that a public space could be transformed into something more meaningful to them, and they actually change it according to their needs. Furthermore, by involving people in the planning and management of their own public spaces, integration and inclusiveness of the community is promoted (Sanoff, 2006). In this placemaking process, people will establish a human connection with those who are changing their neighborhood (Kahne, 2015). They will also recognize that while planners/architects give public spaces their structure, it is the community itself that provides the heart (Rutherford, 2014). With community-based participation at its center, an effective placemaking strategy capitalizes on a local community's assets, inspiration, and potential, and it results in the creation of quality public spaces that contribute to people's health, happiness, and well-being (Project for Public Spaces, 2018).

The transformation of the Gillett Square in London (Figure 7) is an example of the importance of giving public spaces a new purpose through placemaking. Architect Pablo Sendra (2015) argued that people could not recognize the true potential of the space because they could not see past the space being an informal parking lot. Some community members decided to become more involved with the decisions regarding the square and how it could be used and came up with a plan to install temporary kiosks to increase social gatherings at this underused public space. After some time, people noticed the importance of social interaction generated through the assembly at this vacant place, and developed a more formal public square (Sendra, 2015). The result was an inclusive space, where diverse people could "meet, interact, and share a common ground" (Sendra, 2015, p. 826). The place is now frequented by young skaters, children, people playing table tennis, or drinking on the benches. This reconstruction of an under-utilized space revealed the benefits of public space for social engagement. The success of these temporary measures within Gillett Square resulted in a more permanent transformation of the space, which is now being used as a venue for different temporary events.

Figure 7: Gillett Square in London (Vortex Jazz, 2018).

In order to implement public space in a temporary way and create a lasting effect on the community it serves, different design elements need to be considered. Architecture professor Adriana Fontes (2012) argued that eight key design elements are crucial to develop a temporary installation that fosters urban amiability. Temporary installations must be **transient**, **small-scaled**, **unique**, **subversive**, **active**, **interactive**, **participatory**, and **relational**. These design elements encourage both use of and interaction within public spaces. For example, referring to Gillett Square, the convenience of transitory and small cafes, mobile phones, and nail painting kiosks provided diverse people with local spots to participate with, while engaging with others (Holland, 2008). With these characteristics, "temporary interventions [leave] permanent marks in contemporary cities" (Fontes, 2012, p. 31). There are several examples of temporary public space installations that offer considerations with respect to these eight design elements. We describe them in the section that follows. These examples of public space installations around the world share similar characteristics. Most notably, all the examples of both temporary and more permanent installations are relational; they bring individuals and communities together in interesting and powerful ways. Despite this common relational aspect, not all include a built, architectural design element. Incorporating the power of architecture as well as relational activity into an installation will provide aspects of traditional comfort values such as shelter and seating, as well as important human interactions that make a space successful.

Hindu Pilgrimage to Kumbh Mela

This religious festival provides temporary city infrastructure for 5 to 7 million people who stay for the entire duration of 55 days, and the added 10 to 20 million people who come for the highlight of the event (Vera & Mehrotra, 2015). Although it is an extremely large-scaled event, the Kumbh Mela is short enough to be considered an installation, as it leaves no trace after it is finished. All materials are either stored for another use, immediately transported away to construct something else, or left to remain at the site if biodegradable, allowing everything to be recycled (Vera & Mehrotra, 2015).

TRASIENT
ACTIVE
INTERACTIVE
PARTICIPATORY
RELATIONAL

The Cineroleum

TRANSIENT

UNIQUE

SUBVERSIVE

PARTICIPATORY

Architecture studio Assemble transformed an abandoned petrol station into a cinema, dubbed "The Cineroleum." According to the architects Jane Hall and Giles Smith, the concepts of a petrol station, a cinema, and "the phenomenon of their parallel decline" allowed the chosen site and its intended re-purposing to call back to the height of their industries (2012, p. 4). This underlying message allowed those who attended the installation to think about the social effects of industry, as well as enjoy a film.

Folly for a Flyover

This installation by Assemble utilized the space underneath a highway overpass as a public market open on weekends for three months, called *Folly for a Flyover* (Hall & Smith, 2012). It hosted public shows and small shops for the public to enjoy, calling attention to how our cities are designed around motor vehicles. While cars whizzed by overhead, many people actively enjoyed their city in a new way and were able to start conversations about how communities are utilizing their public space (Hall & Smith, 2012).

SUBVERSIVE

ACTIVE

RELATIONAL

Dancing in Glasgow

UNIQUE

INTERACTIVE

RELATIONAL

Artists in Glasgow, Scotland, painted markers on the street that relate to dance choreography for people to follow (Gramazio, 2014). Playing on the classic idea of hopscotch, the circles were colorful and included some that were grey and white to convey the message that the activity is for children, as well as adults. The project engaged people with their public space, called back to nostalgic times playing in the street, and encouraged interaction (Gramazio, 2014).

Before I Die...

This thought-provoking piece implemented by artist Candy Chang allowed anyone passing by to interact with the wall, think about what they would like to do in their life and connect with what others had written. The impermanence of chalk allows the display to remain ever changing. This idea was originally implemented in New Orleans but has since been implemented over 4,000 times in 70 different countries (Chang, 2011).

TRANSIENT

SUBVERSIVE

INTERACTIVE

RELATIONAL

Complimentenpoort

SUBVERSIVE

ACTIVE

In Holland, the design group HIK Ontwerp implemented a gateway that announced compliments to commuters as they walked under it. The goal of this installation was to create a more positive and inviting atmosphere, as well as to just make people smile. Amid all the activity of busy people rushing to their next destination, this "Complimentenpoort" allowed people to remember to think positively and alter their outlook on their day (Pelders, 2018).

Jumping Rope

The non-profit organization Sports Backers installed several jump rope stations in Richmond, Virginia. Placed in the vicinity of bus stops, these stations tethered the rope on one end, and left the other for one partner to swing, and the other to jump. People passing the time before their bus arrived had an opportunity to get active, experience a new use of public space, and have fun with each other in only a couple of minutes (Gelmers, 2017a).

SUBVERSIVE

ACTIVE

INTERACTIVE

RELATIONAL

Ping Pong Pop-Up

INTERACTIVE

RELATIONAL

The urbanist studio Frida&Frank in Vancouver set up ping pong tables throughout the city. The designers aimed for different locations and communities each time the tables were assembled. This use of the game promoted an inclusive, lively, and interactive community. Strangers may play together and hold new conversations that otherwise would be left unsaid (Gelmers, 2017b).

Electric Street

Electric Street in Philadelphia was the first work of The Percy Street Project – a collaborative effort of David Guinn and Drew Billiau. This piece was a neon light art installationlocated in an alleyway that was once crime ridden (Roeser, 2016). The project caused the street to be populated at night by those looking to take photos and enjoy the work. Creating this landmark has resulted in many benefits, including a decrease in crime in the area, and an increase in foot traffic that benefits local businesses (Roeser, 2016).

SUBVERSIVE

INTERACTIVE

RELATIONAL

ACTIVE

PARTICIPATIVE

RELATIONAL

In Toronto, the Love Lettering Project allowed members of the city to pen love letters addressed to their favorite spot. This installation encouraged members of the community to then put the letter in an envelope and leave it in a public space for a stranger to find (Lissner, 2012). By writing a letter, people were actively thinking positively about their city, and then were able to share this with others.

Toronto Love Letters

Yellow Arrow

The Yellow Arrow, by Brian House (2004) allowed participants to point others in the direction of special landmarks. First, someone placed an arrow on a street pole or something similar in the direction of the intended spot. The arrow placer would then link that specific arrow with a text message. Anyone who passed by and noticed the arrow could then text the number printed on it to access the message that was saved there by the arrow placer (House, 2004).
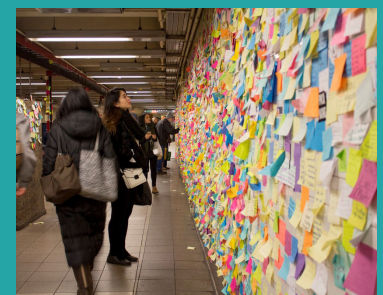
PARTICIPATORY

RELATIONAL

SUBVERSIVE

INTERACTIVE

RELATIONAL

For the project dubbed "Subway Therapy," those who traversed Union Square subway station in New York City wrote thoughts on colorful sticky notes and accumulated them on a wall. Not only was this a bright and colorful image in an otherwise unseemly space, but it was a place for people to share their thoughts without any obligations or repercussions (Gelmers, 2016).

Subway Therapy

Re-defining public spaces in Cape Town, South Africa

Given its long-standing history of social segregation, Cape Town is currently fielding the junction of old spaces and new possibilities regarding the re-creation of public space. Environmental geographer Zayd Minty reflected on how Cape Town's architecture only portrays the history of the powerful and wealthy (Minty, 2006). He argued that it is necessary to re-contextualize old public spaces to fit the backgrounds of all groups coexisting in the city (Minty, 2006). Furthermore, scholars Houssay-Holzschuch and Teppo (2009) explained that inherited spatial structures in Cape Town that used to divide and segregate the population, now correspond to a more democratic society. Examining a previously White designated area in Cape Town, the Victoria & Alfred Waterfront Mall, Houssay-Holzschuch and Teppo (2009) noted a clear evolution of the space. Purposefully introduced symbols of remembrance of times of segregation and the suffering imposed on groups for the explicit benefit of others, including information boards, Nobel Square (with statues of Nelson Mandela, F.W. De Klerk, Nkosi Albert Luthuli, and Desmond Tutu), and the mall's proximity to Robben Island, have fostered the current commingle of races within this space. Despite being a space under the Apartheid government, originally designed for the sole use of White, middle class consumers, "the Waterfront [now] undeniably offers a safe and accessible haven for expressing new social identities" (Houssay-Holzschuch and Teppo, 2009, p. 371).

Implementing public art to prompt awareness regarding historical struggles can also serve to re-contextualize public spaces. In his work, *Post-apartheid Public Art in Cape Town: Symbolic Reparations and Public Space*, Minty (2006) explored public art projects in Cape Town that are part of the symbolic reparations of the post-apartheid South Africa. A key aspect of these projects is the showcasing of past stories of forced removals and racial segregation through art in the public spaces (Minty, 2006). These public art projects served as a platform for those whose voices were unheard, and as a catalyst for reparations and social integration (Minty, 2006). The Public Sculpture Project was curated by Kevin Brand as a means of remembering the suffering of the community of District Six under apartheid policies. During this project, many temporary installations were created in public spaces that portrayed South Africa's segregation history (Minty, 2006).

Despite these examples of efforts to address lasting segregation in South Africa's public spaces, urban development practices still support segregation based on economic status and race. Scholar of urban planning, Faranak Miraftab (2012), exposed how City Improvement Districts (CIDs) were implemented in the 21st century to create areas in the city where property-owners (not residential and commercial tenants) chose to pay higher rates to obtain better cleaning and safety services from the municipality. As property owners control decisions on urban development, domination over public space and how it is used and modified are tied to economic status and race (Miraftab, 2012). This "architecture of fear" recreates the same patterns of segregation that South African society has been trying to overcome (Lemanski, 2004, p. 102). Miraftab (2012) argued that when implementing urban development or public space projects, consideration must be made for the city's social and political history, or there is great risk in maintaining or creating social segregation.

Public spaces, placemaking, and creative industries in Woodstock

In recent years, South Africa's government has made a concerted effort to attract creative industries into its major cities, including Cape Town. These creative industries "which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation of intellectual property" (Department of Culture, Media and Sport, 2001), include the disciplines and practices of architecture, publishing, visual and performing arts, fashion, television and radio, music, and advertising. The Department of Science and Technology published a ten-year plan for shifting South Africa towards the knowledge-based economy, where education and innovation were the key words for solving the country's socio-economic problems (Department of Science and Technology, 2008). Moreover, scholars have shown how the government and other organizations in Cape Town have pushed for this change. As described by Booyens (2012), a senior research manager in the South African Human Sciences Research Council, Cape Town is making its own efforts to advertise itself as a creative city and attract the settling of innovative companies. Additionally, the Stellenbosch and Cape Town area is often referred to as the "Silicon Cape," in reference to Silicon Valley in California (Tech Financials, 2017). The establishment of an innovative area in the city known as "The Fringe" and public events such as *Creative Week Cape Town* are examples of how the city is trying to develop a reputation as a creative hub (Wenz, 2012). The Cape Town Partnership (CTP) was also founded with the purpose of "launching Cape Town into the global arena" (Visser & Kotze, 2008, p. 2575) through urban renewal of the central city area and subsequent settlement of innovative companies.

Creative industries have been presented as potentials for economic growth and development, and the UNESCO is one of the main promoters of this initiative. Their 2013 report on creative economy highlighted the growth in export of creative goods in developing countries, as well as non-monetary benefits such as inclusive social development (UNESCO, 2011). Creative industries have also been compared to agriculture and industry as driving forces for development in the 1920s and 1950-60s respectively, providing new sources of employment and improved quality of life (Wroblewski, 2014). Social science scholars Boccella and Salerno (2016) explained that creative industries managed to increase their turnover even through the large economic crises that affected many areas in the world.

Creative industries have also implemented placemaking strategies in public space development efforts. In the city of Minneapolis, Minnesota, the Hennepin Theatre Trust collaborated with the residents of Minneapolis' oldest street, Hennepin Avenue, to bring to life their vision of the avenue as a walkable and unified corridor (Greg Baeker & Lauren Millier, 2013). The community members were able to play a part in this formation by identifying different cultural resources within the avenue through the development tool, cultural/social mapping. As described by Abidi and colleagues (2009) "Cultural mapping is widely recognized as an effective tool for development planning through identifying a community's strengths and its resources." With this process, the inhabitants were able to fully immerse themselves in the idea of reconstructing this public space into a brand-new revitalized Hennepin Avenue.

Although public views on creative industries shine them in a positive light, presenting creative industry as a vessel for innovation and progress, this industry can simultaneously bring social problems. Many scholars agree that there is no real tangible evidence of the healing effects of creative industries in social development and poverty remediation (Booyens, 2012; Rogerson, 2006). Similarly, Booyens (2012) has argued that creative industries exacerbate the process of gentrification in places like Woodstock, South Africa, provoking more inequality and social exclusion of the working classes. Urban renewal produced for and by creative industries attracts residents with more economic resources into areas that were originally populated by the urban poor, displacing the latter group into outer and less developed city areas (Booyens, 2012). Gentrification changes how residents previously felt about their community and public spaces. They are continuously forced to leave their neighborhood not only for economic reasons, but also because they lose their "sense of place" (Kahne, 2015). These factors only increase the polarization of public space in affected areas.

The urban regeneration process means that these areas are now home to two or more opposing communities, making it difficult for the creative firms to integrate into the neighborhood's community, contributing to this polarization problem (Steyn, 2010). In some areas, such as Woodstock, creative firms tend to establish themselves isolated from the outside environment, in private clusters that promote exclusivity and segregation (Wenz, 2012). Furthermore, these firms are mostly start-ups and small businesses, that do not have large profits nor numerous employees, and therefore do not help in local social development (Booyens, 2012).

Creative industries started settling in Woodstock during the early 1990s due to the area's history and spatial benefits. Laura Wenz (2012), an urban geographer and professor of the University of Cape Town, explained that the downfall of local industry turned Woodstock into an area of decay, crime, drug use, and poverty, which lowered property costs for brand new industries to take hold. Beyond that, factors such as proximity to the central business district and the neighborhood's diversity – both racially and activities-wise – attracted the first creative industries into the area (Wenz, 2012). This inflow of businesses led to urban renewal, attracting even more firms to establish in Woodstock, in a repetitive cycle (Wenz, 2012). The Old Biscuit Mill is a good example of this process (Figures 8 and 9 below). This warehouse was bought and remodeled by new owners and turned into a creative center where different artists and firms could settle and collaborate. This soon became a popular area for engagement and encouraged the settlement of other creative firms in the neighboring areas (Wenz, 2012). Chris Steyn, an investor and board member at the 88mph accelerator program based in Woodstock claims that the neighborhood "has changed beyond recognition compared to five or six years ago when the area was run down and home to drug dealers and homeless people" (Jackson 2018, p. 32).

Woodstock is marketing itself as a trendy business sector, which may be good for some, but not others. The gentrification process brought about by creative industries in Woodstock has elicited extreme property price increases as young affluent individuals move to the area. Landlords quickly realized that the middle-class residents would drive prices up further and attempted to revamp the housing of Lower Wood-stock (Garside, 1993). The great increase in property prices and the outward promotion of Woodstock as a creative industry destination has marginalized the low-income population (Wenz, 2012). Locals are evicted to make way for redevelopment projects including new housing, and the original spirit of Woodstock as a neighborhood of inclusivity is being lost to a new breed of White urbanization.

This project aims to draw on the creative industry to help reform community connections in this diverse and vibrant neighborhood. The architecture and design firm theMAAK, located in Woodstock, was founded under the principle of design with social conscience (theMAAK, 2018). Designers Max Melvill, Georgina Campbell, and Ashleigh Killa created this private studio in 2016 with the mission of having a positive impact on ordinary people's lives through architecture and design. Since its establishment, theMAAK has grown from a start-up to an award-winning studio (theMAAK, 2018). Their projects range from traditional architecture to the utilization of public space and creative design ideas that challenge typical thought, but all projects respond to the organization's principle that everyone should have access to quality design, regardless of their income (theMAAK, 2018). TheMAAK focuses on enhancing or modifying public space that is underused, transforming it into a hub for community interaction. One of the projects that exemplifies this is the re-imagining of retention ponds in Manenberg, which pose a threat for drowning as well as a potential for contamination. The designers proposed to build platforms above them, which can be used as basketball courts, local farmers' markets, among other community-engaging uses. TheMAAK also collaborates with different individuals and communities to create architecture that encourages tangible and positive change. For example, to help redefine a performance studio that theMAAK is building, residents partook in the Community Curtain Project (theMAAK, 2018), and helped in the making of the curtains by sewing and knitting. Overall, theMAAK aims to enhance human agency by presenting new ways to envision spaces, self and community within spaces, and by bringing quality designs to the most needed areas (theMAAK, 2018).

Figures 8: Neighbourgoods Market in the Old Biscuit Mill (Head on down to your friendly Neighbourgoods Market, 2018).

Figure 9: The Old Biscuit Mill.

Acknowledging the significance of public spaces and placemaking, TheMAAK aspires to establish a favorable and beneficial effect as a creative industry. Through the design and implementation of various space alteration approaches, it aims to comprehend what drives people to utilize public spaces, and further promote social engagement among the diverse and rapidly gentrifying communities in the Woodstock neighborhood.

GETTING TO KNOW THE HISTORY OF WOODSTOCK

Woodstock is the oldest suburb of the Cape Town City Center. Originally known as Papendorp, named so after Dutch settler Pieter van Papendorp, the neighborhood was an agrarian society. Due to its unique location near the oceanfront and Table Mountain, the neighborhood steadily grew and eventually developed into an industrial hub in the late 1800s. Subdivisions of old farms into low cost housing was instrumental in growing the population especially during the First and Second Boer Wars when the industrial town provided much needed supplies to British Troops. Woodstock developed into an industrial hub specializing in glass, leather, textiles, and food processing (Wenz, 2012). Starting in the 1920s, the neighborhood abandoned any image of being a seaside resort as the beach was claimed to make extensions to the harbor and the railway system (Wenz, 2012).

While Woodstock managed to remain untouched by the Group Areas Act of 1950, it became socially divided into Upper and Lower Woodstock, with Lower Woodstock containing far more Coloured families than the Upper Woodstock (Garside, 1993). This stark division led to the 1986 Open Woodstock Campaign, launched to raise awareness of Lower Woodstock (Garside, 1993). Although the campaign brought no formal government intervention, it was viewed as a success because much of the population regarded Woodstock as an open town (Garside, 1993). Woodstock managed to remain "unclassified" or "grey" as local administration tended to turn a blind eye to the Coloured families that applied for official permission to live there (Garside, 1993). By the late 1980s, the suburb was declared to be a free settlement. However, by the 1990s, the local industries no longer prospered as they once had, especially with the opening of the South African market to the global economy (Wenz, 2012). Cheaper Asian imports were able to out-compete the local textile industry, and Woodstock broke down into an area of decay, crime, drug use, and poverty (Wenz, 2012).

Figure 10: Woodstock Beach (Joseph, 2014).

METHODS

This project aimed to engage with the diverse Woodstock community to develop and install temporary, community conscious, and user centered small-scale public space installations to idealize the mission of theMAAK. Figure 11 illustrates how the issues revolving around Woodstock and public space overlap to give context to our project. We accomplished our mission using the following objectives:

- Explore well-known public spaces in Cape Town to inform research in Woodstock.
- Understand how the unique cultural and social context of Woodstock influences use of public spaces while establishing community consent for the installations.
- Implement various temporary installations in Woodstock to promote engagement in its public spaces.

Figure 11: Venn diagram revealing the intersecting elements of public space in Woodstock.

As an overview of our methods, we conducted interviews with residents, business owners, and visitors, and completed activity scans of public spaces with associated photo documentation to inform the installations. We used multiple forms of media (photos and videos) to document the process of development, implementation, and public engagement with the installations. In order to assess the success and relevance of the installations, we used observations and additional media documentation.

Objective 1: Explore well-known public spaces in Cape Town to inform subsequent research in Woodstock.

Activity scans and sensory maps of public spaces in Cape Town

Detailed and structured observation and multimedia documentation of frequented and popular public spaces in Cape Town helped identify the characteristics that make established public spaces. This also helped us analyze people's interactions in these public spaces and the level of engagement with them. Using the processes of activity scans (+Studio, 2018) and sensory maps, we obtained an understanding of how a public area is used, and who uses it. This information served as a comparison point when evaluating public spaces in Woodstock.

The activity scans were performed by applying the Public Space Index, used by researcher Vikas Mehta (2014) to quantitatively evaluate public spaces. Mehta (2014) has completed extensive research regarding public spaces in Massachusetts, Florida, Baltimore, Los Angeles, and Oregon. Mehta developed criteria based on five dimensions of public spaces: inclusiveness, comfort, safety, meaningful activities, and pleasurability (see Appendix A for a detailed breakdown of the measures used). We evaluated Cape Town's known public spaces during visits in our first weeks in Cape Town. The locations of study were selected by our sponsor, theMAAK, from their personal experiences and knowledge being Cape Town residents. The places researched were Company's Garden, the Grand Parade, Mill St. Skate Park, Camps Bay Beach, and Sea Point Promenade.

Most of Mehta's criteria relies on physical aspects of the spaces, affording us the ability to assess a space at any time of the day. We chose to visit each place relative to good weather, expected peak hours, and our safety. Appendix B shows the date, time and weather of our visits. Considering our safety, we did not visit any spaces during nighttime and approximated scores for lighting after dark (based on amount of street light) and safety after dark (based on safety during the day). Given our limited time in the area, we could not repeat visits to gain a more accurate perception of the inclusivity aspect of the space at different moments in time. Consequently, we decided to not focus our attention on potential disparities in inclusiveness scores between the Cape Town and Woodstock public spaces assessed. We used Excel to store and analyze the data, transferring the scoring from Mehta's criteria to a spreadsheet. The information was organized by place and sub-category, which informed graphs that visualized our information.

In addition to activity scans, we created sensory maps of the locations of study with the purpose of gaining understanding of the atmosphere of these spaces, an aspect that could not be measured through the more quantitative activity scans. These sensory maps involved an abstract representation of the space in a digital form, exploring different senses experienced in the public spaces studied. This method provided a more sensory perspective to our research and helped us experience the spaces through different perspectives (sounds, smells, sights, feelings).

Objective 2: Understand how the unique cultural and social context of Woodstock influences use of public spaces while developing community consent for the installations.

Interactions with Woodstock residents, regular visitors, and business owners

In order to achieve an understanding of the social and cultural context of Woodstock, how the community uses public spaces, and how to gain community consent for our installations, we interacted and built relationships with Woodstock residents, regular visitors, and business owners of the neighborhood. These conversations gave us the opportunity to discuss in detail the community members' own perceptions of relevant issues. This way, the respondent was able to share meaningful insights while we were able to establish a relationship.

We used respondent driven sampling to meet new community members. Given that we are unfamiliar with the community of Woodstock, we participated in a local walking tour, where we were able to establish a connection with a key informant, our guide Zachariah Aroun (Zach). Following the guidelines on Marc-Adélard Tremblay's The Key Informant Technique: A Non-ethnographic Application (1957), an informant should have a specific role within the community and knowledge acquired from that role. Born and raised in Woodstock, Zach helped us identify key aspects and public spaces based on his experience as a community spokesperson. Using our personal judgement, we ensured he was willing to communicate with us, he could express his ideas in a clear manner, and he was unbiased; fulfilling all five Tremblay's criteria for a key informant (1957). Additionally, Zach introduced us to his father who gave his interesting opinion on Woodstock safety and South African politics.

We developed relationships with local business owners, by frequenting their establishments and having casual conversations. We interacted with people on the street while observing potential public spaces, as well as while participating in the Open Streets Woodstock event held on October 28, 2018. At the event we met a representative from the Woodstock Residence Association. She put us in contact with Rob van Zyl, local artist and resident of Upper Woodstock for 15 years. For everyone we talked to, we asked them to introduce us to others that would be interested in talking with us.

During the weeks preceding our installations, we interacted with community members so that they could become aware of our work and provide informal consent for the upcoming installations. On multiple occasions we spoke with resident Shanazz, who both resides on and operates an Airbnb on Essex Close. We recorded personal reflections to allow for easy reference to the information gained by community interactions. Conversations took place on-site (where we meet our informants) or at a community member's preferred place. We gradually made some adaptations to the major themes we touched upon aiming to make the conversations more pertinent to our objectives. Themes included:

- Community engagement
- Community issues and recent history
- Gentrification in daily life
- Community relationship between gentrifiers and gentrified
- Use and perception of current public spaces in Woodstock
- Residents' activities during free time
- Attractiveness to interactive public spaces
- Community Consent

The interactions resulted in qualitative data that served as reference for project-related decisions. Ultimately, the goal of the interactions was to establish relationships with community members and use this as a tool to obtain consent for our installations.

Activity scans and photo documentation of public space use in Woodstock

We used the same criteria (see Appendix A) from Mehta's research that we used to assess public spaces in Cape Town to perform activity scans of public spaces around the neighborhood of Woodstock, which provided a point of comparison between these spaces and the ones studied around Cape Town. This information helped us determine where to implement our public space installations. Combined with community interactions, this method helped us develop a sound framework on public space use in Woodstock and how it is affected by its unique context and history.

Different places to study were determined through line-intercept sampling, providing us with a random representation of public spaces in the Woodstock area. The line-intercept sample strategy involved drawing concentric circles on a map of Woodstock (see representational figure 12), then randomly drawing lines radiating out from the center of the circles, located at the intersection of Church Street and Victoria Road (Handwerker, as cited in Bernard, 2006). We observed the spaces at each point where the lines intercept with the circles and selected the ones with most spatial potential to perform an activity scan. We identified additional places to study based on our informant's experience in the neighborhood. The list of public spaces is as follows:

- Mountain Road and Clarence Street
- Salt River Road and Oxford Street
- Station Road and Wright Street
- Essex Street and Essex Close
- Fairview Park

For the selected public spaces, we performed activity scans and photo documentation that helped us capture as much detail as possible regarding these spaces.

Figure 12: Line-intercept sampling method in a map of Woodstock.

Using the data obtained from both activity scans and photo documentation, we created a map of Woodstock that depicted our findings in a creative way. Researcher Rasouli (2013) has used mapping of public areas to identify and portray common activities and areas used in each space. Our map served as a useful tool in selecting the best places to perform our public space installations.

The five spots were evaluated using Mehta's criteria for our activity scans. We scanned each place in the afternoon on weekdays at about 3 pm in order to keep a baseline time. The complete list of data can be found in Appendix C. Comparisons of the assessments of Cape Town and Woodstock public spaces informed our installations.

Objective 3: Implement various temporary installations in Woodstock to promote engagement in its public spaces.

Wishes for childhood installation: addressing comfort and meaningful activity

We executed our first public space installation in collaboration with another group of WPI students working with the Centre for Early Childhood Development (CECD). The other team aimed to identify relevant issues addressing childhood in South Africa. Our aim, on the other hand, was to carry out a preliminary test on Woodstock's community engagement with a public space installation, as well as to experiment with the concepts of comfort and meaningful activities, identified during activity scans as important aspects of public spaces and lacking in public spaces in Woodstock.

The event took place outside Mountain Road Primary School, on Wednesday the 7th November, 2018 from 1-3pm. The installation consisted of encouraging people on the street to write their own wish or wishes for childhood in South Africa on origami paper cranes – in reference to the Japanese legend that someone who folds one thousand paper cranes will be granted a wish by the gods. As seen in figure 13, the physical elements of the installation consisted of a metal grate where we displayed the cranes made (meaningful activity) and a bench providing comfort. The bench was made from plastic crates and a wooden board, acquired at a waste drop-off facility, as our sponsor request that all the items used for the installations were repurposed or recycled.

Figure 13: "A Wish for Childhood" public space installation.

Exploring "good" public space

Our sponsor, theMAAK, showed great interest in understanding what makes public space "good" and how we can enhance it with architecture. They encouraged us to settle upon one distinct location that could then be used to test different public space installations. These installations would consist of different built structures, each addressing one of the themes established above: meaningful activity, comfort, and pleasurability. We could then gauge which elements were most successful by observing who and how people interacted with which installation.

To effectively undertake this task, we required an area that was open and accessible to the general public as well as ourselves. The area would also need to be large enough to accommodate a variety of different installations, all of which would be of different size, shape, and purpose. Using the locations we had scouted in our line-intercept sampling, we narrowed down our options.

The corner of Essex Street and Essex Close (referred to as Essex Lot) is a large grassy area that sits at the corner of a cul-de-sac and a heavily walked road. The Essex Lot did not have any cars parked on it, allowing for plenty of space for any installation. Additionally, there was already some community use of the space, as a small food garden was already planted. The garden was the work of two of the locals, Shanazz and Leonie. As the operators of a local Airbnb, they act as the unofficial caretakers of the lot. Shanazz informed us that the land was government owned; therefore, we should have no problem setting up our installations. Some neighbors around the area were already interested in the use of the lot as a public space, which showed open potential for community engagement in the activation or renewal of the space. Overall, this was a unique large open lot that proved to fit our goals.

Figures 14-17: Essex Street and Essex Close intersection open lot.

Milk crate installations: addressing pleasurability, comfort, and meaningful activity

When considering what to build for these public space experiments, theMAAK was enthusiastic that we try to use repurposed and ecologically thoughtful materials that could be easily rearranged. Given that we did not possess any tools, our sponsor challenged us to only use plastic milk crates as our building elements. We took a visit to the local drop-off facility in Woodstock, only to find that they did not have any crates and that they do not even accept them there. In effort to maximize our time, we made a quick decision to purchase some wooden box materials (already available at the drop-off facility) to construct benches, as well as a large wooden electrical wire spool to make a table. Over the next two days we sanded, cut, nailed together, and stained the wood to make two benches (Figure 18). We brought one to Essex Square, where the neighbors Shanazz and Leonie were excited about the addition to the space. When we updated our sponsors on the change in direction, they challenged us to continue on the path of finding and using milk crates to experiment with different designs. We searched for days, traveling around to different drop-off facilities, sometimes 20 or 30 minutes away from Woodstock. We had limited luck at the dumps, so we took to the streets and asked a parking attendant, Arthur, to help us find crates. Based on this very informal system, we acquired around 20 crates. On our own, we came across 15 crates.

With our collection of milk crates, we aimed to construct different structures to address spatial elements in Essex lot. Each design was driven by achieving elements of Mehta's scale that we could control, all while focusing on the four categories of intrigue, pause, entrance, and interaction. From these categories we then determined which organization of milk crates would best embody that principle. Further, to promote public interaction with each installation, we cleaned the area of trash and mowed the overgrown grass.

After much time was spent gathering information about public spaces in Cape Town and Woodstock, as well as the context of the area with locals, we focused on how to apply our information to the plans for our installations. First, we recognized the importance of adding elements that will add higher point values to Mehta's criteria, but wanted to put thought into how to ensure the space is successful. In other words, we felt that even if we raised the score for comfort in a space by adding any random bench, it would not necessarily achieve the goal of populating the space. As such, we formulated four main themes to test different concepts in Essex Square. These four main themes were formulated in collaboration with our sponsor and aimed to align with Mehta's criteria. These ideas still contribute to raising the overall score of Mehta's criteria, yet we could test if a design with one focus elicited a different response than another. These four themes are listed and explained below:

Figure 18: Our bench made from reused wooden palets.

Figure 19: Our collection of crates before the installations.

Figure 20 illustrates each installation in this process accompanied by the intended purposes and outcomes. We documented each installation by sitting in a cafe down the street and checking on the installation every 15 minutes to monitor results.

Intrigue

Intrigue contributes to the idea that people are drawn to something due to their curiosity. Intrigue is also relevant to Mehta's criteria because it contributes to pleasurability by way of adding interestingness and attractiveness to a space.

Pyramid

The construction of a pyramid was aimed to first introduce the crates in the space in an intriguing way. This shape strived to create initial interest in what was being put in the space and why. The pyramid was dynamic in that it was more interesting to look at than a simple bench, yet it could still provide seating.

Outcome

We observed multiple people looking at the structure as they walked by. We also observed young children from the neighborhood playing on the pyramid.

Pause

The idea of pause also relates to rest, in that people can enjoy a space if there is an adequate ability to slow down and stop to do so. This directly relates to the Mehta's comfort scale by way of providing seating.

Bench

The bench aimed to achieve the purpose of constructing seating to allow people to pause and enjoy the space. The slight step design was reminiscent of stadium bleachers, which fit well with the idea that people are out to socialize with each other and watch the street and their children play.

Outcome

We observed a few individuals looking at the bench while passing past Essex Square. We also observed one young girl sitting on the bench while she played with other children outside.

Entrance

The concept of an entrance into a space defines the movement into and through the area. This structure provides a sense of enclosure, which, according to Mehta, contributes to the pleasurability of the space. In addition, having a formalized an entrance to a space can define it as a formal public space.

Arch

The arch was constructed to test how an entrance alters the movement in the space. The arch would hopefully encourage people to perceive the space as somewhere they could enter and spend time. A defined entrance could add complexity to the space that was not experienced before.

Outcome

This arch gained a lot of attention from pedestrians. At one point, a group of teens were sitting on the sides of the arch. Otherwise, it was difficult to measure how it changed perceptions about the square.

Interaction

Activity that provokes interaction brings people into a space. An interactive component can prompt longer stays in a space and an incentive to return. Interaction adds to the range of activities in the space, which raises the value of meaningful activity on Mehta's scale.

Game

The building of a game came closer to what the community saw as beneficial for the space. One of the neighbors we talked to envisioned a play area for children and a garden in the square. The interactive nature could connect users with the space in a fun way.

Outcome

The game was very successful in that many kids were playing with it for an extended period of time. Some adults also showed interest. Overall, the game installation gave the space a more active purpose.

Following the completion of our public space tests, our next goal with the Essex lot was to implement placemaking strategies to bring the community together in the activation and renewal of the space that we had originally intended to do. These placemaking strategies would help address people's needs and desires about the space through a spatial installation, all while encouraging community participation. Shanazz had shown great interest in expanding the gardening output of the area, as well as improving the condition of the lot for children to play in.

Community gardening: addressing comfort, meaningful activity, and placemaking

Our final installation consisted of us repurposing the milk crates, from the public space experiments, to be used as containers for growing herbs and vegetables. Additionally, we placed the two benches and the table we constructed to make the square more attractive to the public and provide elements of comfort. On Saturday, December 1st, 2018 at noon we held a gardening event in Essex Square (Figure 21). We asked our Woodstock Resident Association friend Rob to post on the Facebook page about our event, which attracted two people to help us. With their help, we laid the crates out in a pattern, lined them with weed blocker, filled them with potting soil, and planted a variety of vegetable plants. We planted garlic, carrots, celery, squash, peppers, oregano, thyme, and rosemary. Overall, the reception was very positive and Shanazz and Leonie were pleased with how everything turned out. We are hopeful that the garden will grow and provide food for people in the area. We also left the two benches and the table in the area, as Shanazz and Leonie expressed that they planned to cement them in the ground and eventually plant a tree nearby that will grow to provide shade.

Figure 21: Gardening event with community members in Essex Square.

FINDINGS

Good public space requires addressing combinations of Mehta's criteria, not just one element at a time

    Based on the data collected from the activity scans (as detailed in Figures 22 and 23), the Cape Town public spaces we explored have strong scores for each of Mehta's criteria. These public spaces are well populated and enjoyed by a lot of people, which is the goal of any public space. Each Cape Town public space explored scored relatively high in the categories of inclusiveness, meaningful activity, safety, comfort, and pleasurability. By contrast, Woodstock areas evaluated had significantly lower scores (by 10 points or more) in meaningful activities, comfort, and pleasurability. As the more engaging and frequented public spaces in Cape Town scored much higher in these categories, we determined that if we raised the scores in these categories for the Woodstock locations, they would become more enjoyable and used spaces. We addressed the categories of comfort and pleasurability by adding seating, making the space more attractive, and adding interest through various installations. We addressed meaningful activities by adding a range of activities including games and gardens.

	Company's Garden	Grand Parade	Sea Point Promeade	Mill St Skate Park	Camps Bay Beach
Description	Gated green area located in the city center.	A square surrounded by the Cape Town City Hall, the Castle of Good Hope and the Cape Town railway station.	A beachfront boardwalk in the Sea Point and Green Point neighborhoods.	A public, fenced, and concrete park located under an overpass.	A beach located in the wealthy neighborhood of Camps Bay.
Inclusiveness	15.8	23.4	26.4	15.8	27.4
Meaninful Activities	15	21	21	12	28
Comfort	27	17	22	17	17
Safety	19	17	26	15	19
Pleasurability	23	14.4	18.8	21.7	20.9

Figure 22: Cape Town public spaces evaluation using Mehta's criteria.

	Essex Lot	Mountain Rd	Salt River Rd	Station Rd	Fairview Park
Picture					
Description	Open, grassy lot in Lower Woodstock.	A corner located between the Woodstock Hospital and Victoria Rd.	A large corner located besides a bus stop.	A large corner located in a popular commuting route.	A public park located on Victoria Rd with Fairview Avenue.
Inclusiveness	20.2	23.8	23	24.6	19.8
Meaninful Activities	5	4	13	3	20
Comfort	5	12	13	12	15
Safety	15	18	21	17	12
Pleasurability	8	6	15.4	7	14.9

Figure 23: Woodstock public spaces evaluation using Mehta's criteria.

While exploring the four themes around our installations (pause, intrigue, interaction, and entrance) we attempted to address the elements that Woodstock was lacking (pleasurability, comfort, and meaningful activity) separately. However, after assessing each of our installations, we concluded that in trying to depict what makes "good" public space and what factors contribute to it, all aspects that make up public space are equally important and necessary. Introducing the elements individually did not provoke any major changes in the use of the public space. This means that by adding comfort (pause), for example, to a space that lacks it will not necessarily attract more people to use that space. On the contrary, it was the combination of elements that successfully "activated" the underused public space.

For example, the level of interaction and engagement with the pause installation (bench) was extremely low. We recognized that time is valuable to individuals, and if something takes precedence over that, it must be significant. Therefore, if people are willing to take the time to stop and enjoy Essex Square and make good use of the bench, then that space is successful. However, the community neighbors and commuters were not interested in sitting on the bench and socializing with others. They displayed questionable and confused looks, probably because the installation did not look appealing, thereby showing no interest in spending time at Essex Square. The bench did not include any form of activity to bring the community together or create interaction and engagement, and as a result Essex Square was not transformed or activated in a positive way.

Reconsidering our activity scan results (Figure 22), the combination of all elements in each Cape Town location is what contributed to their success as a public space. For example, in Company's Garden there is a fence around the entire space, which contributes to the safety and pleasurability of the space. However, just the fact that there is a fence is not what draws people into the space; it is the combination of these aspects, comfort elements and historical importance that make the space popular. This is also the case with the Sea Point Promenade. There are benches that line the coast and provide elements of comfort, but no one would sit on them if the view of the sea was not there to enjoy, making the area more pleasurable. The Grand Parade scored significantly higher in comfort and meaningful activities. However, its location is a major factor that contributes to its popularity as a public space. Comparing our results from the Woodstock installations with the Cape Town activity scans, we found that all aspects in a sound combination make a well-rounded and appealing public space.

Community engagement, or placemaking, is a vital element in establishing "good" public space

Based on our installation efforts within Essex Square, we realized that successful placemaking in public spaces focuses less on the physical elements presented in that space, and more on the social processes of co-constructing the space. When the community participates in the change and development of their public spaces, the space can to become more engaging and interactive, consequently yielding positive results.

We observed this with two of our installations. First, our activity scans of Cape Town public spaces (Figure 22) revealed that all locations scored high in the meaningful activity criteria, concluding that interactive elements have a heavier impact than physical elements. Community representatives in Essex Square expressed their interest in adding a play area to Essex Square. The interaction installation (game) was the most successful of the four installations attempted regarding that aspect.

The gardening event is another example of this consideration. Essex Square was already being used as a garden by one of the neighbors, and she expressed her interest in expanding this further. Incorporating her ideas and inviting the community to participate in the renewal of the space was a way of fostering engagement with the space and making it more meaningful for the community around it as they helped to generate it. Other people that did not live in the immediate surrounding area showed their support for the event and helped us in the building of this garden. In addition, despite many comments that the plants would not remain in the space overnight and would be stolen and resold, the plants were still in the space and looking healthy four days later. This showed that adding a meaningful activity to a space, and engaging with the community to do so, can encourage use and raise awareness of the space, even to those that do not usually frequent it.

Gaining community consent is crucial for installing change in public spaces

From our interactions with several members of the Woodstock community, we learned that gaining consent and understanding from neighbors is crucial for installing change in public spaces. Our tour guide, and ultimately key informant on Woodstock, Zachariah Aroum (Zach) gave us powerful insight about this. He stressed that an important issue in Woodstock currently is the gentrification that is pushing many out of their homes due to increased rent prices. The issue that many Woodstock natives have is that they were never approached or consulted about how to deal with the impending gentrification. They realize that there are benefits but are resentful of how they have no say in how the negatives will be dealt with. Zach said that consulting with the community first and asking their opinion would help us create space that is accepted by the community without resentment. Further, when meeting with a representative from the Woodstock Residents' Association, Rob Van Zyl, we learned that South Africa has become very politically charged recently over issues of land use, thus many people may see our efforts as a political stunt rather than a community conscious project.

He recalled one instance where a man attempted to grow a public food garden in a rundown lane near his house, the community did not accept his use of the property and ultimately paved over the area. Therefore, Rob recommended that we have explicit community consent and community member participation in all stages of our project.

In terms of our own experiences with installations, there are several factors that relied heavily on gaining community consent. On the most basic level, we would not have felt comfortable doing anything in Essex Square if we had not spoken to any neighbors first. Further, we would not have learned that the space was government owned, and we would not have had anywhere to store the crates overnight. Most importantly, we would not have known what the community envisioned in the space. In order to achieve placemaking as much as we could, we needed to understand what the community envisioned in the space. All these things contributed to gaining community consent and understanding, as well as the overall positive acceptance of our installations.

Public space cannot be generalized, and creating good public space requires specific contextualized considerations

Although public space is said to be a vital part of society at large, it really is an institution that is local to a specific area and to a specific group of users. Through conducting the activity scans in Cape Town and Woodstock (see Figures 22 and 23), we attempted to formulate a way to break down each area into numbers that we could then quantify. Although the numbers we gathered from Mehta's criteria were insightful, they did not give us the entire picture for every public space. Different communities view and utilize public space in different ways. This issue of generalizing public space is extremely apparent when examining Woodstock. Woodstock is a diverse neighborhood that has rapidly been gentrified over the past few years; therefore, its use of public space is going to reflect that social evolution. Comparing and contrasting the well-established public spaces in Cape Town with areas we located in Woodstock was helpful in determining what elements were missing; however, the public spaces in each neighborhood were intrinsically different.

This is also true when comparing the Cape Town spaces with each other. There is specific context for each that contributes to its success. Sea Point Promenade, for example, sits in a particularly affluent area surrounded by upscale restaurants, parks, and a golf course. These features are naturally going to affect who uses the promenade and will therefore ultimately change its social standing as a public space. In contrast, the Grand Parade sits in the heart of Cape Town, making it a passageway for many who walk through the city center. However, its popularity and attractiveness to businesses would not be the same if it was a similar square located in a residential neighborhood. Similarly, Company's Garden provides a green, comfortable area near numerous museums and government buildings in the city center. Besides its built elements, its location and historical importance impact significantly on its popularity among locals and tourists. Camps Bay beach owes much its fame to the location's natural beauty. Mill St. Skate Park is located under an overpass that provides shade during the day, so its use cannot be compared to other random skate parks. Even though all five of these public spaces are found in Cape Town, they cannot easily be compared as they each possess unique qualities that distinguish them.

Many aspects that influenced the outcome of our project are due to the uniqueness of Essex Square. For example, simply mowing the grass and picking up the trash had a very large impact on the area regarding its appearance and accessibility. The space looked more attractive, interesting, and inviting. Also, as soon as we completed our cleanup process, the neighborhood children quickly began interacting within the space by running and playing around freely, since there was nothing left to inhibit their movements. Discussions with Shanazz helped us learn more about the community and its inhabitants and become more comfortable within the space itself. She was also there to support us every step of the way, be it by allowing us to leave our crates at her mother's house or by storing our wooden bench at her house once we finished working in Essex for the day. Furthermore, speaking with Shanazz and Leonie, who had already started their own public space gardening efforts, gave us an idea of what direction the project could go. The fact that Essex was an area that was not completely abandoned, but instead one that they had worked on and wanted to continue cultivating, encouraged us to carry on with our plans and proceed in making significant improvements to the area.

Additional considerations and next steps

After reflecting about the entire project, we identified three primary limitations in our approach. First, we only experimented in one area of Woodstock instead of several different areas, given our time limitation. As such, we feel that the strategies we employed to address considerations of comfort, pleasurability, and meaningful activities would not necessarily be successful in other areas. However, we also feel that areas are unique and efforts to evoke use need to be just as unique and contextualized. Second, our approach to monitoring use of the installations was intermittent. We could not sit on the street the entire day to assess who interacted with them in fear that our foreign presence would suppress natural reactions. Our intermittent (every 15 minutes) checks on the space could have missed some observations during the day. Ideally, there would have been a place to set up a camera to record a video to make sure we had footage of everything. Finally, people became more accustomed to our presence in Essex Square the longer we engaged with the space. As such, it is possible that community members interacted more with the installations presented by the end of the week because everyone was beginning to understand what we were doing and why. The neighborhood is also made up of a lot of young children, so this may have affected how successful some installations were, because the children were more attracted to certain installations over others. For example, the game installation drew a lot of attention, and prompted them to interact and engage with it, allowing them to stay in the space longer. Meanwhile, the bench installation (presented early in the week) did not peak any interest and generated no interaction.

Our various trials and tribulations with our installations helped us understand just how difficult it is to effectively change public space. There is no "one size fits all" approach that lets us improve all areas we wish. Public space is going to be irregular by nature; therefore, the process of altering the public space will be irregular as well. So many elements gave Essex square its context, and it is this context that makes its transformation one of a kind. This type of distinction leads to the conclusion that public space cannot be fully generalized without losing vital context. This main conclusion also fits in with the rest of our findings, that community consent is vital in any public space project, spatial elements are not successful on their own, and placemaking and community interaction are really what contribute to the positive cultivation of public spaces.

The five of us have learned so much over the course of this project on a personal level. We want to extend a special thank you to Max and Ashleigh of theMAAK, who gave us the incredible opportunity to work in Woodstock and think about public space and architecture in a new way. Also, we feel indebted to the Woodstock community, who welcomed us into the neighborhood with open arms.

ACKNOWLEDGEMENTS

APPENDICES

Appendix A - Activity scans criteria from Mehta (2014).

Aspect of public space	Variables	Weight	Scoring criteria	Measuring criteria
Inclusiveness	Presence of people of diverse ages	0.4	0 = very limited 1 = low 2 = medium 3 = high	Determined by observations using counts
	Presence of people of different genders	0.4	0 = very limited 1 = low 2 = medium 3 = high	Determined by observations using counts
	Presence of people of diverse classes	0.4	0 = very limited 1 = low 2 = medium 3 = high	Determined by observations using counts
	Presence of people of diverse races	0.4	0 = very limited 1 = low 2 = medium 3 = high	Determined by observations using counts
	Presence of people with diverse physical abilities	0.4	0 = very limited 1 = low 2 = medium 3 = high	Determined by observations using counts
	Control of entrance to public space: presence of lockable gates, fences, etc.	1.0	3 = none 2 = low 1 = medium 0 = high	Determined by observations
	Range of activities and behaviors	1.0	0 = very limited 1 = low 2 = medium 3 = high	Determined by observations using count of activities, behaviors, postures
	Opening hours of public space	1.0	0 = very limited <10 hrs. 1 = open at least 10 hrs. 2 = open most hours 3 = no restrictions	Determined by signs indicating such and/or security guards, guides, etc. asking people to leave
	Presence of posted signs to exclude certain people or behaviors	1.0	3 = none 2 = somewhat 1 = moderately 0 = very much	Determined by number of signs, their location, size and the verbiage
	Presence of surveillance cameras, security guards, guides, ushers, etc.	1.0	3 = not at all 2 = somewhat 1 = moderately 0 = very much	User's subjective rating
	Perceived openness and accessibility	2.0	0 = not at all	User's subjective rating

			1 = some parts/at some time 2 = mostly 3 = completely	
	Perceived ability to conduct and participate in activities and events in space	1.0	0 = cannot in most 1 = only in some/at some time 2 = in many 3 = in almost all/all	User's subjective rating
Sub-total		10	30 (maximum)	
Meaningful Activities	Presence of community-gathering third places	2.0	0 = none 1 = one 2 = two 3 = few	Determined by observations of businesses and other specific places that act as community gathering places
	Range of activities and behaviors	1.0	0 = very limited 1 = low 2 = medium 3 = high	Determined by observations using count of activities, behaviors, postures
	Space flexibility to suit user needs	1.0	0 = none 1 = somewhat flexible 2 = moderately flexible 3 = very flexible	User's subjective rating*
	Availability of food within or at the edges of the space	2.0	0 = none 1 = one 2 = two 3 = several	Determined by observations using counts
	Variety of businesses and other uses at the edges of the space	1.0	0 = none 1 = very little 2 = moderate 3 = high	Determined by observations using counts
	Perceived suitability of space layout and design to activities and behavior	2.0	0 = not suitable at all 1 = somewhat suitable 2 = moderately suitable 3 = very suitable	User's subjective rating
	Perceived usefulness of businesses and other uses	1.0	0 = not at all 1 = somewhat 2 = moderately 3 = very much	User's subjective rating
Sub-total		10	30 (maximum)	

Comfort	Places to sit without paying for goods and services	2.0	0 = none 1 = few 2 = several in some parts of space 3 = several in many parts of space	Determined by observations using counts
	Seating provided by businesses	1.0	0 = none 1 = few 2 = several in some parts of space 3 = several in many parts of space	Determined by observations doing counts
	Other furniture and artifacts in the space	1.0	0 = none 1 = few 2 = several in some parts of space 3 = several in many parts of space	Determined by observations using counts
	Climatic comfort of the space - shade and shelter	2.0	0 = not comfortable 1 = somewhat comfortable in some parts of space 2 = comfortable in some parts of space 3 = comfortable in most of the space	Determined by observations
	Design elements discouraging use of public space	1.0	3 = none 2 = 1 or 2 1 = few 0 = several	Determined by observations
	Perceived physical condition and maintenance appropriate for the space	2.0	0 = not at all 1 = somewhat 2 = mostly 3 = very much	User's subjective rating
	Perceived nuisance noise from traffic or otherwise	1.0	3 = none 2 = very little 1 = moderate 0 = high	User's subjective rating
Sub-total		10	30 (maximum)	
Safety	Visual and physical connection and openness to adjacent street/s or spaces	1.0	0 = almost none/very poor 1 = somewhat tentative 2 = moderately well connected 3 = very well	Determined by observations

	Physical condition and maintenance appropriate for the space	1.0	0 = not at all 1 = somewhat 2 = mostly 3 = very much	Determined by observations
	Lighting quality in space after dark	1.0	0 = very poor 1 = many parts not well lit 2 = mostly well lit 3 = very well lit	Determined by observations
	Perceived safety from presence of surveillance cameras, security guards, guides, ushers, etc. providing safety	1.0	3 = very much provide a sense of safety 2 = provides some sense of safety 1 = not at all 0 = feel unsafe	User's subjective rating
	Perceived safety from crime during daytime	2.0	0 = not safe at all 1 = somewhat unsafe 2 = mostly safe 3 = very safe	User's subjective rating
	Perceived safety from crime after dark	2.0	0 = not safe at all 1 = somewhat unsafe 2 = mostly safe 3 = very safe	User's subjective rating
	Perceived safety from traffic	2.0	0 = not safe at all 1 = somewhat unsafe 2 = mostly safe 3 = very safe	User's subjective rating
Sub-total		10	30 (maximum)	
Pleasurability (for street)	Presence of memorable architectural or landscape features (imageability)	1.0	0 = none 1 = very few 2 = moderate 3 = several	Determined by observations
	Sense of enclosure	1.0	0 = very poor sense of enclosure 1 = moderately well enclosed 2 = good sense of enclosure 3 = very good sense of enclosure	Determined by observations
	Permeability of building facades on the street front	1.0	0 = not at all 1 = some parts somewhat permeable 2 = moderate permeability	Determined by observations

			3 = very permeable all along	
	Personalization of the buildings on the street front	1.0	0 = not at all 1 = some parts somewhat personalized 2 = moderate personalization 3 = very personalized all along	Determined by observations
	Articulation and variety in architectural features of building facades on the street front	1.0	0 = poor articulation and variety 1 = somewhat articulated 2 = moderate articulation 3 = very well-articulated	Determined by observations
	Density of elements on sidewalk/streets providing sensory complexity	1.0	0 = none or very few 1 = few 2 = moderate 3 = high	Determined by observations using counts
	Variety of elements on sidewalk/street providing sensory complexity	1.0	0 = none or very few 1 = few 2 = moderate 3 = high	Determined by observations using counts
	Perceived attractiveness of space	2.0	0 = not at all 1 = somewhat 2 = moderate 3 = very much	User's subjective rating
	Perceived interestingness of space	1.0	0 = not at all 1 = somewhat 2 = moderate 3 = very much	User's subjective rating
Sub-total		10	30 (maximum)	
Pleasurability (for detached plaza, square, park)	Presence of memorable architectural or landscape features (imageability)	1.0	0 = none 1 = very few 2 = moderate 3 = several	Determined by observations
	Sense of enclosure	1.0	0 = very poor sense of enclosure 1 = moderately well enclosed 2 = good sense of enclosure	Determined by observations

			3 = very good sense of enclosure	
	Variety of subspaces	1.0	0 = none 1 = very few 2 = moderate 3 = several	Determined by observations using counts
	Density of elements on sidewalk/streets providing sensory complexity	1.0	0 = none or very few 1 = few 2 = moderate 3 = high	Determined by observations using counts
	Variety of elements on sidewalk/street providing sensory complexity	1.0	0 = none or very few 1 = few 2 = moderate 3 = high	Determined by observations using counts
	Design elements providing focal points	1.0	0 = none 1 = one 2 = two 3 = several	Determined by observations using counts
	Visual and physical connection and openness to adjacent street/s or spaces	1.0	0 = almost none or very poor 1 = somewhat tentative 2 = moderately well connected 3 = very well connected	Determined by observations
	Perceived attractiveness of space	2.0	0 = not at all 1 = somewhat 2 = moderate 3 = very much	User's subjective rating
	Perceived interestingness of space	1.0	0 = not at all 1 = somewhat 2 = moderate 3 = very much	User's subjective rating
Sub-total		10	30 (maximum)	
Pleasurability (for attached plaza, square, park)	Presence of memorable architectural or landscape features (imageability)	0.7	0 = none 1 = very few 2 = moderate 3 = several	Determined by observations
	Sense of enclosure	0.7	0 = very poor sense of enclosure 1 = moderately well enclosed 2 = good sense of enclosure 3 = very good sense of enclosure	Determined by observations

	Variety of subspaces	0.7	0 = none 1 = very few 2 = moderate 3 = several	Determined by observations using counts
	Density of elements on sidewalk/streets providing sensory complexity	0.7	0 = none or very few 1 = few 2 = moderate 3 = high	Determined by observations using counts
	Variety of elements on sidewalk/street providing sensory complexity	0.7	0 = none or very few 1 = few 2 = moderate 3 = high	Determined by observations using counts
	Design elements providing focal points	0.7	0 = none 1 = one 2 = two 3 = several	Determined by observations using counts
	Visual and physical connection and openness to adjacent street/s or spaces	0.7	0 = almost none or very poor 1 = somewhat tentative 2 = moderately well connected 3 = very well connected	Determined by observations
	Permeability of building facades on the street front	0.7	0 = not at all 1 = some part somewhat permeable 2 = moderate permeability 3 = very permeable all along	Determined by observations
	Personalization of the buildings on the street front	0.7	0 = not at all 1 = some parts somewhat personalized 2 = moderate personalization 3 = very personalized all along	Determined by observations
	Articulation and variety in architectural features of building facades on the street front	0.7	0 = poor articulation and variety 1 = somewhat articulated 2 = moderate articulation 3 = very well-articulated	Determined by observations

	Perceived attractiveness of space	2.0	0 = not at all 1 = somewhat 2 = moderate 3 = very much	User's subjective rating
	Perceived interestingness of space	1.0	0 = not at all 1 = somewhat 2 = moderate 3 = very much	User's subjective rating
Sub-total		10	30 (maximum)	

Public Space	Day of the week	Date	Time	Weather
Company's Garden	Friday	Nov 2, 2018	12 pm	Sunny
Grand Parade	Friday	Nov 2, 2018	1 pm	Sunny
Sea Point Promenade	Friday	Nov 2, 2018	5 pm	Sunny
Mill Street Skatepark	Thursday	Nov 8, 2018	3 pm	Sunny
Camps Bay Beach	Friday	Nov 9, 2018	3 pm	Sunny

Appendix C - Activity scans results

Cape Town locations

Criteria	Company's Garden		Grand Parade		Sea Point Promenade	
	Score	Weighted	Score	Weighted	Score	Weighted
Inclusiveness						
Diverse ages	3	1.2	2	0.8	3	1.2
Different genders	3	1.2	3	1.2	3	1.2
Diverse classes	2	0.8	2	0.8	1	0.4
Diverse races	2	0.8	2	0.8	1	0.4
Diverse physical capabilities	2	0.8	2	0.8	3	1.2
Control of entrance	0	0	3	3	3	3
Range of activities and behaviors	1	1	1	1	2	2
Opening hours	1	1	3	3	3	3
Presence of posted signs	3	3	3	3	3	3
Presence of cameras	2	2	1	1	3	3
Perceived openness	1	2	3	6	3	6
Ability to conduct activities	2	2	2	2	2	2
Sub-total		15.8		23.4		26.4
Meaningful Activities						
Community gathering	1	2	1	2	1	2
Range of activities and behaviors	1	1	1	1	2	2
Space flexibility	2	2	2	2	2	2
Availability of food	1	2	3	6	2	4
Variety of businesses	1	1	3	3	3	3
Perceived suitability of space	2	4	2	4	3	6
Perceived usefulness of businesses	3	3	3	3	2	2
Sub-total		15		21		21
Comfort						

Places to sit without paying	3	6	2	4	3	6
Seating provided by businesses	2	2	0	0	1	1
Other furniture	2	2	2	2	3	3
Climatic comfort	3	6	1	2	1	2
Design elements discouraging use	3	3	3	3	2	2
Perceived physical condition	3	6	3	6	3	6
Perceived nuisance from traffic	2	2	0	0	2	2
Sub-total		27		17		22
Safety						
Connection to adjacent streets	1	1	3	3	3	3
Physical condition and maintenance	3	3	3	3	3	3
Lighting after dark	1	1	1	1	3	3
Safety from cameras and guards	2	2	2	2	1	1
Safety during daytime	3	6	1	2	3	6
Safety during night	0	0	0	0	2	4
Safety from traffic	3	6	3	6	3	6
Sub-total		19		17		26
Pleasurability (Attached Square)						
Memorable architecture	3	2.1	3	2.1	3	2.1
Sense of enclosure	3	2.1	0	0	0	0
Variety of subspaces	3	2.1	0	0	2	1.4
Density of elements	3	2.1	1	0.7	1	0.7
Variety of elements	3	2.1	2	1.4	2	1.4
Design elements with focal points	3	2.1	0	0	1	0.7
Connection to adjacent streets	2	1.4	3	2.1	3	2.1
Permeability of building facades	0	0	1	0.7	0	0
Personalization of buildings	0	0	0	0	1	0.7
Articulation and variety of architecture	0	0	2	1.4	1	0.7

Attractiveness	3	6	2	4	3	6
Interestingness	3	3	2	2	3	3
Sub-total		23		14.4		18.8
Average Score		19.96		18.56		22.84

Criteria	Sea Point Promenade		Mill Street Skate Park	
	Score	Weighted	Score	Weighted
Inclusiveness				
Diverse ages	3	1.2	0	0
Different genders	3	1.2	0	0
Diverse classes	1	0.4	0	0
Diverse races	1	0.4	2	0.8
Diverse physical capabilities	3	1.2	0	0
Control of entrance	3	3	0	0
Range of activities and behaviors	2	2	0	0
Opening hours	3	3	2	2
Presence of posted signs	3	3	3	3
Presence of cameras	3	3	3	3
Perceived openness	3	6	2	4
Ability to conduct activities	2	2	3	3
Sub-total		26.4		15.8
Meaningful Activities				
Community gathering	1	2	1	2
Range of activities and behaviors	2	2	0	0
Space flexibility	2	2	2	2
Availability of food	2	4	0	0
Variety of businesses	3	3	1	1
Perceived suitability of space	3	6	3	6
Perceived usefulness of businesses	2	2	1	1

Sub-total		21		12
Comfort				
Places to sit without paying	3	6	3	6
Seating provided by businesses	1	1	0	0
Other furniture	3	3	3	3
Climatic comfort	1	2	3	6
Design elements discouraging use	2	2	0	0
Perceived physical condition	3	6	1	2
Perceived nuisance from traffic	2	2	0	0
Sub-total		22		17
Safety				
Connection to adjacent streets	3	3	3	3
Physical condition and maintenance	3	3	2	2
Lighting after dark	3	3	0	0
Safety from cameras and guards	1	1	0	0
Safety during daytime	3	6	2	4
Safety during night	2	4	1	2
Safety from traffic	3	6	2	4
Sub-total		26		15
Pleasurability (Attached Square)				
Memorable Architecture	3	2.1	3	2.1
Memorable architecture	0	0	3	2.1
Sense of enclosure	2	1.4	0	0
Variety of subspaces	1	0.7	3	2.1
Density of elements	2	1.4	3	2.1
Variety of elements	1	0.7	2	1.4
Design elements with focal points	3	2.1	3	2.1
Connection to adjacent streets	0	0	1	0.7

Permeability of building facades	1	0.7	1	0.7
Personalization of buildings	1	0.7	2	1.4
Articulation and variety of architecture	3	6	2	4
Attractiveness	3	3	3	3
Sub-total		18.8		21.7
Average Score		22.84		16.3

Woodstock locations

Criteria	Essex Sq.		Fairview Park		Salt River Rd.	
	Score	Weighted	Score	Weighted	Score	Weighted
Inclusiveness						
Diverse ages	3	1.2	2	0.8	2	0.8
Different genders	3	1.2	2	0.8	3	1.2
Diverse classes	0	0	1	0.4	1	0.4
Diverse races	0	0	0	0	1	0.4
Diverse physical capabilities	2	0.8	2	0.8	2	0.8
Control of entrance	3	3	1	1	3	3
Range of activities and behaviors	0	0	1	1	1	1
Opening hours	3	3	2	2	3	3
Presence of posted signs	3	3	2	2	3	3
Presence of cameras	3	3	3	3	2	2
Perceived openness	2	4	3	6	3	6
Ability to conduct activities	1	1	2	2	3	3
Sub-total		20.2		19.8		24.6
Meaningful Activities						
Community gathering	1	2	2	4	0	0
Range of activities and behaviors	0	0	2	2	1	1
Space flexibility	0	0	1	1	1	1

Availability of food	0	0	2	4	0	0
Variety of businesses	0	0	2	2	1	1
Perceived suitability of space	1	2	2	4	0	0
Perceived usefulness of businesses	1	1	3	3	0	0
Sub-total		5		20		3
Comfort						
Places to sit without paying	0	0	2	4	0	0
Seating provided by businesses	0	0	1	1	0	0
Other furniture	0	0	1	1	0	0
Climatic comfort	0	0	2	4	2	4
Design elements discouraging use	3	3	1	1	3	3
Perceived physical condition	0	0	2	4	2	4
Perceived nuisance from traffic	2	2	0	0	1	1
Sub-total		5		15		12
Safety						
Connection to adjacent streets	2	2	3	3	3	3
Physical condition and maintenance	1	1	2	2	2	2
Lighting after dark	2	2	1	1	2	2
Safety from cameras and guards	0	0	0	0	2	2
Safety during daytime	2	4	1	2	2	4
Safety during night	0	0	0	0	0	0
Safety from traffic	3	6	2	4	2	4
Sub-total		15		12		17
Pleasurability (Attached Square)						
Memorable architecture	3	2.1	3	2.1	2	1.4
Sense of enclosure	1	0.7	1	0.7	0	0
Variety of subspaces	0	0	2	1.4	0	0
Density of elements	0	0	1	0.7	2	1.4

Criteria	Score	Weighted	Score	Weighted	Score	Weighted
Variety of elements	0	0	1	0.7	1	0.7
Design elements with focal points	0	0	2	1.4	0	0
Connection to adjacent streets	3	2.1	2	1.4	3	2.1
Permeability of building facades	0	0	1	0.7	0	0
Personalization of buildings	2	1.4	2	1.4	2	1.4
Articulation and variety of architecture	1	0.7	2	1.4	2	1.4
Attractiveness	0	0	1	2	2	4
Interestingness	1	1	1	1	3	3
Sub-total		8		14.9		15.4
Average Score		11.04		16.34		12.72

Criteria	Mountain Rd.		Station Rd.	
	Score	Weighted	Score	Weighted
Inclusiveness				
Diverse ages	3	1.2	2	0.8
Different genders	3	1.2	3	1.2
Diverse classes	2	0.8	1	0.4
Diverse races	2	0.8	2	0.8
Diverse physical capabilities	2	0.8	2	0.8
Control of entrance	3	3	3	3
Range of activities and behaviors	1	1	1	1
Opening hours	3	3	3	3
Presence of posted signs	3	3	3	3
Presence of cameras	3	3	2	2
Perceived openness	3	6	3	6
Ability to conduct activities	0	0	1	1
Sub-total		23.8		23
Meaningful Activities				
Community gathering	0	0	0	0

Range of activities and behaviors	0	0	1	1
Space flexibility	1	1	1	1
Availability of food	0	0	3	6
Variety of businesses	1	1	3	3
Perceived suitability of space	1	2	1	2
Perceived usefulness of businesses	0	0	0	0
Sub-total		4		13
Comfort				
Places to sit without paying	0	0	0	0
Seating provided by businesses	0	0	0	0
Other furniture	0	0	2	2
Climatic comfort	1	2	1	2
Design elements discouraging use	3	3	3	3
Perceived physical condition	3	6	3	6
Perceived nuisance from traffic	1	1	0	0
Sub-total		12		13
Safety				
Connection to adjacent streets	3	3	3	3
Physical condition and maintenance	3	3	3	3
Lighting after dark	2	2	2	2
Safety from cameras and guards	0	0	1	1
Safety during daytime	2	4	2	4
Safety during night	1	2	1	2
Safety from traffic	2	4	3	6
Sub-total		18		21
Pleasurability (Street)				
Memorable architecture	1	1	0	0
Sense of enclosure	0	0	1	1

Permeability of building facades	0	0	0	0
Personalization of buildings	1	1	2	2
Articulation and variety of architecture	1	1	0	0
Density of elements	1	1	1	1
Variety of elements	1	1	1	1
Attractiveness	0	0	0	0
Interestingness	1	1	2	2
Sub-total		6		7
Average Score		12.76		16.66

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