

**The Democratization of Public Space:
Anti-Monumentalism Through an Augmented Reality Based Mobile App**

Pooyan Alizadeh

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By: **Pooyan Alizadeh**

Entitled: **The Democratization of Public Space: Anti-Monumentalism Through an Augmented Reality Based Mobile App**

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Signed by the final examining committee:

_____ Examiner
M. Wright

_____ Examiner
Dr. Martin Racine

_____ Thesis Supervisor
Dr. Carmela Cucuzzella

Approved by _____
Dr. Martin Racine, Graduate Program Director

Annie Gérin, Dean, Faculty of fine arts

Date: **25 August, 2020**

ABSTRACT

The Democratization of Public Space: Anti-Monumentalism Through an Augmented Reality Based Mobile App

Pooyan Alizadeh

Nowadays, the role of monuments in public space is a matter of controversy around the world. While public space is being reshaped by social movements worldwide, digital rights to the city raise questions about physical spaces and address them through the digital realm. The purpose of this research-creation project is to examine the possibilities of Augmented Reality (AR) as a platform made for expression and speculation in public space. Critical and speculative design methods are used to foster engagement by examining the capacity of social and cultural movements to produce democracy in public space. Through this research-creation process, qualitative data is used to investigate the capabilities of Augmented Reality as a participatory medium, and Anti-monumentalism as a gradual response concerning the city and memories is explained. Consequently, each stage of this dissertation tries to unveil a particular aspect of the central phenomenon that could form a multifaceted online platform that amplifies the unheard voices of the city. In this framing, decision-making is no longer a one-way relationship, where information is produced and spread by responsible authorities but could be redefined more collaboratively through active engagement.

Keywords: right to the city, public space, social engagement, critical and speculative design, anti-monumentalism, augmented reality

to my parents

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Chapter 1: Introduction

Presently, the roles of monuments in public space are a matter of controversy around the world. Monuments reflect both the values and the power structure of a community, and ironically, they can disconnect us from history. “They can anesthetize us rather than deeply connect us to the past” (Hisour, 2019). Recent acts of anti-monumentalism around the globe challenge the way monuments and memorials remind us of the past. Anti-monuments invite us into their message to cause reflection or interpretation of the past.

A plethora of innovative technologies are being examined as a means to empower people to become active in shaping their urban environment, fostering relationships with their city, and collaboratively addressing shared urban problems. In his paper, *Owning the City: New media and citizen engagement in urban design*, Lange (2013) proposes the concept of ownership as a lens "to take a substitute look at the role of urban new media in the city." If our cities are now digital and material, then the struggle for more equal rights to the city" must move beyond a sole focus on material spaces and into the digital realm" (Shaw, 2017). Digital Rights to the City helps us investigate how the Internet allows citizens to participate, organize, and act upon urban topics.

Recently, we have seen moments in which there are significant issues that shake peoples' lives, no official capacity to manage the problem arising from these issues; people take the matter into their own hands. A wave of internet-based social movements started in Iceland in January 2009, and then intensified from December 2010 in Arab countries. The motives and outcomes of these movements are very diverse. As another example, recent #Blacklivesmatter movements in the US are pointing out the urgent need to respond to this subject matter. Started by the death of George Floyd in June 2020, online demonstrations commenced on the street. Eventually, the monuments that reminded protestors of racializing and slavery were protested or even taken down (Elliott, 2020). As a repeating pattern in all these movements, the people have revolted for economic reasons, social reasons, and rejecting the political arrogance of the elites. As one of our newest achievements in communication technology, social media can bring social change.

As Manuel Castells puts it, "if we would have one law in human nature, is that wherever there is domination, there is resistance to domination; that is in fact how societies have evolved, fortunately" (Stalder, 2008). The transformation of communication technology "is fundamental for the transformation of communication" and, therefore, "the connection of human relationships themselves and then society as a whole. That is why the Internet is essential... Of course, to start with and then develop in different forms”

(Stalder, 2008). The challenge of our age is taking place through social movements that always are based on internet networks.

For example, advocates of an Obama-era plan to put abolitionist Harriet Tubman on the \$20 bill were disappointed by the news that the Treasury Department has delayed the bill's redesign. Nevertheless, critical artist Dano Wall chose not to wait for the Trump administration to honor the Underground Railroad hero. As a result, he has created a "stamp that can be used to superimpose Tubman's image over President Andrew Jackson's portrait" (Romine, 2019). The intent was to get Tubman on the bill as soon as possible through the Internet. With the same analogy, Augmented Reality (AR) can be used in public space with an approach to complement the surrounding with more capabilities and freedom of choice. With its spatial features, Augmented Reality could act as a medium to address obstacles regarding public space.

AR can support quality assurance in planning processes and expand the range of means offered to support participation. Augmented Reality has the political and social capacity to channel social movements. Even though the social rights movements on the Internet are thriving more than ever, very few empirical research has been conducted on Augmented Reality's possibilities for social change from a critical design perspective. The use of immersive technologies to enable and channel the Right to the City movements are especially understudied.

Like other emerging technologies, early research surrounding Augmented Reality has focused almost exclusively on "technological development efforts, most notably the tracking, user interaction, calibration and registration, and display techniques" (Zhou et al., 2008). Innovations through smartphones raise new chances for the creation of place, by "allowing people to re-encounter everyday space and understand the structure of those settings" (Dourish, 2006). By examining AR as a tool to assist the decision-making process eventually policies could be improved. However, the social possibilities that this medium could bring to the urban realm is experiencing a deficiency.

The purpose of this exploratory study is to examine the possibilities of Augmented Reality (AR) as an essence for a platform made for debate and expression in public space. In this research, we focus on monuments as the most controversial colonial legacies in urban space. Anti-monumentalism will generally be defined as an action that "rejects the notion of a monument developed from an elitist point of view as an emblem of power" (Lozano-Hemmer, 2002). Anti-monumentalism attempts to address centuries of emotional and physical damage inflicted on individuals and settler colonialism through the removal or re-presentation of colonizers. Such social movements are identified as cultural movements, subsequently focusing on the cultural values of society. With the support of the theoretical framework, this research-creation is an attempt to explore the political and social potentials of a mobile AR app to channel the Right to the City through anti-monumentalism.

Overview of chapters

Chapter two will explore existing theoretical frameworks regarding the Right to the City as the framework to address the demand for the democratization of public space. Then we will move on to the next framework Digital Rights to the City and Online Social Movements and their profound motives, functions, and possibilities. The next section focuses on the possibilities of Augmented Reality as a platform to increase social engagement.

In chapter three, I will introduce the methodology and the logic for the choice of methods. To reflect upon the hypothesis's feasibility, I chose reflection-on-action proposed by Donald Schön in *The Reflective Practitioner* (1983). Within the framework of Critical Design, I will position myself in the process and the core values of design to provoke speculation and debate. The methodology is constructed in four main parts: literature review, case studies, participatory workshops, and prototyping. Qualitative methodologies will convey most data collection; however, to make the findings discussed more thoroughly, some quantitative outcomes will be reflected in forms of diagrams, graphs, and charts.

Chapter four consists of the speculations generated through the reflections on the process. The relation between city and memory and the act of monumentalizing is examined concerning citizens' social rights. In this chapter, the central concept, anti-monumentalism, is reviewed and demonstrated. Recent movements around controversial monuments will be elaborated to bring insights into the process of making. Chapter five will focus on different prototyping stages, including explorations through making following observations upon each project. Therefore each project is organized by reviewing the process and then reflections, which affected the subsequent prototypes. This chapter consists of five stages of the design-creation, respectively, *Transparent Toolkit*, *Augmentist*, *the Portal*, and two versions of *the PerspectivesApp*. Finally, in Chapter six, this research concludes with some overall insights from the process and realizes the project's counterproductive outputs and future steps.

Chapter 2: Technology as a means to Right to the City

This chapter contains the main theoretical discussions of the Right to the city and its digital implications that foster social engagement. The interdisciplinary theoretical framework of this research-creation falls into the following main themes: **Right to the City**, **Digital Right to the City**, **Online Social Movements**, and **Implications of AR for Social Engagement**. The Right to the city contextualizes this concept's unique value to invite citizens to address inequities and injustices of urban capitalism. Later online social movements are explored, to magnify the role of the internet as a critical transformation of communication between people. Next, implications of AR for social engagement explores how Augmented

Reality could enable social engagement. Nonetheless, the literature review of this project includes a diverse range of references, including, but not limited to, books, chapters, journal and magazine articles, interviews, dissertations, corporate and academic websites and blogs, and documented design projects.

Right to the City

“The right to the city is like a cry and a demand.” (Lefebvre, 1968)

In his book *Le Droit à la Ville* (1968), Henri Lefebvre proposed The Right to the City, which has been reclaimed more recently by social movements that demand to regenerate the city as a co-created space. He built his concept around the concept that "citizens should not just have the right to occupy and use space, but that space should be shaped according to its inhabitants' needs" (Purcell, 2002). In his original concept, Lefebvre gave particular weight to the effects that capitalism had over the city, whereby urban life was transformed into a commodity, social interaction became increasingly abolished, and urban space was turned into exclusive assets. In an adversary response to this trend, Lefebvre called to convert urban space into "a meeting point for building collective life" (Swing, 2018). In other words, the Right to the City is a moralistic claim, founded on essential principles of equity, and is a direct manifest to the inequities and injustices of urban capitalism and neoliberalism.

Nowadays, the right to the city is often demanded by activists who hope to make the city more spatially equal. The term is usually understood in a liberal way, as a request to add a right to the city to the list of individual rights that the government already guaranteed. However, the Right to the City that was conceived in France in the 1960s, in the work of Henri Lefebvre, was a far more radical idea. This concept was for citizens "to rise up, become active, and decide to take control of their affairs" (Purcell, 2002). It suggested that citizens could regain their bonds with the city, in all domains of life by collaboratively addressing shared urban problems. This includes citizens holding a set of relevant rights, such as "the right to information, [...], the right of expression, the right to culture, the right to identity indifference and inequality, the right to self-management, the right to public and non-public services", as well as the right to "occupy public spaces, the right to free movement, the right to gather, and the right to political representation and to vote." As such, the Right to the City includes the right of all city dwellers to fully appreciate urban life with all of its settings and advantages, and the right to participation (Fernandes, 2007).

Don Mitchell has written broadly on the subject of public space and its relation to democracy, by applying Henri Lefebvre's notion of the Right to the City. He asserts that the sense of democracy requires systemic change in the underlying political economy, so that, "the use-value that is the necessary bedrock of urban life would finally be wrenched free from its domination by exchange-value" (Mitchell, 2003). In

other words, seeking the Right to the City suggests creating cities that are "not rooted in and driven-by capitalism" (Mitchell, 2003). The Right to the city is "the right to wrest the city's use from the privileged new masters and democratize its space. It is the right of "the distressed, and the alienated to demand and receive the material (e.g., a living wage, shelter) and non-material (e.g., recognition, respect, dignity) necessities of life" (Marcuse, 2012). In Lefebvre's terms, the Right to the city is not about inclusion in a structurally unequal and exploitative system, but about democratizing cities at their decision-making stages. "The freedom to make and remake our cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights" (McCartney, 2018).

For example, Michael Rakowitz, in 1998 in the US, designed inflatable, mobile, heated homeless shelters, called *paraSITE*. (Figure 1) This project proposed to "take advantage of the exterior ventilation systems on existing architecture to create temporary shelter for the homeless" (Ericson et al.,2011). The material included plastic bags, polyethylene tubing, hooks, and tapes, and the flattened structure is light and compact enough to be carried on one's back. An intake tube can be connected to outtake tubes of a building's HVAC system, and "the warm air leaving the building inflates and heats the membrane structure" (Ericson et al.,2011). In more than ten years, thirty prototypes of the *paraSITE* shelter got built and distributed to homeless individuals in New York, Boston, Cambridge, and Baltimore. The purpose of these shelters was to refuse to surrender and protest against authorities seeking to make their cities homeless-proof. They made visible and legitimized through artistic gesture, the unacceptable circumstances of homeless life within the city.



Figure 1: *ParaSITE* inflatable homeless shelter designed by Michael Rakowitz. Photo by Inhabitat

Digital Right to the City

For many urban citizens, smartphones and their mobile apps have become vital tools for daily life. Since smartphones became popularised, millions of urban citizens worldwide are using apps for navigating

their way around the city, for hanging out with friends, for sharing loving moments with our beloveds, for playing games, and for many more purposes. According to Joe Shaw and Mark Graham (2018), "Cities have become more than bricks and mortar," they have their digital presence, and they are reproduced continuously. If our cities are now digital and material, then the struggle for more equal rights to the city "must move beyond a sole focus on material spaces and into the digital realm" (Shaw, 2018).

In the late 1960s, cybernetic thinking led some people to reshape the city as a "system that could be digitally mediated and optimized, though early deployments of such ideas failed to deliver on their promise" (Forrester, 1969). In 1970, long before the likes of Google ever enabled our digitally-augmented cities, Henri Lefebvre outlined in *Urban Revolution* (1970), "Should we feed all the data for a given problem to a computer? Why not? Because the machine only uses data based on questions that can be answered with a yes or a no." However, throughout the time, it revealed that computers, when used as instruments in the hands of those in power, can potentially act as weapons for pressure groups and politicians. Lefebvre continues to argue: "Can anyone claim that all the data have been assembled? Who is going to legitimate this use of totality?" (Lefebvre, 1970). He believed that urban life's great potential should be open to everyone, not just the large corporations and dominant elites that own and control so much of our cities. Now in the twenty-first century, our everyday life of most of us is entrapped by technologies that connect peoples and machines to produce information and redefine urban life.

On the other hand, with the booming dependence on digital tools and their capabilities, we need to address the digital divide. This is when people "do not have equality of access to digital information and have different capabilities when it comes to using information technology and digital tools" (Jefferies, 2015). In an early study in 1997, in the United States, the racial gap in Internet access increased. However, Internet access grew in one year by 48 percent for Hispanic households, and by 52 percent for African-American households, compared with 52.8 percent for white households. However, among college students the racial and gender differences in the use of the Internet are disappearing more recently. (Figure 2.)

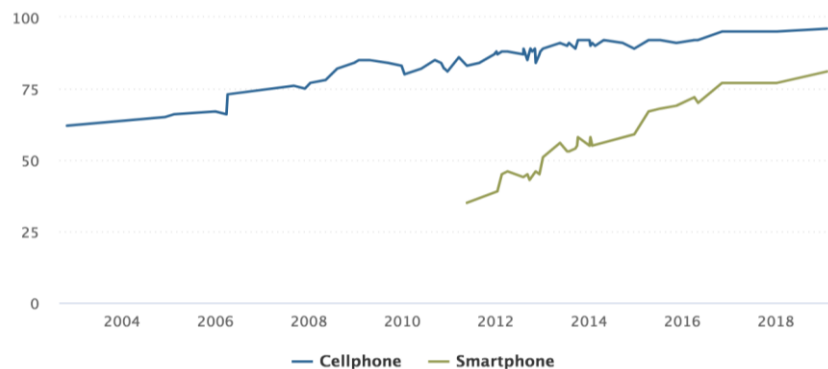


Figure 2. Percentage of U.S. adults who own smartphones and cell phones by PEW Research Center

When you walk down a street, you know that you have guaranteed rights as a citizen preserved by law. However, the same does not apply for the invisible digital footprints you'd leave behind while walking. Internet-related technologies proceed to evolve fast, and large businesses will also see an opportunity to pursue their agendas. In the meantime, we should actively participate in making innovations that address our digital rights to the city.

Online Social Movements

"If we would have one law in human nature, is that whoever there is domination, there is resistance to domination; that is how societies have evolved, fortunately" (Castells, 2013).

In the past few years, several social movements have exploded quite unexpectedly all over the world. During the 1990s, the question that dominated the social dimension of the internet was, "Does the Internet favor the development of new communities, virtual communities, or, instead, inducing personal isolation, severing people's ties with society? ultimately, with their "real-world?" (Coy, 2019) However, the world has experienced a remarkable wave of social movements since then, starting in Iceland in January 2009 and then intensifying in Arab countries from December 2010, and moving forward to other movements throughout the years. It grew in over 100 countries, involving over 10 million people worldwide with similar types of movements. One might ask, "What these movements have actually produced?" These movements played a significant political role in channeling the profound disruption in the population at large. "Social movements are very romantic creatures" (Castells, 2013). They are destined to die; they either crash or win and get institutionalized. The most important outcome of these movements is the fact that they can change the minds of people.

Indeed, the motives and consequences of these movements are very diverse. However, one major common factor in these movements is that the motivation is dignity and that it comes from an emotional outburst in a non-tolerable situation. People have always rebelled for economic reasons, social reasons, and rejecting the elites' political arrogance. We have seen in history, the moment in which there are significant issues in peoples' lives, and there is no institutional capacity to manage the problem, people take the matter in their hands.

Social movements based on the internet are emotional, and they aim to express the suppressed anger, which is expressed as outrage. "The outrage has emerged based on oppression, misery, and exploitation" (Castells, 2013).

However, the one element that has the ability to overcome anger is fear. Fear as the most potent human emotion is a repressor behavior, and anger is an accelerator behavior. Most social order is based on fear. To overcome the fear, there should be a construction of a protective space in which you are not alone with your fears. "This is where communication comes in powerfully." The alteration of communication technology is fundamental for the transformation of communication and, therefore, the connection of human relationships themselves and then society as a whole. The challenge in our time is taking place through social movements that always are based on internet networks "to start with and then develop in different forms" (Castells, 2013).

We lately see new forms of social movements corresponding to the new form of social structure, cultural and institutional domination. They are spontaneous, viral, and exclusively nonviolent. They do not choose to have a spokesman; they prefer to be called as the movement itself. These movements are global and local; they can act and lead to other places. Therefore, the transformation of these communication networks is critical for "elaborating new forms of social movements that challenge the power" (Castells, 2013).

Online social movements develop their goal primarily through media, traditional or digital. It is easier, less costly, and less time-consuming to link collective action since real-time communication can occur extensively via social media (Thompson, 1995). For example, the Arab Spring was a series of protests, uprisings, even armed rebellions that spread across many Arab countries in the early 2010s. "It began in response to oppressive regimes and a low standard of living, starting with protests in Tunisia" (David, 2011). The protests then expanded to other countries such as Egypt, Libya, and Bahrain. They were resulting in either significant uprisings, riots, and social violence or removal of the government.

Another example would be #BlackLivesMatter or #BLM, a worldwide activist movement that dawned in the African-American community, which campaigns against systemic racism and violence towards this community. BLM supporters frequently protest police killings of black people and speak against broader concerns such as police unfeelingness, racial profiling, "and inequality in the US justice system" (Wabc, 2020). In 2013, the movement "started with the use of the hashtag on social media after the liberation of George Zimmerman in the shooting death of African-American teen Trayvon Martin in February 2012" (Wabc, 2020).

Most recent protests started by the death of George Floyd in June 2020 in Minneapolis have quickly given rise to a vast American reckoning with racism. As this movement turned into something more global, monuments that reminded of racializing and slavery of countries were protested and even taken down. In Richmond, protesters tore down a statue of the explorer and colonizer Christopher Columbus overnight and tossed it into a lake (Elliott, 2020). Across the country, at least ten monuments to controversial historical figures have been removed, and people have questioned comparable monuments in more than twenty cities.

Implication of Augmented Reality for Social Engagement

Fundamental study on Virtual Reality (VR) and Augmented Reality (AR) goes back to the 50s. (Carmignani et al., 2011). However, the first definition of AR was presented in 1997 by Azuma: An Augmented Reality atmosphere has the following features: "(1) Combines real and virtual environments, (2) Is interactive in real-time 3) Is registered in 3D" (Azuma, 1997). On another note, there are two approaches to provide location-based information: (1) using a GPS module or (2) using marker-based technologies. The second approach uses QR Codes or LLA Markers which stands for latitude, longitude, and altitude detection.

Because of the current accessibility of adequate mobile devices equipped with cameras, internet connection, and improved CPUs, AR apps have become of interest. Consequently, urban planning is increasingly fascinated by AR technology and its implications for social engagement. "AR can support quality assurance in planning processes." and "expand the range of means offered to support participation" (Carmigniani, 2011). Senbel and Church (2011) see AR visualization technique in planning, as a "mediator of empowerment" in participation. Therefore, Augmented Reality, combined with other tools in urban planning and participation processes, can improve these procedures and make them more useful.

For the quality of the participatory technique, Augmented Reality instruments should satisfy conditions such as "equal chances for different groups to participate and influence the decision-making processes should be guaranteed" (Weidenmaier, 2012). When examining the impact of augmented reality applications in the participation process, five initial inquiries were addressed: (1) How meaningful is participation? (2) Which groups can be the target with AR tools (3) How do other researchers and practitioners utilize AR in participation? (4) How can AR facilitate the contribution of knowledge? (5) What are the pros and cons of AR applications, compared to analog types of demonstrations? (Jefferies, 2015). "If Augmented Reality is introduced as an additional communication and participation tool early in the participation process, it can more easily be integrated into an ongoing project" (Jefferies, 2015).

Mobile Augmented Reality is made possible by a convergence of several enabling technologies, which are essential to consider for new practices surrounding AR. Thus, mobile technologies raise new opportunities for the creation of place, allowing people to re-encounter everyday space and understand the structure of those settings (Dourish, 2006). While augmentation of information through mobile devices is nothing new, the visual, interactive, and real-time nature of digital augmentations offers fundamentally new ways of experiencing, moving through, annotating, and enacting (Shaw, 2018). Employing Augmented Reality in urban planning recognizes itself as a toolset used to enable the inhabitants to get along and educate about arranging what is occurring in their regular daily lives.

As seen in the example of Pokémon: Go, Augmented Reality has already seen massive enterprise potential in the entertainment and tourism industries. Aside from the app developer Niantic's growth, the phenomenon has economically impacted many businesses and communities by altering their platforms into the digital world. The future of AR entertainment is "far from limited to catching Japanese pocket monsters, with location-based entertainment being considered at multiple levels of development" (Aukstakalnis, 2016). Another example of AR infused with public space is the "Tomorrow's Augmented Reality" murals in New York City by artist Jordan Seiler. These representations contain intractable augmented components viewable via mobile device applications. The mural, paired with a digital overlay, exemplifies the interactivity of physical and digital art, with 3D objects popping out of the mural.

On the same note in the Re+Public app, users can point their gadgets at a billboard on a subway station, and it will examine the picture for duplicates in its database. In case the application recognizes the advertisement, it will supplant it on the screen with a picture made by one of the various artists. The augmented gallery comes loaded with great-looking works from many street artists, with a critical perspective.

Chapter 3: Methodology

SSHRC defines research through design methodology as "an approach to research that combines creative and academic research practices and supports the development of knowledge and innovation through artistic expression, scholarly investigation, and experimentation" (Social Sciences and Humanities Research Council, 2019). I sought the research through design methodology because of its iterative nature and association with experiments and observations during the creation process. This methodology recognizes the design process as a legitimate research activity, examining the tools and processes of design thinking and making within the design project, bridging theory and building knowledge to enhance design practices. Martin Racine stated in his 2012 Article, in this approach, the emphasis is on the research objective of creating design knowledge, not the project solution (Racine, 2012). The definition also clarifies that formal or academic research-creation cannot be limited to *the process*; it must contribute new knowledge through both artworks and written papers or a thesis that can be disseminated and examined (Candy, 1996). In this project, the research-creation method provided a context for generating and distributing new contributions through a personal reflective approach.

I conducted research through the creative practice that, first, is responding to a set of broader questions, utilizing the body of the work to experiment and cross-examine ideas, analysis of the hypothesis, pose new questions, documenting and communicating the work "to advance design scholarship and enhance the inventory of design resources" (Martin, 2012). Through a long process of ideation, experimentation,

and critique, I constantly reiterated the problem to arrive at a proper solution. Throughout the project, the research is purposefully flexible, as it is a form of exploration through the possibilities of technology to enhance social rights. Instead of a formal analysis of accurate data, this research relies on inspirations throughout the research-creation.

Over the course of this dissertation, I conducted five iterations to test different conceptual frameworks and to reflect on the process. Towards the end, some concepts evolved in their definition; therefore, I had to reconstruct the question to narrow down the possible solutions. These prototypes and their reflections are documented thoroughly in Chapter 5. From the artifacts that emerge from the design process, including sketches, drawings, models, and prototypes, the most critical is documentation, which contextualizes and communicates design action (Martin, 2012). While each project had different goals and aims, together they helped me weave the final concept of the *Perspectives App*. Therefore, creating each iteration was an opportunity for exploration as well as for reflection and evaluation.

The ultimate intention of this project was to explore the social functions within Augmented Reality as a medium, through which democratization of public space can be framed throughout a speculative design process. This research-creation examined a new approach to address the question by exploring the potentials and opportunities of mixed reality technologies. This dissertation is situated at an interdisciplinary stand, where disciplines consist of disciplines from urban design to mobile application design.

Reflective Practitioner

"Schön came as close as anyone I have ever seen to developing a theory of what it is that professionals - in all disciplines - do in modern society, and how they do it" (Neumann, 2000).

Reflection is a critical concept within many scholarly areas, including but not bound to design studies. John Dewey (1985) describes reflection as a cognitive state that occurs when we encounter the unfamiliar, and we must weigh our old preconceptions against some new problem for the sake of driving a change. "Reflective thought includes a conscious and voluntary effort to establish belief upon a firm basis of evidence and rationality" (Dewey, 1985). HCI field of reflective design, for example, actively employs "a set of design principles and strategies that guide designers in rethinking dominant metaphors and values and engaging users in the same critical practice" (Sengers et al., 2013). Donald A. Schön, in *The Reflective Practitioner*, sees this problem as a "crisis of confidence in professional knowledge." He questions whether professional knowledge as it is currently developed and disseminated can anticipate and handle situations of practice that are complex, uncertain, unstable, unique, and ridden with value conflicts in developing his

argument. Schön draws upon reflection-in-action cases in the following professions: architecture, psychotherapy, engineering, city planning, and management.

Schön asserts that this condition of practice is disturbing to many professionals because they have no adequate way of "describing or accounting for the artful competence, which practitioners sometimes reveal in what they do" (Schön, 1983). After a brief review of its development, Schön notes that this hierarchical model of professional knowledge creates a situation where researchers hold a more esteemed position than practitioners. He characterizes the prevailing model of professional practice as "Technical Rationality". Schön adds, "has no place in a body of professional knowledge concerned exclusively with problem-solving" (Schön, 1983). He asserts that problem-solving "is a process in which, interactively, we name the things to which we will attend and frame the context in which we will attend to them" (Zahedi, 2016). Schön calls this art of practice "knowing-in-action". He suggests that frequently it is difficult, if not impossible, for this knowing-in-action to be described in other than a common-sense fashion.

He suggests that successful practitioners frequently think about what they are doing, and this reflecting-in-action becomes central to the art through which practitioners sometimes cope with the complex conflicting circumstances of practice. He rejects dependency on the traditional view of professional knowledge instead and proposes that practitioners become reflective researchers. Schön raises a legitimate point regarding formal programs of study, and it is one that should be pondered by academicians who prepare practitioners (Schön, 1983).

In this project, considering an Augmented Reality platform as a 'digital scene for debate' is an opening to a series of relevant questions. Can Augmented Reality act as a platform to showcase art in public spaces? Could it amplify the unheard voices in the city? Using a reflective framework for this research, instead of seeking more realistic responses to all the questions in the process, I attempted to redefine the question in every session of *making*, with an exclusive *reflecting* approach. The dialectic of authoring or facilitation changed my approach to the project.

Participatory Design

Participatory design is a human-centered method advancing user and stakeholder engagement throughout each phase of the design process, including co-design activities. In recent years, participatory design has expanded in scope and methods, earning great approval as an approach to use in research and employment across industrial design, architecture, urban design, interaction design, and communication design (Martin, 2012). As a result of advancements within the field of urban design, the issue is no longer whether participation should be part of the design process in public activities, but rather who should

participate, which methods should be applied, what type of knowledge will be contributed, and how will that knowledge be combined into the process.

The participatory design methods include cultural probes, diary studies, flexible modeling, photo studies, collage, creative toolkits, and design workshops. Participatory design values the original insight of participants to inspire and aid in guiding the design process and react to design outcomes. Nonetheless, participant's inputs are joined with design expertise, supporting designers' creative authority to translate collaborations into design guidelines, services, and artifacts. Engaging urban design methods, such as planning-in-situ and open planning, are tested to engage different stakeholders in the planning of urban open space.

Sherry R. Arnstein, in *A Ladder of Citizen Participation*, described: "There is a critical difference between going through the empty ritual of participation and having the real power needed to affect the outcome of the process" (Arnstein, 1969). Design that functions in the public sphere and towards social change proposes ethical responsibility similar to those in other disciplines that work with the public, such as journalism, sociology, and urban planning. Participatory design reveals a critical perception of design's inherent social processes, investigating it within consultative sessions, collaborative workshops on public panels. This process reflects on the differences in perspective, power, priority, and judgment. The OECD identifies three levels of government-citizen relations in participation and policy making: (1) Information: a one-way relationship in which information is produced, provided, and spread by the responsible authority. (2) Consultation: A two-way relationship is offered so that citizens can provide feedback. (3) The highest level of participation is Active Participation: As governments push towards progressively participatory planning processes, they invite inhabitants in critical choices (OECD, 2020). These innovations offer an increasingly available medium for commitment.

The participatory design contains several methods; however, they all require consultation with users, clients, and other stakeholders in the design process, ideally through face-to-face contact in activity-based co-design engagements (Martin, 2012). Four dimensions of purpose are described as (1) Probing participants for self-discovery and reporting, (2) Priming participants for further participatory engagement, (3) Understanding current experience, and (4) The generation of future scenarios and concepts. Participatory design methods might differ, based on group size and composition, face-to-face or online, venue, and stakeholder relationships between the designer-researchers and participants.



Figure 3. Intersections project in function. Photo by A+URL

Intersections was a project by A+URL in 2002 that used media devices for activating public space (Figure 3). This project evolved as an ongoing project and workshops concerned with media communication and intervention in public space. The results were several devices for political interventions in the city. *Intersections* includes “objects and structures for recording, producing and projecting sound, for producing and measuring light, and for occupying space through inflatable and temporary means” (Ericson et al., 2011). Devices are made based on do-it-yourself projects, open-source and recycling principles. Therefore, materials and media are considered as complementaries to political activity, aiming to reconfigure the production process outside the market system. *Intersections* left the institutional space in 2003, to participate in direct actions in the streets of Barcelona, “wherein devices took on roles in catalyzing social interactions and participating in political action” (Ericson et al., 2011). Started by A+URL, *Intersections* was part of a broader project trying to prevent processes of corporatization, homogenization, and globalization with alternative local strategies for developing the public realm.

In 1999, Campo Boario was a neglected sphere in the center of Rome. Formerly a slaughterhouse, this space was used by Italian homeless people, the horse carriages taking the tourists on tours around town, and a Roman cultural center, as well as immigrants and refugees. In combination with the Biennial of Young Mediterranean Artists held nearby, Stalker temporarily transformed Piazza Boario into Piazza Kurdistan, a site for dialogue about the Kurdish diaspora in Rome (Endres, 2003). The aim was to catalyze the process of blending the refugee population arriving in Italy from Turkey. Workshop participants included architecture students, local artists, and Kurdish immigrant groups. As a cooperative project, they repaired one of the evacuated buildings on the site to use as a community center for Kurdish immigrants and the collective's office. This project took three years between 1999 and 2002. Stalker,

along with immigrant communities, collaborated to improve the "dilapidated building and organize on-site arts and cultural events, including Kurdish festivals, a planning workshop, and design competition for the site along with other art exhibitions and performances" (Endres, 2003). Other similar projects use the participatory method to engage the users in deciding on their shared space.

Critical Design

Numerous contemporary designers encounter conventional ideas of what design is and what it should be about. While technology is advancing as quickly as it is now, reflection and criticism are particularly crucial. Most designers, primarily industrial and product designers, view design as somehow neutral and pure; however, "all design is ideological" (Ericson et al, 2011). In other words, the design process is affected by values based on a particular viewpoint or worldview and understanding reality.

In critical design, aesthetics and form continue to be central not only for servicing clients or problem-solving but also for problem finding and design for debate within the design and with its commissioners and consumers. Larry Ligo (1984) addresses five different types of functions of critical design: (1) Structural articulation, (2) Physical function, (3) Psychological function, (4) Social function, as well as (5) Cultural-existential function. The critical design objective has considerable importance for product design but emphasizes neither the commercial purpose nor the real utility. They are products for the mind.

In emerging genres of social criticism and service design, for example, practitioners question gender and class ownership and authorship power and welfare. In general, design falls into two categories: (1) Affirmative design and (2) Critical design. The affirmative design reinforces how things are now, and it conforms to cultural, social technical-economic expectations. Critical design, however, rejects how things are now the only possibility by providing a critique. Its purpose is to stimulate discussion and debate among designers, industry, and the public about "aesthetics quality for our electronically mediated existence" (Suri, 2012).

Critical design is relatively tricky since design professionals see the social value of their work linked to capitalism. To be considered successful in the marketplace, the design has to sell in large numbers; therefore, it has to be popular as if "design outside this area now is escapist or unreal" (Ericson et al., 2011). On the other hand, critical design can never be widely appreciated, and that is a fundamental dilemma. For example, instead of thinking about appearance, user-friendliness, or corporate identity, designers may develop design proposals that challenge conventional values. In affirmative design, the marketplace he has viewed as the only reality, or as Thomas Frank (2002) writes in *One Market Under God*, the form of market populism has taken hold, where people's true desires Expressed and fulfilled through the marketplace.

Eichbaumoper by Raumlaborberlin in 2009 was a critical vision for the transformation of Eichbaum station into an opera house. Thirty years ago, Eichbaum station was a symbol of "modernity marking the dawn of a new mobile population" (Raumlaborberlin, 2009). However, throughout the years, Eichbaum has become a problematic space: assaults, rapes, and extreme vandalism became routine. Structural measures and appeals haven't been able to disperse the fear associated with the place. Moreover, this project attempted to "redefine the layer of accumulated negative socialization of space." The Opera project proposed two main activities to facilitate this re-envisioning: (1) inviting artists, composers, and musicians to develop a formal response to space. "Composers were asked to develop their composition in relation to the site's experiences and conditions." (2) Sounds, histories, and narratives collected on the site as well as local residents contributed to the works. The premier took place on June 24th with performances through 4th of July. The Opera was a temporary project and left the site; however, the site remains as "a place for future visions and transformations" (Raumlaborberlin, 2009).

In critical design, it is believed that in order for the conceptual design to be effective, it must provide pleasure or provide a type of experience that Martin Amis has called complicated pleasure. (Ericson et al., 2011). The aim is to encourage the viewers to ask themselves why the values embodied in the proposal seem fictional or unreal. In these scenarios, technologies are realistic, but the social and cultural values are often fictional or highly ambiguous. Critical design questions the social and cultural mechanisms that define what is real or fictional. If they are too weird and instantly dismissed, if they are not strange enough, and they are absorbed into everyday reality.

The design also produces arguments, taking the form of carefully crafted representations. A critical question for both policy and design is what happens after compelling and persuasive arguments are made how are these interpreted or activated as social relations. Representations can catalyze a standard for people to interpret and debate collectively why some examples are highly authored, others are open source or open-ended, platforms for sharing and aligning concerns through the collective transformation of an ordinary object. In this sense, critical objects can be about confronting and engaging critical subjects. Both material and critical make arguments that ask for interpretation, "catalyze discourse, and perhaps provoke a change in thought and action in the here and now" (Anderson, 2018). Arguments made by design speak to power, what they also enable critical and participatory dialogue.

Speculative Design

In design theory, scholars such as Anthony Dunne and Fiona Raby acknowledge how design can be used to encourage debate (Dunne et al. 2013). This research-creation considers the role of design in enabling discussion while looking particularly at the advantages of this platform to increase participation

in the public realm, and how this concept can be evolved. Like the speculative design, adversarial design, in its encouragement of political discourse through design, could question the possibilities of debate platforms. Illustrated by Anthony Dunne and Fiona Raby in their book *Speculative Everything* (2013), "Speculative design encourages the creation of work that incites debate about alternative ways of being."

By defining speculative design as the use of design "as a means of speculating how things could be," Dunne and Raby (2013) argue that by exploring alternative situations, we can encourage more desirable futures and make reality more tactile. Speculative projects aim to support the free stream of imagination towards alternative futures. While Dunne and Raby know that the future cannot be predicted, they contend that engaging in more creative practices such as speculative design can help consider our reality differently and encourage new design thinking (Dunne et al, 2013).

On a similar note, Carl DiSalvo in *Adversarial Design* (2015), defines adversarial design as the design or use of artifacts or objects to engage with political issues. He uses politics to discuss design ideas and examines these concepts in contemporary art and design practice. DiSalvo references the political concept of agonism, which argues that "democracy is intrinsically contentious and therefore, spaces of contestation must exist for democracy to flourish" (DiSalvo, 2015). He argues that in design practice, agonism can be applied towards the creation where plurality is encouraged to develop critical dialogues. This project ultimately aims to design a platform enabling dialogue around controversial topics. This research is situated within a speculative and adversarial design, as the use of design is to engage citizens in political and social issues. By using adversarial design, this project attempts to unveil connections between power structures through design, and it encourages more intelligent and educated conversations about issues of dominance in public space.

New Beauty Council (NBC) in 2008 staged some public events to encourage dialog about the city and its "publics". NBC introduced its mission "to inquire into public space by introducing new perspectives and public discussion" (Mazé, 2013). The efficiency of representing aesthetic and environmental concerns within the city was charged with Stockholms skönhetsråd or the council to protect the Beauty of Stockholm. However, NBC attempted to protect the city by curating public events that included people and perspectives that usually left out. The *NBC Changed Perspectives* were a series of public discussions, including urban developers, architects, homeless, and queer activists (Mazé, 2013). Drawing on cultural studies, NBC examined "how architecture is charged with authority" and how urban design and planning could be opened up by staging dialog and debate across the policy. "The citizens of a city might have different opinions of good & bad, beautiful & ugly, fun or boring, but they have one thing in common – the public space. At odds or finding a consensus, the public realm is a stage for constant negotiation" (Ericson et al., 2011). Projects that aim to use the power of debate and speculation on a community's shared qualities bring in different perspectives around any subject on a more verbal-based level.

Chapter 4: City, Memory, and Monuments

This chapter commences by questioning how to approach the public space and objects embedded in it, as a subject matter, leading to anti-monumentalism as the conceptual framework. This exploration is a critical process since approaching a national figure or a nation's history from a speculative perspective is controversial. Throughout the research, the aim was to evaluate the function of the monuments in the city and how to address the racist notions of these artifacts.

Accordingly, the relationship between the city's public space and monuments "reflects both the values and the power structure of that community" (Webber, 2001). This power structure is the primary purpose of reform in the sense of collaborative spaces in the city. Historic monuments that were once designed to be "figurative, commemorative, and situated based on specific cultural characteristics have evolved" (Webber, 2001). Hence, the first part of this chapter seeks to explore the city and its relation to memory. The second part of this chapter illustrates the various purposes of monumentalizing and preserving memories in the city. Towards the end, controversial monuments in Montreal, Canada, have been addressed and explained to underscore the existing approaches and critical importance.

City and Memory

In his influential writing on history and memory, Pierre Nora indicated that "we speak so much of memory because there is so little of it left" (Candy, 1996). Memory and physical place have a long-standing link, including the tradition of memory palaces. In this system, the things to be remembered are associated with specific physical locations, and it is through spatial relations that memory is nurtured and maintained. Shared urban space can provide the means of developing and living – in routinized ways – shared collective memories; "disruptions to and destruction of shared space can occasion and stimulate critical thought and action" (Pratt, 2014).

Not surprisingly, some of the same tensions that emerge concerning memories associated with the city in general shape discussions of the city as an archive. In his essay 'Nietzsche, Genealogy, and History,' Michel Foucault argued for freeing history from the model of memory, seeking instead to challenge humanist history by turning history into a counter-memory (Foucault, 1977). Monuments are the established sites for remembering official history and simultaneously forgetting or erasing counterclaims to space; they are often dead zones that close the possibilities for urban politics and contestation. For some theorists, the city archive of monumental spaces is haunted by what is repressed.

Physical places also embody nostalgia, and cities are often rich contexts for nostalgic remembrance which is commonly marketed through a place-based heritage industry. A long line of political philosophers,

from Kant, Hegel through Marx, has condemned nostalgia for its regressive effects of preserving class privilege's status quo, injecting political passivity, provoking reactionary nationalisms, and preventing historical understanding (Pratt, 2014). Eventually, a memory turned out to have a more prominent future, becoming a means of critiquing official history as exclusive and disembodied. As an example, this refusal of memory has been linked to France's colonial history in Algiers and located within a broad sense of national memory that raises questions of guilt and responsibility. The focus on memory rather than history pointed to the instability of the past, especially in relation to psycho-analysis that had been concerned with the complicated nature of memory in relation to consciousness.

Monuments as Reminders

A monument is a reminder. Its location, form, site-design, and engravings aid in recalling persons, things, events, or values. In contemporary English Usage, monumental means "large, important, and enduring." Monuments generally honor, and their prominence and durability suits, subjects of lasting merit. According to Merriam-Webster, to preserve is "to keep safe from harm... to maintain, keep up, guard gains decay". However, the decision is having to be made daily by the practitioner to raise philosophical questions at every turn. What are we setting out to do when we begin caring for a monument, historic building, or complete historic environment? What do we mean by a monument or history building? Why should such buildings be treated differently from other buildings? And how differently?

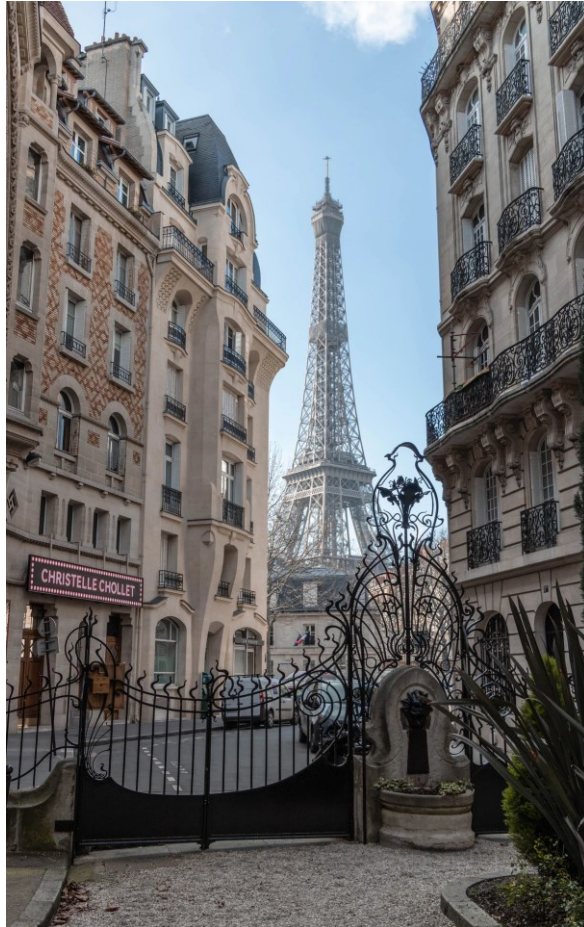


Figure 4. Eiffel tower *raison d'être*. Photo by Louis Paulin

The care of first-rank celebratory monuments is, to some degree, a matter of pride for the society or the tier of society that produced them and, while that society remains stable, their fabrics are likely to be raped and serviced to a representative standard. Then what happens if the community at all sense repels an old heritage? A place for life detached from the growing effects that commodification and capitalism have had over social interaction and the rise of spatial inequalities in global cities throughout the last two centuries. Some of such buildings go through a phase when they are underrated, unacceptable, or architecturally unfashionable. However, if they survive these risks, they tend to return permanently to national monument status, the Albert memorial, and Eiffel tower are prominent examples.

According to Kevin Lynch's theory of imageability, one of the elements of public space that promotes the legibility of the city is a landmark, which is "the point of reference in urban; it is where the focal point is when the people are supposed to orient themselves visiting a particular space" (Lynch, 1979). Landmarks can be "either building, stores, or statues," Lynch suggests, "that brings history, a sign, or a meaning." This analogy suggests examining the function of a monument as well as its intention to address

the controversies around them. To endeavor social and political force of contemporary design practices, we may pose questions about the role of public statutes and how we define a functional memorial that engages with the society. One could argue that it should be part of the design's self-understanding to be socially engaged because historically, the design has created products that have been part of our daily life in various ways. Although history helps to institutionalize a precise definition of design, the design itself is a fluid subject that develops through time.

Monuments can paradoxically separate us from history. They can anesthetize us rather than deeply connect us to the past. As if memory becomes invested in the monument rather than people, and the monument's presence takes over the responsibility for memorizing. As the urban critic Raymond Ledrut emphasizes, the moment the city is severed from its social production, it is seen as an objective and physical entity. The construction of a statue in a public space liberates citizens from the real and challenging duties of memory. "By commissioning statues, we collectively cancel the work of memory, outsourcing it to sculptors and engineers" (Zaretsky, 2020). The erection of public memorials can paradoxically, exterminate collective memories. In this dissertation the ideal city, however, is seen as an environment formed through various, often conflicting, social practices produced by diverse social groups.

Anti-Monumentalism

"A man has no scale unless he stands against bricks and stones erected before he was born" (Bainbridge, 1997).

Anti-monuments challenge the way monuments remind us of history. They welcome us into their message, or the lack of it, to provoke consideration or interpretation of the past. Instead of forming an anecdote for the viewer, the anti-monument provides individual influences upon the viewer, which can transform how people recognize the past. Anti-monuments attempt to have one reflect on their own and not influence in one way or another. James Young asserts that anti-monuments or "counter monuments are against the authoritarian propensity in all art that reduces viewers to passive spectators" (Young, 1992).

Rafael Lozano-Hemmer defines an anti-monument as an action, a performance, or an object, "which rejects the notion of a monument developed from an elitist point of view as an emblem of power" (Lozano-Hemmer, 2002). The public sphere and monumentality are profoundly defined and theorized extensively by James E Young. He defines conventional monuments as "heroic, self-aggrandizing figurative icons that celebrate national ideals and triumphs" (Young, 1992). In her book, Nancy Fraser *rethinking the public sphere*, suggests the need for a multiplicity of voices in the public sphere (Fraser, 2014). Anti-monumentalism is a movement that has the purpose of existing monuments whose statement

you no longer support, to get changed or removed. James Young says that anti-monuments are often memory acting against itself. He argues that an anti-monument, such as the famous Monument against Fascism, War, and Violence-and for Peace and Human Rights, "serve to change the way events, ideologies, victimhood, and of course, monuments, are perceived" (Young, 1992).



Figure 5. The Holocaust Memorial, Photo by Mary-Grace Blaha Schexnayder

As an example, Holocaust anti-monuments cannot propose to be aesthetically delightful. (Figure 5) That beauty should come from such an event as the Holocaust would be another path to false comfort and, consequently, a lie. Anti-monumentalism artists have, "a deep distrust of monumental forms in light of their systematic exploitation by the Nazis, and a profound desire to distinguish their generation from that of the killers through memory" (Niven, 2013). As a result, anti-monuments force the observer to bring their own definitions to the monument and face their history head-on. Anti-monuments often declare their presence on the space they occupy in a way that resists efforts to ignore them in the first place. Neither literal nor symbolic references suggest anything more than their abstract connection to the Holocaust will suffice. Instead of attempting to capture the memory of circumstances, therefore, "they remember only their

relationship to events" (Young, 1992). Anti-Monuments seek to challenge this and leave the viewer with a lasting impression.

One other example of this anti-monuments is the Norbert Radermacher's memorial in Berlin. "Norbert Radermacher bathes a guilty landscape in Berlin's Neukölln neighborhood with the inscribed light of its past" (Young, 1992). The text of this memorial project onto a space that was a former concentration camp, a space that conversely at first impression appears to be reasonably common. The historical text about the area is only projected when someone walks into space, hence transforming it unexpectedly and rendering a compelling impact on the viewer based on the surprise of the confrontation. Norbert recognizes the likelihood that memory of events so weighty might be reduced to displays of public craftsmanship or cheap pathos remain intolerable. Therefore, in this piece, he rejects the traditional forms and reasons for public memorial art, those spaces that either "console viewers or redeem such tragic events, or indulge in a facile kind of Wiedergutmachung or purport to mend the memory of a murdered people" (Young, 1992). Recently, many promising anti-monumentalism acts are channeling themselves as protests, which helped me reiterate the scope of the project.

Montreal's Controversial Monuments

Various communities are making demands, insisting on racial profiling, spatial exclusion, and economic inequality that is hown in public space. More onto the activities targeting the public monuments and its elements, we can point out to anti-colonial activists who vandalized iconic monuments of Montreal. The city of Montreal has several monuments dedicated to historical figures with dark histories (Macpherson, 2020). In the following, I list four of the most controversial monuments in Montreal.

James McGill

The monument touches upon the intriguing subject of the forgotten slaves of Canada. Not many even know that the founder of McGill university, one the most prestigious universities of Canada, owned slaves. This monument is situated on McGill's main campus' land, and the accompanied pelaque honors the trader without mentioning the truth about his slavery ambitions. However, recently it is being discussed that for about two centuries, slavery was legal and even well-established in New France, even before the conquest of the province by the English in 1760 (Everett-Green, 2014).

Jacques Cartier in Saint Henri Square

The 1893 fountain honors Jacques Cartier's declaration of the triumph of Canada in the name of France. If you take a closer look at the foot of the pedestal on which the Cartier figure stands, you can see depictions of indigenous people's heads. This monument brings lots of debates around implied racism in the public space, and yet it is one of the least discussed controversial statues of Montreal's landscape. "The seemingly decapitated heads below the feet of the conqueror makes for especially disturbing imagery" (MacDonald, 2018).

Queen Victoria

This Monument has become a representation of British colonialism and hegemony in North America. Montreal has two monuments of Queen Victoria, there is one in Square Victoria, and another on McGill campus. "During her reign, extreme murders of indigenous communities took place" (MacDonald, 2018). It was funded by donations from a citizens' committee on the occasion of Prince Arthur's visit to Montreal in 1869. The one situated in Square Victoria has been vandalized many times through recent years and it is a statue with great potential for further empirical study.

The Sir John A. MacDonald's Statue

Anti-monument activists "covered John A. Macdonald monument in red paint over the weekend and have vowed to continually trash the monuments until it is removed from public space" (Daily Hive, 2018).

The statue of Sir John A. MacDonald was sculpted by George Edward Wade and it is located at Place du Canada in Montreal. Queen Victoria gifted it to the City of Montreal in 1892 to mark the 250th anniversary of the founding of the city. The statue has been subject to repeated vandalism since 2017, with calls for its removal due to the explicit racism of Macdonald's policies towards First Nations.

At the very top, a symbolic female figure carries a horn of plenty that symbolizes Canada. Underneath, the seven children symbolize the seven provinces that made up Canada at the time. MacDonald in this monument looks west-northwest, under a canopy formed by trades, at the vast range awaiting the command coming from Montreal. He also faces off versus the tribute to Sir Wilfrid Laurier, across the street in what is now Dorchester Square. The two cannons beside the monument were used at Sevastopol in the Crimean War.



Figure 6: Cleaning the MacDonald statue after it was vandalized. Photo by Graham Hughes

In 2018, the MacDonald statue in Victoria City was removed as part of the city's plan for reconciliation with local indigenous communities (Daily Hive, 2018). Consequently, in August 2018, a biographical online article about MacDonald was erased from the Scottish government's website. As the spokesperson stated: "We acknowledge controversy around Sir John A Macdonald's legacy and the legitimate concerns expressed by Indigenous communities" (Balogh, 2020). In 2017, The Canadian Historical Association decided to withdraw Macdonald's name from their prestigious 'Sir John A Macdonald's award for the best scholarly book about Canadian history. Historian James Daschuk recognizes Sir John A Macdonald's contributions as a founding figure of Canada, but he states, "He built the country. However, he built the country on the backs of the Indigenous people" (Hamilton, 2018).

However, this monument has not been displaced despite the debates around it. Conservative senator Hugh Segal believes that MacDonald's real monument is Canada itself: "Without MacDonald, we would be a country that begins somewhere at the Manitoba-Ontario border that probably goes throughout the east [...] We would be buying our oil from the United States [...] It would diminish our quality of life and range of careers, and our role in the world would have been substantially reduced" (Government of Canada, 2008).

Moreover, Swainson proposes that Macdonald's wish for a free and liberal Canada became part of its national vision and contributed immeasurably to its character (Government of Canada, 2008).

Insights

The project started with the goal to democratize public space, and shifted the focus on the monuments, as a way to address the memory associated with the city in the public space. Monuments are reminders of values and the power structure of a community. However, as our values matured, our cities did not get the chance to catch up. Therefore, the world has been experiencing many forms of resistance to the right to public space. More recently in June 2020, at the same time with anti-racism protests following the death of George Floyd, a petition on Change.org began calling for removal of the MacDonald statue. It fairly received 2100 signatures as of June 8, and several monuments with ties to racist elements of Canada's past, were defaced or vandalised including the MacDonald statue in Prince Edward Island (Fresh Daily, 2020). Focusing on these controversial monuments allowed me to understand the opposing points of view on different elements of the city. In the next chapter, I will explain the different levels of narrowing down the scope of the project.

Chapter 5: Design-Creation

This chapter includes the different stages of exploration and prototyping that enabled the Perspectives App to reach its full potential and eventually led to a bigger idea to pursue. Each iteration tries to address particular keywords of the central question in their own way; however, the reflections on the processes raise new questions at every stage. The concepts were created, integrated, and weaved through research-creation, attempting to explain via various disciplines, and exploring many tools, with Augmented Reality as the primary medium. The research was developed in parallel with the creative process and got polished with observations upon public presentations. The Reflective Practitioner methodology enabled me to make a potpourri of the knowledge obtained through readings, critical case studies, and the audience's reflections while presenting and playtesting the prototypes. Finally, surveying was used to gather quantitative data for the app's desirability with possible users. In the following section, the prototypes and their critical reflections are portrayed respectively in consecutive order (Figure 7).

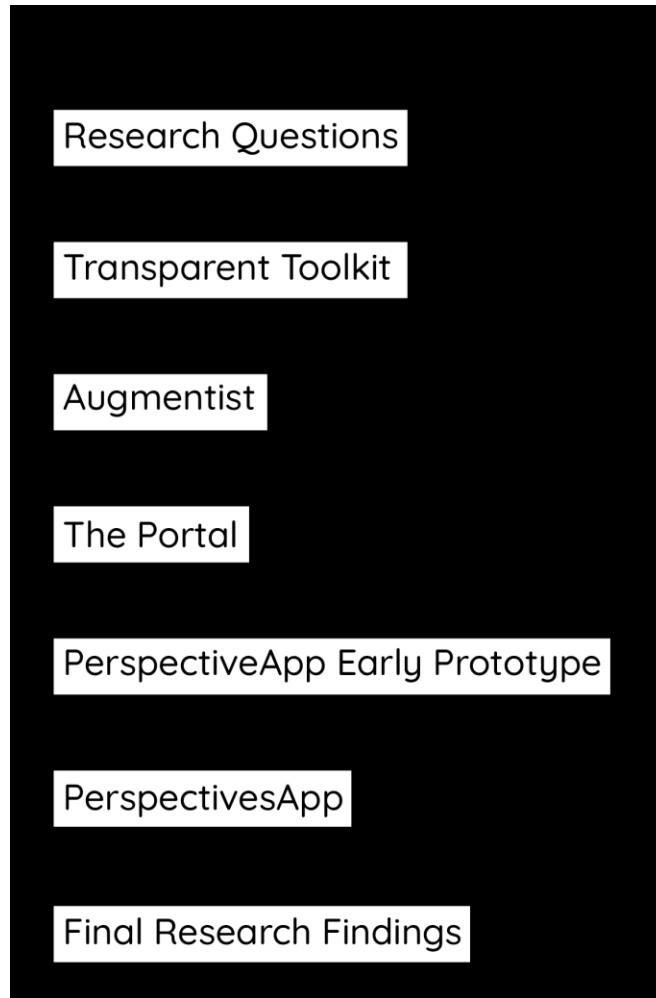


Figure 7. Process of design-creation used in this dissertation. Designed by Author

Project 1: Transparent Toolkit

The transparent toolkit was my first iteration in December 2018, and it was presented in the form of a participatory workshop at Art Hive, Concordia University. This workshop aimed to be a collaborative art-creating session using a "creative toolkit" to encourage participation and expression. I was aiming for a creative expression that enables humans to connect at a non-verbal level. In this project, instead of focusing on the technical part of my research question, I tried to investigate the notion of participatory art-making sessions to foster innovation through creativity. To analyze the capacities of participation in design projects, This session initiated with one question:

How does "creative toolkit" as a participatory method encourage participants to collaborate in the art-making process?

This session with 20 minutes time in total, intended to be a form of a short term data collection. Moreover, this project tried to use the limitation of time as a tool to motivate participants to show the most creative they can be with all that is provided. A combination of *Healing Space* and *Creative Toolkit* is a means of packaging the elements of any participatory method. Bella Martin and Bruce Hanington discuss that engaging participants in creative expression through facilitated participatory activities can give them a tangible object on which "to project thoughts, feelings, desires, and emotions that might be otherwise hard to articulate using traditional research methods" (Martin, 2012).

I began with the concept of *Healing Space* to articulate the requirements of the process of art-making sessions. Besides the activity, the environment could play a fundamental role in putting people in a better state of mind. Therefore *Healing Space; The Science of Place and Well-Being* by Esther M. Sternberg (2010) became gainful while defining the creative space and examples of similar projects. This book helped me in how to facilitate the session, place assets, and the documentation process.

According to Sternberg, art therapy sessions are good examples of collaborative activities involving people with diverse experiences. "Art therapy not only reframes how researchers can support co-creation but also shifts how we view the manifestation of health conditions and symptoms during the process of creation" (Piper, 2018). In art therapy, participants, guided by the therapist, use different art materials, the creative process itself, and the resulting artwork "to express feelings, reconcile conflicts, foster self-awareness, and achieve other goals" (Sternberg, 2010). The idea of art therapy helped me encourage free expression as much as possible and witness participants' thoughts, feelings, and experiences. A critical aspect of a therapeutic art session is the role of music, which physically can act as a remedy for the nerve system. You do not need an intricate symphony to see the result of music in therapeutic sessions; simply eliminating loud noises that cause stress would be enough. Can listening to music or preserving silence enhance people's creative process?



Figure 8: Organization of the healing space aspect. Photo by Author

In this session, participants were provided with a tool as the canvas that looked like a digital device and was framed with black foam and the drawing area with transparent plastic talc. The creative toolkit also had many components such as markers, pencils, pens, magazines (as an inventory for images and words), buttons, shape and sticky symbols. (Figure 9). The toolkit was provided with a generous assistant from the Art Hive team, trying to accommodate a range of potential exercises for participants. One subgoal of the toolkit was to provide sets of elements that could be reused for a variety of participatory sessions, even if some parts may need re-stocking after each use. Depending on the intent of the exercise, play kits can be built from original materials, or existing parts, constructive toys, or games.



Figure 9: The creative toolkit in use. Photo by Author

The Process

One affecting factor in shaping art-creating sessions using creative toolkits is portability. I considered ease of storage, transport, and use across locations, as well as the packing and unpacking of parts. This factor was especially essential considering that I had twenty minutes to move people from the initial presentation space to the so-called "healing space", where Art Hive was located. In addition to toolkits, I added the theme transparency to the workshop to encourage more creativity. The point of using a canvas was to prepare each of the artworks to work together when placed upon each other, so that eventually one collective artwork could be produced of this session. However this theme was not discussed until discovered by the participants themselves.

The session started on time, and with minimal verbal interaction, I tried to motivate participants to be expressive as much as they want in the artwork. Even though my motive was to create a healing space, and typically eliminate stress with calming music, natural light, so on, it didn't go as I imagined. It brought laughter, conversation, and sometimes satire. Which ultimately resulted the same way. Nonetheless, I was hoping to lower Cortisol's level, the primary stress hormone, which was ultimately done through amusing participation. People, in the end, did figure out why the canvases were transparent. However, it was too late towards the end, and the final artwork looked like a solid filled color with many details. My initial plan was to use this co-created artwork in *Augmentist* to show to the participants (design students) how easily their work could be featured in the app and ultimately change the face of the city. However, I chose not to do so.

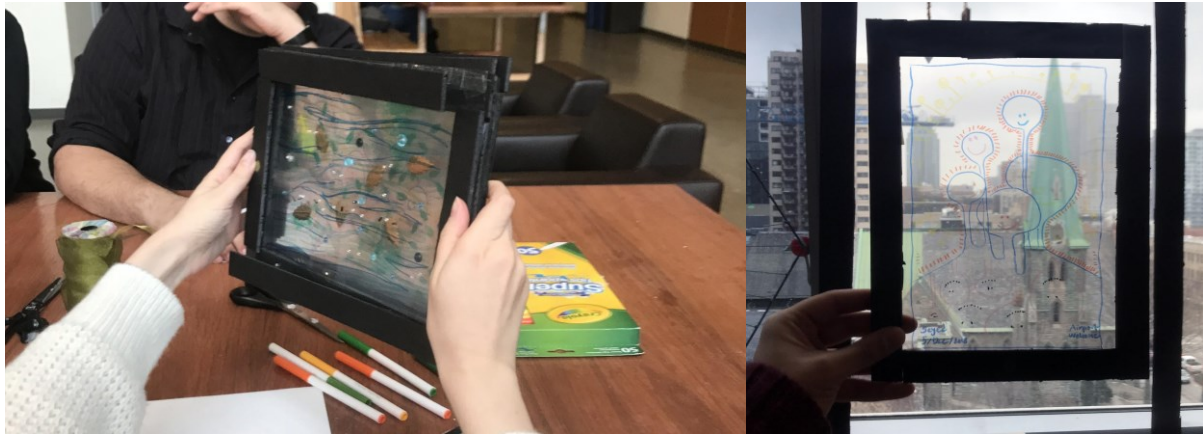


Figure 10: Collective artwork being made. Photo by Author

Insights and Reflections

This project's goal was to encourage participation through a creative art-making session so that this method could be examined to address the main research question. These sessions can increase communities' wellbeing, improve the lives of people, engage citizens in new and enlightened ways, build social networks, and encourage new society leaders. However, this process is complicated with participative dynamics that could eventually overshadow the output for the sake of the social values within the experience of collaboration. If the initial mobile app was up and running, who would decide which artworks are suitable to be shown or placed in public? What would be the agency of design in this project? This session brought up many questions that needed a careful literature review and case study by studying collaborative art-creation projects to increase social engagement. In this concept, art is understood as new multi-dimensional knowledge and identities in a site where collaborations are always being formed. Hence, the aesthetic experience offers the ability "to transform our perceptions of difference and to open space for forms of knowledge that challenge cognitive, social, or political conventions" (Kester, 2011). Furthermore, this phenomenon could get more critical when it comes to placing the physical co-created artwork in the urban space, where the collective is accountable for facilitating the place-making process.

Project 2: Augmentist

“Prototype, much like a picture, is worth a thousand words” (Martin, 2012).

The concept was to make a unique database web page and the initial AR-based mobile app to place virtual public art in the city. The app's idea was presented frequently before; however, this was the first time I showcased a prototype for possible future users. At this stage, I started to look at my cohort peers as the future stakeholders of the app. The aim was early testing the ideas and visualizing the proposed concept for constructive review and feedback for iterative changes. In this iteration, I explored how a digital public gallery would be interfaced and experienced. As a result, *the Augmentist* attempted to gather the essence of creativity excluded from urban spaces by elitism. In this iteration, I intended to answer:

What are the possible features of an AR app That could extend physical public art to the digital realm?

In general, we can categorize prototypes based on their resolution in two ways: (1) Low-Fidelity. (2) High-fidelity. (1) Low-fidelity prototyping is conventional throughout early ideation processes in all design disciplines, appearing as concept sketches, storyboards, or sketch models. A standard method of low-fidelity prototyping in interface and software design is a paper prototype. (2) High-fidelity prototypes are more refined than those mentioned earlier. They often represent the final product's appearance in look and feel, and sometimes even basic functionality. I was going for something genuinely tangible as if I was pitching my final product for investors and stakeholders. Therefore, I was going for both design and function of the app and website. The physical realization of interface concepts is a critical feature of the design process. In interaction design, "representing the creative translation of research and ideation into a tangible form, essential testing of concepts by the designer, is essential" (Martin, 2012).



Figure 11: Mockup of the first page of the app. Designed by Author

The Process

To start, I imagined the process as if I was to make a short movie. First, I started by sketching a storyboard I had in mind as small thumbnails. Then I started adding more details to each page and connecting them to decide how the user experiences it. At first, it was only an application which exhibited artworks in AR platforms through the city; however, by considering the target audience, public art tours, promoting new media artists, and public art-related publication material were added to the initial purpose. Visual artists were able to exhibit via *Augmentist* by uploading their works and statements. Nonetheless, people who preferred word for expression could engage by posting stories or conducting interviews. Who was going to be interviewed? Inspired artists who have or wish to have their artwork placed in public space. When used creatively, the design provides large openings for dialogue and discovery.



App Design

With a combination of GPS location and your smartphone's camera, *the Augmentist* app could present a unique approach to public art. This mockup operated as a platform for digital artists to begin by reserving their desired location on the map. Then they would upload the artwork and artist statement, and after an evaluative process, their artwork in Augmented Reality format would be on the location. To spread the idea throughout the physical world, using the QR code was an idea worth expanding. First, it would act as a marketing agent in the city. Second, it would suggest convenient locations for new public artworks. Third, it would help the ARTist find or suggest new locations. As seen in (Figure 12), five main options were presented on the main screen: (1) view artworks whether physical or digital (2) join public art tours (3) read the new public art innovations and creations (4) get to know artists and last, but not least (5) add posts or artworks.

Figure 12: Main menu of *Augmentist*. Designed by Author

Website Design

Initially, I planned to use the google maps API as the landing website solely. However, I changed my mind since it did not offer any real service, nor did it have a practical experience to reveal. Due to a minimal background in coding via HTML and JavaScript, I designed the website in three main parts: (1) Showing different functions of the app: View AR artworks (let us call them ARTworks), Get to know ARTists, Interviews, and Tours. (2) An interactive map to locate the near ARTworks around the user (3) and ways to download the app mockup.

When figuring out the tour, I comprehended that there are archival approaches to web design; therefore, I intended to collect a proper database on the existing public arts in the city to add to the brand new augmented ones. An existing website named *artpublicmontreal*, provided a concrete database I was looking for. Finding the right resources to augment new data was exceedingly helpful throughout the process, as it has an analogical connection to the relation between Augmented Reality objects and the things within the physical realm.

Insights and Reflections

One of the many intriguing questions on this prototype was: "What is the difference of this app with Instagram?" This question arose because the presentation lacked something, supposedly the spatial features that come with an AR app. In other words, the necessity of the sense of place in this specific project did get more vivid throughout the presentation. That would be the focus of my next prototype, *the Portal*, which brings more tangibility of mobile AR. That is the primary contrast of *Augmentist* with apps such as Instagram. Augmented Reality, with its spatial features, as a definite asset in my dissertation, was involved in the conceptual prototype and explored in later versions.

By reflecting on *Augmentist*, I came to more questions about my role in this project. If I become another agent to evaluate artworks, would it be a real "democratizing" public space? Or is it another filter for new artists in the long run? As established personae of design are displaced in contemporary society, new questions are raised about responsibility and accountability. That is a critical question for designers today, to query their role and examine their own agency. It is a new relation to the social and political dimensions of design activity.

However, since this app specifically aims to democratize, thus the assigning decisions can be a sort of resistance to an authoritarian image of design. When a design is dislocated, it stages and curates rather than authoring and owning the design process. There is a spectrum between 'leave it to the experts' versus 'power to the people' that addresses the crossroads at which designers find themselves. I decided to examine the ultimate freedom for designers after this step, which then would be challenged in the limitation part of the conclusion.

Project 3: The Portal

Within the scope of Augmented Reality, I decided to create a virtual anti-monument to showcase in the second stage prototype. The magic carpet presented in this project was an attempt to bring tangible AR artwork to the scene of the presentation. The aim of this project was to amplify the subjective narrative of Iranian immigrants and for the audience to imagine their own subject for anti-monuments. Augmented reality was the proposed tool to bridge the gap between public space and technology's social benefits. This project was my first attempt to explore and experience the technical aspects of the central phenomenon.

I got fascinated by the idea of Anti-Monumentalism, which proposed representing the absence of matters in public space. This theory was a suitable match to emphasize AR's characteristics with a profound responsibility upon public space. It is an exciting matter that AR can act as an artistic medium that can pull the viewers out of the ordinary rational world and engage them within a digital space. On the same note, that is what Anti-monuments are also aimed to do; they could absorb us in their message, or the lack of it.

On another note, for the sake of this prototype, I had to choose the group of "voice," I wished to amplify in the city. Three leading voices were chosen after a work-in-progress crit session in the ideation stage: 1. Middle Eastern Immigrants 2. First Nation communities 3. African-American community. Despite the plan to engage these groups in public art creation, I chose to limit this project into one perspective, not attached to a specific space. I decided to visualize my reflections as a middle eastern immigrant, one of the so-called marginalized groups. In other words, I tried to reflect on immigration and social exclusion within the conceptual framework of anti-monumentalism in order to represent this phenomenon critically. Therefore I envisioned the Portal as a little mixture of realism and fantasy with a soft flavor of Persian culture (Figure 13).

By referencing one of the stories in the One Thousand and One Nights, I intended to explore my vision of the phenomenon from Iranian culture literature. It is written there that Prince Husain travels to Bisnagar in India and buys a magic carpet. This carpet is described as follows: "Whoever sitteth on this carpet and willetth in thought to be taken up and set down upon another site will, in the twinkling of an eye, be borne thither, be that place nearhand or distant many a day's journeys and difficult to reach" (Burton,1885). This story became an asset when creating the Magic Carpet and its characteristics. The Magic Carpet also presented a monument on top that was being moved. The monument was a figurative statue of Ferdowsi, the well-known Persian poet, and novelist, who was a symbol of literacy of Persian culture. This piece was to show the Persian culture being transferred to other space, critical opinion of the ever-increasing immigration from Iran.



Figure 13: Portable anti-monument in use. Photo by Author

The Process

With helpful suggestions from Sensor Lab of Concordia University, I chose Unity as the primary tool to create the AR platform, to enable the AR objects in public space in real-time, and in its precise geolocative position. However, as I was looking for something to be experienced worldwide, I used Vectary 3.0, an online WebGL based 3D modeling platform that could export USDZ files with the ability to augment spatially-registered virtual objects.

WebGL allows developers to put real-time interactive 3D graphics in the web browsers. This technology can be applied to interactive music videos, games, data visualization, 3D design environments, 3D modeling of space, 3D modeling of objects, plotting mathematical functions, or creating physical simulations (Caballero, 2020). With this tool, I could create anti-monuments in a typical graphic 3D software, but showcase it in AR via web link, capacitating more people to interact with it.

USDZ file format created by a partnership between Apple and Pixar, it was developed as an open file format. USDZ is a 3D file format that shows up as AR content on a website. (Apple, 2020) Despite the fact it was helpful for prototyping, it lowered the aesthetic attributes of the artwork by having a limitation of faces in 3D objects. Another example of limitations would be the compatibility with operating systems. If android, the USDZ file would be recognized only as a 3D object, and not a spatially-registered augmented reality object. These reflections on the process made me decide to consider Unity using Vuforia plugin for future steps.

For the sake of this prototype, I also chose "Rick and Morty" as a reference to the portable wormhole concept with an analogy to smartphones and the ability to augment 'other' realities. In this animated show, the protagonist Rick Sanchez uses what is referred to as a 'portal gun' as a plot device to travel through wormholes to different universes, dimensions, and realities. Wormholes are a popular feature of science fiction as they allow superluminal interstellar travel within human timescales.

The Portal was based on an analogy between Rick's portal gun and our mobile smartphone and their ability to augment different realities. Reflecting on this part, showed me that the more aspects you add to complement your concept, the more difficult the audience will experience. Also, describing this conceptual framework ended up using more time than needed, which affected the time people had to experience the piece.

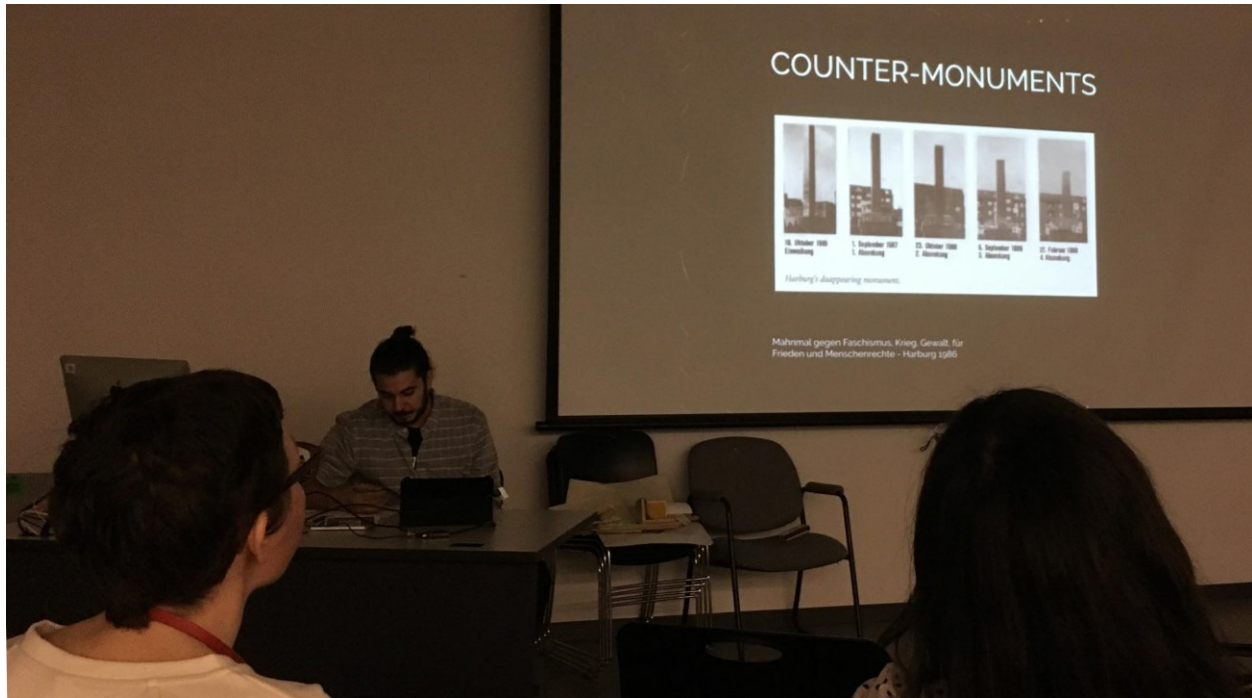


Figure 14: Presenting the idea of anti-monuments in crit session

In parallel to documenting the process, I had the opportunity to test the piece's desirability through different target audiences. To do so, I posted on my social media personal network of 2000 people. Eventually, 20 people wanted to take part in the documentation process, most of them were 18 to 25 years old, and all of them were iPhone users. That was the limitation posed by the platform. The plan was to send them the link, and they would screen record their very first impression with the Anti-monument in the space they were in. In the end, I montaged all these clips into a 2 minutes video uploaded on youtube and Instagram, showing different interactions with the piece. Besides, I asked each participant about their feelings towards the project, and with many of them being Iranian, the concept turned out to be tangible. However, the term anti-monument needed more explanation to be comprehended. Reflections of this kind of direct connection with an audience were fruitful in directing me into the conceptual framework.

Insights and Reflections

This project was my first attempt to create an anti-monument. After the session and through various meetings with the faculty, it was determined that the project required workshops to collect different perspectives from marginalized groups. The plan was to have several art-creation workshops along my Master's journey, to allow them to collaborate on making anti-monuments of their own through these workshops. In this plan, the art was created via Virtual Reality software by Google named Tilt Brush that lets the user paint in 3D space. However, this stage helped me realize that my question would require me

to design an AR platform, not anti-monuments. The final app could become a tool to collect and create rather than a medium for solely exhibit. This approach would also dislocate me as the facilitator/designer to only the creator of the platform, which lets the art happen with minimal interference and would ultimately democratize public space.

Also, by reflecting on the notion of anti-monumentalism, existing monuments in public space were a new focal point to explore, eventually shaping *PerspectivesApp*. In that sense, anti-monuments would be defined as events, performances, movements, and made objects. A platform to channel the existing anti-monument movements would become essential based on the current social and political incidents. These reflections helped me develop the next prototype, followed by many meetings and informal interviews with possible future users. Therefore, the question reflected from this iteration was,

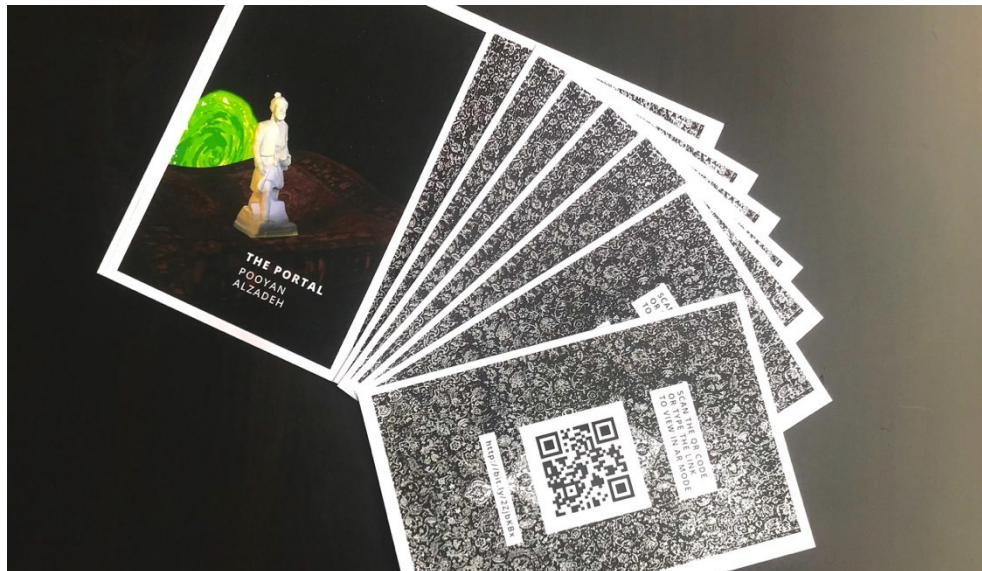


Figure 15: The QR code was embedded in design materials of the Portal. Photo by Author

What are the potentials of an AR-based platform that could collect and exhibit various viewpoints of what is absent from the City's landscape?

Project 4: Perspectives App Early Prototype

PerspectivesApp was getting shaped toward the end into an application that focuses on the existing monuments around the city, bringing different voices visually and audibly, using Geo-Locative Augmented Reality. At this stage of the app, users would be able to view and find monuments around them, when they reached the selected monument, they could view different monuments and anti-monuments upon the

memorial, and at the end, they would vote if the monument belongs to the city's landscape or not. This scenario was storyboarded and then showed in a video mockup that I made from the app and showed in the final critic session of master of design with the faculty. The interface and experience design was a timely process, and it contained different types of communication and interaction design processes.



Figure 16: Perspectives App early prototype mockup. Photo by Author

The Process



Figure 17: The logo of the Perspectives app designed by Author

At this point in branding, I had to choose a name and come up with a logo that shows all concepts in one word/image. *Perspectives* is revealing the concept in an innovative way. In Figure 17, imagine the very central circle, as the historical object (monument) and assume the two outline shapes are shedding light upon the object. These two perspectives are meeting at some point, and that's where the debate is happening, the momentum of reality. This app would work as a platform to create a dialogue between people, stakeholders, and designers. And the branding had to reveal that in the first impression.

While designing the icons, considering their function in the user experience, I designed a visual family for the icons that ought to be outlined, flat, and minimal. To visualize the idea of anti-monumentalism, the categorization of different types of anti-monument showed to be helpful. So, in general, I categorized the perspectives categories into four groups: (1) Oral history, (2) Indigenous point of view, (3) French point of view, and (4) British point of view (Figure 18).

However, throughout the process, the act of generalization revealed itself. The app's initiative was not to replicate the generalization of history in the public space, and yet it was doing the same mission. During an informal speech with one of my classmates, she said: "I was born in Canada, but my parents were immigrants from Britain, so I am basically British. British worldview doesn't necessarily go under the category related to British people. Maybe I want to bring the point of view a feminist into this work, and that kind of generalization suddenly could repel me". Due to that on-time honest criticism, I accommodated the idea into either monument or anti-monument modes (Figure 16). However, this kind of dual positioning would also be repelling if the comments could lead to hate speech. We will review this in the next chapter.



Figure 18: Initial categorization of icons. Designed by Author.

The Content

By observing the recent anti-monument movements in Montreal, I chose to focus on the monument of Sir John A MacDonal in Montreal. The City of Victoria recently took down their statue of Canada's first Prime Minister Sir John A. Macdonald, and since then, Montreal's monument has also been a target for vandalism. While he is best known as Canada's first prime minister and the man who steered the country from under English rule, Macdonald's legacy has a much darker side.

"We will remove the statue of Sir John A. MacDonal from the front doors of city hall so that the family members and other Indigenous people do not need to walk past this painful reminder of colonial violence each time they enter the doors of their municipal government", said Lisa Helps, mayor of Victoria, when announcing the plan to take down the statue (Daily Hive, 2018).

Therefore, for the sake of this prototype, I needed to develop two anti and two pro dialogs around the role of Sir John A. MacDonal in history. By studying the controversies around the monument, I asked two of my friends to help me with an idea from (1) an Indigenous perspective and another one from (2) a Quebecor. To address the first perspective, one of my friends, who is part of the indigenous community, proposed the stone stack idea to cover up the original statue (Figure 19). The idea was as if you wanted to

hide something on the beach, and there you would naturally cover up something under the sand, with a piece of stone upon it. Therefore, if you want to hide up something that big, you need a large stone stack to do that for you.

The other one, however, focused on the relationship between Sir John. MacDonald, and Louis Riel, "a founder of the province of Manitoba, and a political leader of the Métis people of the Canadian Prairies." He led two revolutions against Canada's government and its first post-confederation prime minister, John A. Macdonald. Riel tried to preserve Métis rights and culture as their homelands in the Northwest came under the Canadian sphere of influence. Over the decades, Louis Riel is now a "folk hero for Catholic nationalists, native rights activists, and the New Left student movement" (Google Culture, 2020).

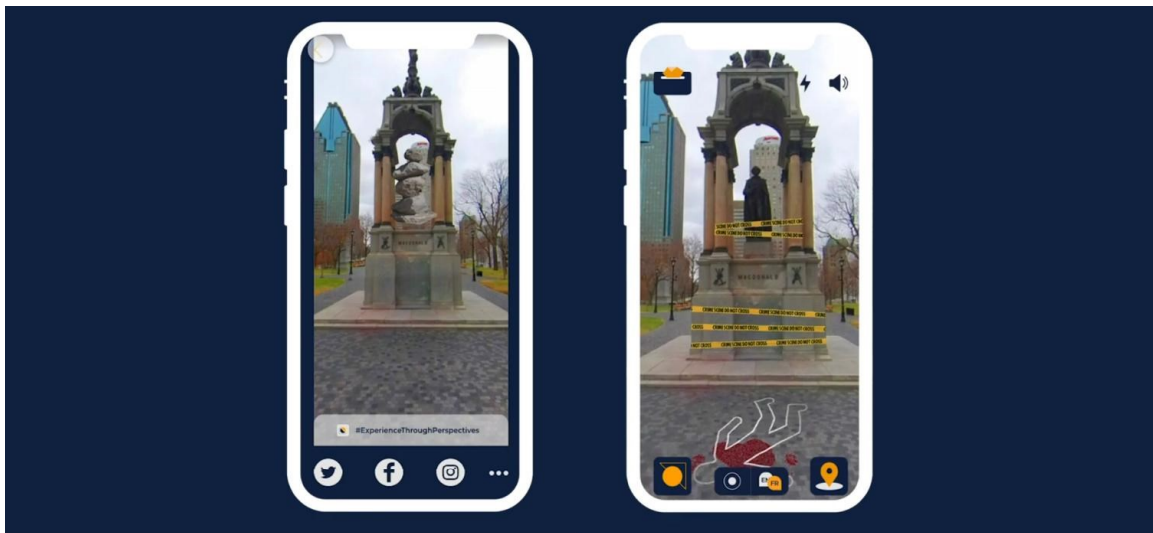


Figure 19: Two anti-monument concepts. Photo by Author

Therefore, another friend's suggestion for this piece was to replicate a crime scene that has been there permanently. In that way, it will bring up the question of metis right and pointing to the critical acts against Louis Riel. The audio narrated the controversies between these two historical figures and what Louis riel was aiming for Canada. Riel was seen as a heroic victim by French Canadians. It is believed that "his execution had a lasting negative impact on Canada, polarizing the new nation along ethno-religious lines" (Bumsted, 1992).

Insights and Reflections

I presented the early prototype of *PerspectivesApp* two times in February 2020: first in IDEAS.BE lab and once more in the crit session with the design and computations arts faculty and Concordia's master of design students. The feedback from both sessions was useful, and I enjoyed the formal and often informal

interactions. One of the comments worth elaborating was: "In your prototype, it only shows as if it is summer, could it also function in winter?" There is a hidden message in this question. How could people use the app in winter, wherein Montreal, the weather gets unbearable to even commute into the city? How could we expect the users to use the app then? I attempted to respond in two ways: (1) Expanding the target audience to a more global scale, so that *PerspectivesApp* would yet be used in other countries. (2) Considering other types of AR than geo-location so that the anti-monuments would be accessible even from home. The only problem with the second solution is that, if anybody, from anywhere, could comment on any monument, it could increase the chance of spam. One would take the chance and advertise their product, or one could imagine worse scenarios. This problem would be addressed thoroughly in Chapter 6. During the presentation of the idea, I faced the question,

"Who will make the anti-monuments?"

This question enlightened the research to How could an AR-based mobile application enable citizens to create Anti-monuments on location, as well as the ability to collect and exhibit perspectives? Fortunately, AR would augment any flat or 3D visual object as well as sound and text. This project encompassed all the previous creations to consult how the notion of social force via Augmented Reality in a mobile application was interrogated through a speculative approach, from a co-creating healing space to a virtual debate stage. Therefore, the *PerspectivesApp* is shaped as a place to debate as well as envision, that intends to be a place where the public space and democracy coincide.

Project 5: Perspectives App

This final prototype was an invitation to experience anti-monumentalism in a broader sense within global space. The User Interface (UI) and Experience (UX) attributes and sequence of the pages were inspired by the previous prototype derived from the prior stage's desirability test. In this prototype, anti-monuments were not limited to controversial monuments of only Montreal, and adding anti-monuments on location would be added.

As a result, by adding the option to add personal perspectives and generate anti-monuments, the user would not need to use third-party graphic tools. I started by categorizing the different types of media required for maximum expression. Categories included: (1) Image, to demonstrate flat visualizations (2) Video, to show the idea in multiple frames (3) Audio, to add your voice to the public scene (4) 3D object, showcase future monuments made by the relative artist. (5) The ability to comment with text and link has been added for the users, who prefer words to share their thoughts.

The process of engagement in re-envisioning the monument would have been much easier this way, and the agency of users in this approach would have a better engagement level. Such dislocation of the stakeholders has been thoroughly explored by the critical studies of critical design scholars such as Dunn and Raby, as mentioned in Chapter 3. From this viewpoint, the user could build their own reality of public space, maybe in complete contrast with the physical reality. The process of making and reflecting with such concepts enabled me to consider the process of creation with a more speculative approach. Such a process would bring more conversation in diverse socio-cultural contexts.

App Design

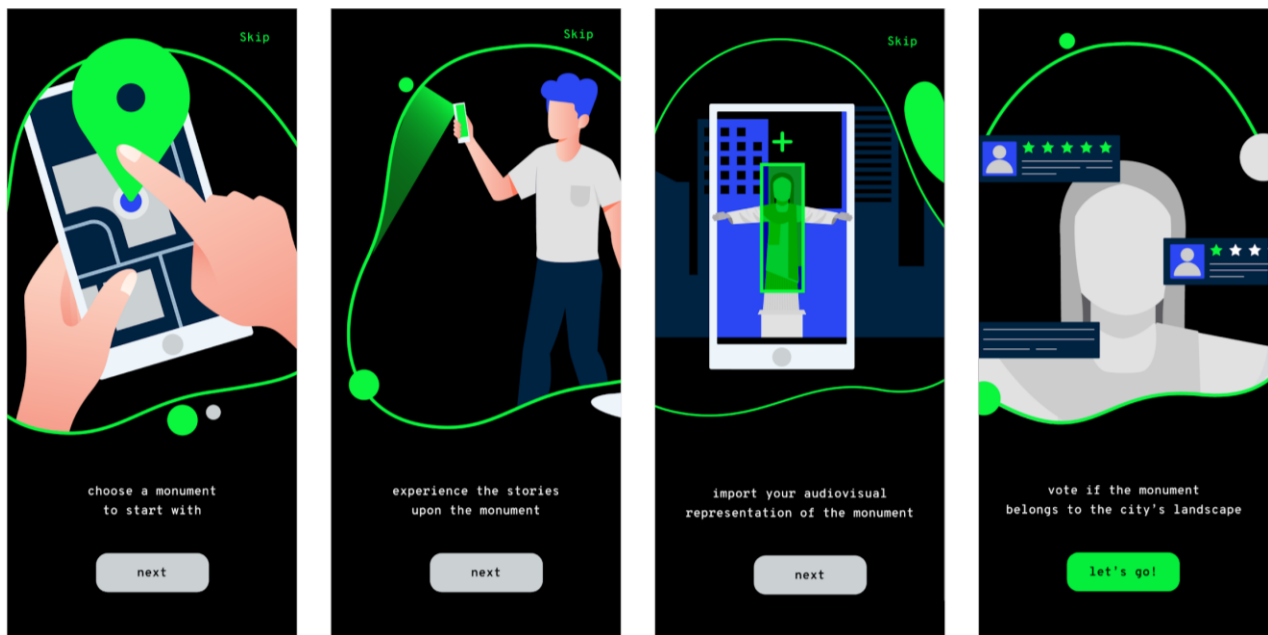


Figure 20: App's starting walkthrough. Designed by Author

The outcome is an AR-based application, designed and wireframed via Adobe XD, developed in Unity, accompanied with a Web database. The app starts by asking you a few permissions from user to allow access to (1) Camera, to be able to augment the digital objects using smartphone's camera (2) Location, to enable the geo-location features of the app, and (3) Notifications, which would allow the user to know when they have reached the location. However, this approach would take too much of the users' data and maybe decrease the engagement of users concerned about their digital footprint. Afterward, the app interactively informs users of what the functions are. (Figure 20)

It starts with choosing a monument on the map; then, reaching the monument will enable the Augmented Reality mode. In the main screen, users have the choice to either (a) vote for the monument,

(b) view the different anti-monuments (alternatives), or (c) create an anti-monument, or (d) record and share to social media. Users here could go back to the map to reselect a monument anytime.

Website Design

As the expo turned into an online exhibition, it was revealed that PerspectivesApp had to adapt itself to the digital presence. Therefore in the latest prototype, a polished website accompanied the app, as if the app is ready to direct users to the usual app stores such as Google Play, or iTunes App Store, or hopefully, direct downloading from the website. This step required me to take care of hosting and domain, considering the possible future use as a database.

Moreover, three main pages were designed: *Landing Webpage*, *Methodology*, *A Manifesto*. By using reflective practitioner methodology as an approach to document the related actions regarding the development of the application, I devoted a web page to *Methodology*. However, *a Manifesto* focused on the three major study clusters, the right to the city, decolonization of public space, and anti-monumentalism. Last but not least was a *Landing Webpage* illustrating the functions of *PerspectivesApp* for potential users. This page specifically consisted of four main sections as follow: (1) The opening slider 3D graphics, (2) The walkthrough illustrations clarifying the function of the application, (3) Quick link to manifestation accompanied with a motion gif that shows the act of “anti-monumentalism” (4) Quicklink to the “Make/Reflect” methodology timeline of the project.

Exhibition

The interstice exhibition was supposed to take place in April 2020 in the Anteism gallery, and the figure below shows my initial exhibition strategy (Figure 21). Unfortunately, due to Covid-19, and with the sudden official closure of Quebec, we shifted the exhibition into an online design research exhibition. Therefore, I will demonstrate the initial plans for the exhibition and the methodologies that I wished to achieve.



Figure 21: Exhibition space mockup. Designed by Author

(From right to left) When you enter the space you face, the different versions of the application design for A/B testing reasons. a QR code image will allow you to download the prototype and enjoy the tangible experience. Beside, a TV presented the application in use on a specific monument on a loop. Since the application required users to be in the location to trigger the AR, it was not possible to use the actual app in the exhibition. So this video would simulate the app's urban experience. On the other side of the space, there are more critical viewpoints regarding my literature and the methodology that took me there. On the screen, you would watch the process of this app being made; the video is available on YouTube to teach how to make the exact same app from A to Z.

Closer to the center of my space, I envisioned two iPads with perspectives app prototypes already installed on them. As to answer for the limitation of geo-locative, only for the time of the exhibition, perspectives app offers a prototype that will enable AR in the exhibition space. A mixed-media map would prepare the basis of the AR to trigger. The statue in the middle is first scanned by a plethora of photographs from different angles and generated a 3D object by Photogrammetry. Then the 3d object is printed and is part of the target to trigger the target-based Augmented Reality.

In the exhibition, I also had two options as for my method, to be utilized at this stage, (1) Graffiti Walls and (2) A/B initial testing that, unfortunately, I was unable to do due to COVID-19. Graffiti walls produce an open canvas on which participants can freely propose their written or visual comments about an atmosphere or an object, in the context of use or visit. "a Large-format paper is temporarily adhered to

a wall or other surface," with markers attached to a string (Martin, 2012). The canvas could be left blank, or a guiding question may be written to encourage comments on a specific theme. This method can be used almost anywhere, and for this project, I intended to select three of the most controversial monuments in Montreal, Canada, as mentioned in chapter four. This method is specifically useful for situations in which it may be "challenging to collect information through traditional methods such as interview or observation" (Martin, 2012). Respect for privacy or personal behaviors led to this gathering data tool.

A/B testing is a technique that allows you to compare two diverse versions of a design to decide which one gets you closer to a business goal. The tests are run by randomly assigning different people down two paths, the "A" test, and the "B" test until a statistically relevant sample size is reached. I chose to use A/B testing to compare two versions of the same design to see which one performs better against a predetermined goal. At the end of the test, you will be able to determine which design gets you closer to your goals.

Possible User's Validation

At this stage, I conducted a small survey to collect and embed possible users' perspectives in the app and recognize the next questions. Surveys are a method of collecting self-reported information from people about their characteristics, thoughts, feelings, perceptions, behaviors, or attitudes (Martin, 2012).

In total, 27 people took the survey, and some insights could be taken at this stage. 56% of the respondents were in the age range of 25 to 34 years old; 29% were from the range 18 to 24 years old. 56% of the respondents were female, and 44% were male. In terms of the occupation, more than half the respondents were students, as seen in (Figure 22). The respondents added three new options to the list of occupations: (1) "Self Employed" (2) "Ph.D. Student" (3) "Student Intern (Employed)." In terms of the respondent's country, 17 were residing in Canada, 7 in Iran, and one from the USA, UK, and Turkey each.

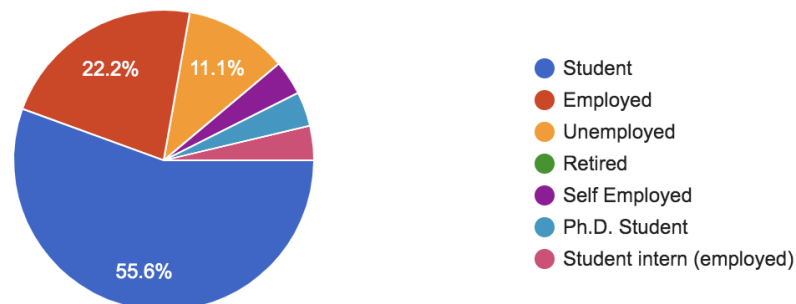


Figure 22: Occupation pie chart. Extracted by Author.

Then, I started by asking some general questions about their relationship with the monuments. The question was, “what specific reasons made them appreciate monuments.” Interestingly, two options had 17 (63%) votes, (1) Aesthetic and architectural features, and (2) Remembrance of historical events and figures. The next option would be the personal memories associated. One other option was proposed by a respondent, which was “catching attention when not expected.” (Figure 23)

The next question asked about the function of monuments in the city, and it was a multiple-choice question with the chance to add other options. However, the options seem to be sufficient, as nobody added an option. Most respondents supposed that monuments represent a symbol for the city or commemorate an important event of the past. The least chosen function was to help them navigate through the city. Also, 11 (40.7%) of the respondents thought that monuments “are educating them about history,” and they are used as “urban decorations.”

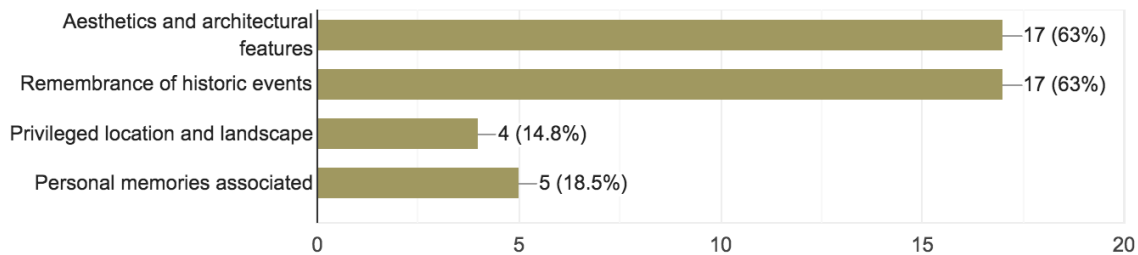


Figure 23: Appreciation of monuments bar chart. Extracted by Author.

The next question was in consideration of recent global protests, "what is the best way to deal with these controversial monuments?" By asking this question, I was hoping to get statistics on Perspectives apps' future steps in terms of critical approach. The most preferred options were to "move them to a museum" and the "preserve them in the same location." The second rank with 6 (22.2%) respondents was to "replace them with more inclusive design." Other options such as "demolish them" or "alter them" and four added votes only had one vote each.

In this question, respondents could only choose one option because the focus is the word "best." However, two respondents added their own options as a combination of existing options. Here is an example, "Move them to a museum AND replace them with more inclusive design," following a logical sequence of actions regarding controversial monuments. There were also two other options added. I found interesting "Educate people on why our view of these figures are being reconsidered," highlighting the role of education that Perspective App could enable. "Purpose of a monument is to honor some historical figure or represent a historical event that has a good impact on society; thus, its nature is subjective. I believe that

some of them should be demolished and some not. First, we should discuss their impacts, and after that, based on a public forum, we should decide what to do with them."

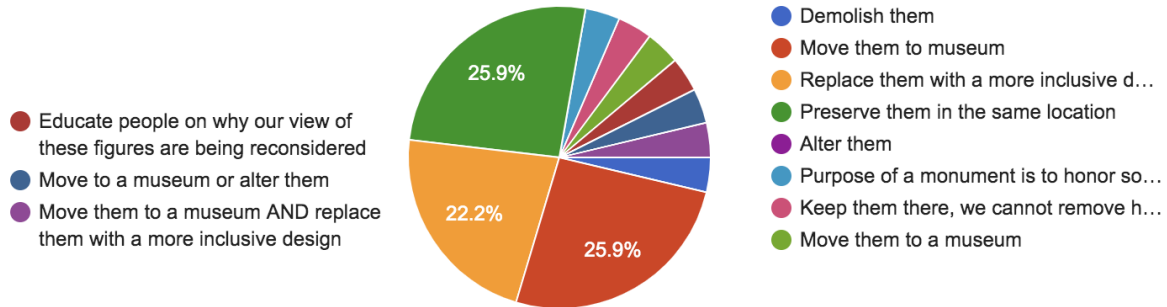


Figure 24: Best way to deal with Controversial Monuments. Photo by Author

The next one was a multiple-choice grid that asked ten questions on digital habits and concerns of the respondents. They could choose between the polarity of strongly agreeing to disagree strongly (Figure 25). Most people disagreed with the statement that "cannot leave without the Internet." By looking at the next chart, we will understand that more than 50% of the respondents actively use navigator apps to themselves in the city. In the next bar chart, we observe that disagree with the notion that the digital realm cannot impact the physical world. That would mean that people would welcome alternatives in the digital realm to change the physical world. One of the fascinating answers is revealed in the next chart. More than any other question, people agreed on the fact that AR can be used to re-envision monuments, which is an excellent sign for the Perspectives App. As seen in the 5th chart, respondents were neutral in deciding if social media-driven movements are temporary matters.

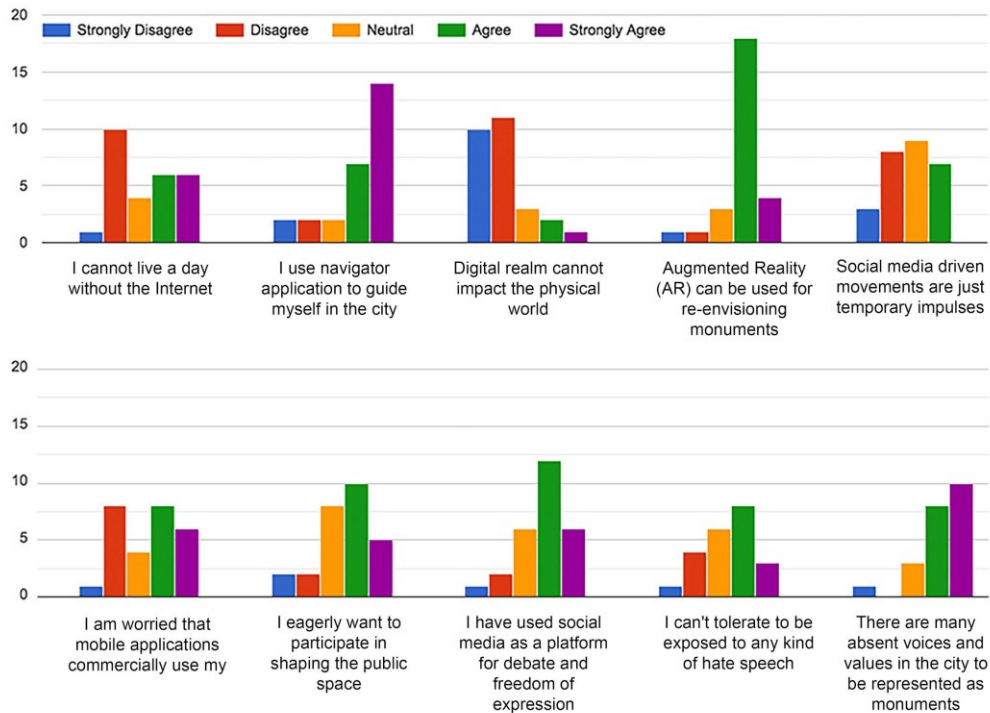


Figure 25: Bar chart generated from the grid multiple choice questionnaire. Extracted by Author

With a bit skew to strongly agreeing, the next chart showed that almost half the respondents were worried that mobile apps were selling their data. In the 7th bar chart, either people wanted to participate in shaping the public space eagerly or neutral, which was an interesting fact. As shown in the next chart, a high percentage of people have used social media to debate and enjoy their freedom of speech; however, from these people, many more agree to the fact they cannot tolerate any hate speech. The last question approached to see if the respondent agreed that many voices or values are absent from the scene of public space, like monuments (Figure 25).

As well as the quantitative nature of this survey, I attempted to ask two critical questions in a qualitative format. The first question was, "Is there a specific monument in your city's landscape that you would want to replace? Which one?" Five people did not answer this question because it was not required. About nine people either did not have anything in mind or had a dot or just written nope. It was not obvious that the question was optional. However, eight people responded with their target monuments to be taken off, 3 of them were addressing the controversial John. A MacDonald statue, as explained thoroughly in Chapter 4. I chose three surprisingly long answers, as they have an interesting perspective.

"Some modern-looking monuments are just too abstract for the public to understand, I wish there were at least an information panel to help us understand the purpose of feeling the artist is trying to convey."

This showed the uncertainty alternatives that are replacing the controversial monuments." This subject is one of the opportunities for future studies. The second input was "Any monument related to a religious figure or war martyr." which denied the memorialization of war figures in the city. "In my opinion monuments are cursors to past events and history of places and help us remember the past and should not be touched, but some modern monuments built with no specific reason could be replaced with something representing a society-wide accepted thought or a recent event." This was an intriguing comment pointing to the other monuments of the city, legacies of modernism in public art.

The second qualitative question asked, "Imagine you have the chance to decide on a new monument in your city, what value or concept would you like to represent?"

This part directly reflected on the concepts that more people feel emotionally connected to them. For example, multiculturalism, love, unity, equity, and togetherness were popular ideas. Some were trying to give a chance to communities with fewer opportunities to express, such as "immigrants" and "minority artists. "However, three respondents mentioned "COVID-19 victims" and "heroes who sacrificed themselves for COVID-19," and one elaborate on the same concept: "I believe every monument represents an important event of its time. Today's new monument will have to be some statue representing the nurses who have spent countless sleepless nights fighting COVID-19."

Chapter 6: Reflections and Conclusion

Within the boundaries of its concept, *Perspectives App* asks users to search the alternatives to monuments in urban space. This project attempted to address the following question: *How could AR-based anti-monuments pose as alternatives aiming to democratize public space?* Inspired by similar critical design projects, the core concept has been formed and developed in response to various personal and political paradigms. The design process of the *Perspectives App* was critically influenced by current social issues, established theories, and reflective design insights. Through various prototypes, the concept of social engagement in public space decision making has been explored via collaborative art with specific focuses on different levels of participation.

In *Transparent Toolkit*, I studied the concept of participation more thoroughly by creating and observing a collaborative session to encourage collective expressions. In *Augmentist*, the idea of citizens' participation was investigated by an AR platform that enabled them to create and install public artworks in a digital realm. In such a context, it was essential to bring equity to the field and evade the elitist point of view that the galleries desire. The exploration continued by investigating some of the overlooked rights to

the city, in the context of public space, and looking into the recent social movements with a lens of speculation to urban life.

In *the Portal*, an early augmented reality anti-monument was produced, tested, and documented by possible future users' collaboration. This project defined its aim to imagine public space that could be redefined by new social values to prevent monotonous reality. In addition, I tried to utilize marginalized perspectives for a conceptual framework in this prototype, and at the end, brought up the need for a neutral and unbiased platform. The research process coincided with ongoing debates about city, memory, and what the existing monuments are presenting.

Perspectives app designed in this dissertation tries to act as an agent in the continuous debate about the potentials of technology to implement Right to the City for spatial equity. In such an innovative context, the user could gain the chance to co-create the public space as a shared quality in our urban lives. Therefore in this project, the idea of anti-monumentalism would ultimately preserve the monuments by being open to the idea of altering or replacing them with more comprehensive designs. We could ultimately move the controversial monuments to museums, to be remembered for their advantages and flaws. By reflecting on the memories that are absent from the city, anti-monumentalism could broaden our horizons toward more commonly admired concepts. According to these disputes, we are building the city not only for the present but also for the future.

Described below, several unique reflections on the research-creation are provided to address my own research questions, simultaneously raise new questions for interested future app designers that address monuments.

“What would be an alternative to controversial monuments?”

The choices could vary from radical responses like demolishing them to more conservative solutions such as moving them to museums and replacing them with monuments that represent inclusive social values. On the other hand, people were concerned that some modern installations and memorials do not convey a concrete meaning, and they were looking for more contextualized methods. Some responses to the survey at the end of Chapter 5, brought up the fact that people would enjoy the same traditional approach to monument design, figures with a heroic pose, but for other classes of the society, like one of the most popular ideas concerning the more recent pandemic, COVID-19. With its inevitable consequence, this pandemic puts more pressure on people related to medicine such as doctors, nurses, and others that are at the forefront of fighting with COVID-19. Kudos. This would also be an act of anti-monumentalism in such context and function by bringing up personal interpretation of human history. Much like the Holocaust memorial, COVID-19 is something to remember but cannot propose to be aesthetically delightful. “That

beauty should come from such an event as the Holocaust would be another path to false comfort and, consequently, a lie” (Young, 1992). However, does this type of figuring work as anti-monuments? What would be attributes of potential anti-monuments in regards to current social values? These questions would be a possibility for future interested researchers to study.

“Could *PerspectivesApp* be used as a method to collect data?”

As one of the reflections upon the application, *PerspectivesApp* could be a method to collect various viewpoints on monuments. However, monuments are only one of the potentials of public space to be investigated via Augmented Reality. Other elements, such as streets, buildings, abandoned urban spaces, could be the focus of similar critical projects in urban planning. It could also gather oral history about locations and elements that are mostly neglected, with an analogy to the theory of imageability of a city proposed by Kevin Lynch. Whatever element that affects the legibility of the city seems like an excellent opportunity for future researchers.

Eventually, If enough perspectives and alternatives from people are collected, this app may act as a mediator to institutionalize social demands and make a change in the policy. This is a unique opportunity to bridge the gap between authority and citizens. *PerspectivesApp* also has the ability to document the colonial attitudes that remain to affect and form society. This app provides a method to collect information and data on attitudes.

“How could a colonized tool decolonize?”

This discussion had been brought up two times during the critic sessions with concordia faculty in two different forms. In the early prototype of the *PerspectivesApp*, the question was more concerned on decolonizing public space. And one question was how would you decolonize with a colonized tool? However in the final prototype this question widened into bringing all kinds of perspectives and with no focus on decolonization. (1) One reason was that decolonizing would become the opponent of colonization, and this kind of polarity is something to be prevented by design. However the question still stands in the final product, since colonization is where the users are; the smartphone. In our new social structures, using mobile apps smoothen many of our activities and this project tries to find the answer to the problematic environment to increase accessibility.

(2) The app has to get people's emails to let them comment which would prevent spamming and hate speech in some cases. It also asks them for permission of camera, location, and notification which could act as a threat to the privacy of users. Users might suspect their data in many ways could be used for

commercial purposes. Informed consent provides a critical protection for privacy, and supports profound social values such as autonomy and trust. Yet currently there is a mismatch between industry practice and the public's interest. According to a recent report from the Federal Trade Commission, 59% of sites that collect personal identifying information neither inform Internet users that they are collecting such information nor seek the user's consent.

“How would you define the line here between hate speech and freedom of speech?”

One of the productive reflections on the final prototype was the capacity of this app to facilitate dialogue. Dialogue democratizes. Nevertheless, it could unintendedly destroy communication. Hate speech, racial comments, misinformation, and spamming are examples of attitudes that might occur in the app. By being able to express freely, in different formats, such as image, video, sound, and comment, it would be possible that this app could be used to bombard different forms of hate speech. As a matter of ethics, to what extent should we allow freedom of speech?

We see a lot of racism and other phobias around the world, including rising anti-Semitism, anti-Muslim hatred, and persecution of Christians. Accordingly, social media and other forms of communication are being exploited as platforms for dogmatism. With all these advocacies of hatred worldwide, How does racism operate? Indeed, where is the line between free speech and hate speech? Who gets to decide? Hate speech is a particularly tricky concept to define. It is even harder to explain if we consider racialized political speech widely tolerable through mainstream media. What is the ultimate way to combat hate speech in this application? According to Nadine Strossen (2019), "Censorship of hate speech, no matter how well-intended, has been shown around the world and throughout history to do more harm than good in actually promoting equality, dignity, inclusivity, diversity, and societal harmony." With all that being said, is it possible to combat hate speech not through censorship, but preferably through more speech? Is freedom of speech the ultimate tactical accomplice of hate speech? What are the critical commitment strategies an online platform should follow to allow freedom of expression with no censorship needed? These are some questions as future steps of this research.

“How does *PerspectivesApp* position itself to hate speech?”

As with any social media platform, it needs to be resistant to hate speech and spam. Otherwise, it would cost users' engagement and eventual abandonment of the platform. One approach would be to study the strategies on hate speech of more popular social media platforms and develop a strategy guideline. As an example, UN's action on hate speech suggests: (1) Monitoring and analyzing hate speech, (2) Addressing

root causes, drivers and actors of hate speech (3) Engaging and supporting the victims of hate speech (4) Engaging with new and traditional media, and the list goes on (Pejchal, 2020).

This is a good opportunity for interested researchers to pursue. Though threats or harassment disproportionately impact those vulnerable to discrimination and "hate speech," not all threats or harassment will necessarily be bias-motivated or characterized by hatred. To adequately address hate speech, we need first to identify hate speech that can be restricted in the platform and distinguish it from protected speech. Second, identify the positive measures available to counter 'hate speech'? Third, we need to categorize types of hate speech that should be prohibited, and by which circumstances? With all that being said, *Perspectives.App* acknowledges the counterproductive outcomes such as hate speech.

To conclude, this research-creation was initiated with a single question; however, it finished with many more. In speculation, posing various questions as a method has its essential impact on the subject matter. Through these speculative questions, one can create their own perception of public space, in attunement with the values of all ethnicities, races, and social classes.

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Appendix

City and Memory

Hello,
Thank you for taking this 6-minute survey.
The purpose of this questionnaire is to collect data about an upcoming AR application that aims to democratize public space. This data will be used only for academic purposes, so your answers are confidential.
Your time is much appreciated.

What is your name? (Optional)

Your answer _____

What is your age group range?

Choose _____

What is your gender?

Female
 Male
 Prefer not to say
 Other: _____

What is your occupation?

Student
 Employed
 Unemployed
 Retired
 Other: _____

What country do you reside in?

Your answer _____

Next

City and Memory

*** Required**

Monuments

Oxford Languages defines monument as: "a statue, building, erected to commemorate a famous or notable person or event."

What do you appreciate in a Monument? *

Remembrance of historic events and figures
 Personal memories associated
 Aesthetics and architectural features
 Privileged location and landscape
 Other: _____

What is the purpose of a Monument in your opinion? *

Commemorating an important event of the past
 Honoring someone important
 Navigating through the city
 Representing as a symbol for city
 Educating me about history
 Urban decorations
 Other: _____

Considering recent global protests, what is the best way to deal with these controversial monuments? *

Alter them
 Replace them with a more inclusive design
 Move them to museum
 Demolish them
 Preserve them in the same location
 Other: _____

Is there a specific monument in your city's landscape that you would want to replace? Which one? *

Your answer _____

Imagine you have the chance to decide on a new monument in your city, what value or concept would you like to represent? *

Your answer _____

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I have used social media as a platform for debate and freedom of expression | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I eagerly want to participate in shaping the public space | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am worried that mobile applications commercially use my data | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Social media driven movements are just temporary impulses | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| There are many absent voices and values in the city to be represented as monuments | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I can't tolerate to be exposed to any kind of hate speech | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I cannot live a day without the internet | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Digital realm cannot impact the physical world | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Augmented Reality (AR) can be used for re-envisioning monuments | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I use navigator application to guide myself in the city | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Figure 26: Survey designed with Google Forms. Designed by Author