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Meta Mosque

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              associate.advisor ("joshua rodenberg")
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MetaMouque

Envisioning the Mosque as a Virtual Public Space

ACKNOWLEDGEMENTS

I thank God Almighty for giving me the strength to complete this research. Without Allah's assistance, I would not have been able to finish this work. Words are not sufficient to express my deep gratitude to my committee members whose persistent inspiration, enlightening remarks, and thoughtful supervision assisted the completion of this proposal and made it possible. I would like to express my deepest gratefulness and true love to my dear family, in particular, my father, mother, sisters, and brother whose support has sustained me through the years of my graduate study, and to whom I sincerely dedicate this proposal.

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ABSTRACT

Historically, the mosque was not only a space for communal prayer but also a place for building a community. Today, however, with conflicts and diseases fragmenting society, people are less able to gather physically in large spaces. Out of necessity, people rely increasingly on technology to get together and interact virtually. In this context, my research challenges the notion of the mosque as a physical space, proposing, instead, its extension into virtual space. Recent global events pose the question: Can the metaverse offer an opportunity for the mosque to reassert itself as a public space. I propose that a MetaMosque can facilitate vital, spiritual and communal functions—similar to a physical mosque—creating a sense of belonging and unity across social and physical boundaries. Rather than replacing the traditional mosque's capabilities, the MetaMosque attempts to extend them, forming a virtual public space and encouraging a more accessible and inclusive virtual society.

INTRODUCTION

- INTRODUCTION
- PROBLEM STATEMENT
- DELIMITATIONS

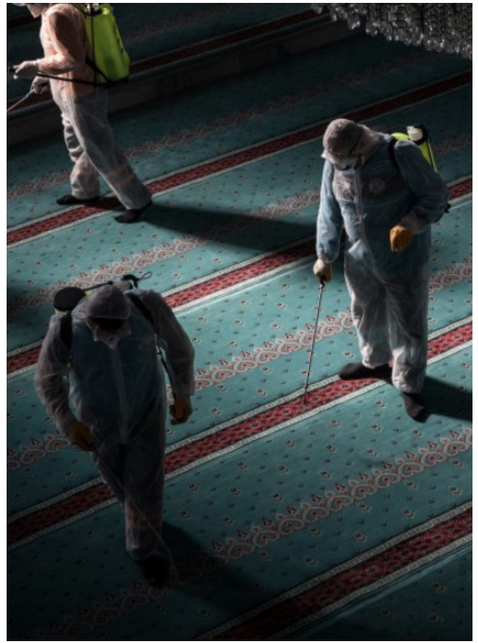

Figure 1

INITIATION

War and hostility among people were the last memories I had of Syria before leaving in 2013. I left with hopes to find unity and togetherness in an attempt to decrease the animosity I had carried during the civil conflict. Moving to Qatar brought peace and safety mixed with feelings of alienation. I later moved to Cyprus for my higher education, still on the hunt for that sense of community; however, my search was fruitless during the years I spent there as Cyprus itself is divided by a physical border with two sides in conflict. Consequently, I concluded that social division is a global issue that people cannot escape. Yet, with all that division, technology has allowed us to stay within each other's reach via writings, pictures, videos, and so on, in return to feel connected virtually.

We are in the era of constant communication, which is supposed to reflect how humanity can connect, but ironically this era bears all the features to be the "bloodiest" time in the human history as Dr. Mohammed Al-Aboudi refers to it (the age of blood)[1] where we are growing further apart from one another. It is impossible to deny or disregard the overwhelming accomplishments achieved within all fields of technology. However, this technology also enabled the world to go through one of the darkest times in history, in which social cohesion was one of the many victims and "mass alienation" emerged as communities started to disintegrate.[2] With the addition of the pandemic that struck the world, this scope of isolation was stretched even further, contributing to greater levels of disunion.[3]

If technology continues to grow at this current pace, it is most likely to witness an increase of conflict, wars, and alienation, that being internal and external.[4] The digital world is now an integral part of people's lives rather than a privileged addition. Today people have the ability to activate and access virtual public spaces through online meeting platforms, it is also possible to bring people together and rebuild a sense of community and collective living, where people meet to share spiritual and social connections.

PROBLEM STATEMENT

Globalization, the rapid growth of communications technology, and the pandemic caused waves of isolation. Humans, in fact, face challenges to handle the accelerating flow of technology, as it can come across as overwhelming.[5] Henceforth, the same technology that separates people could also bring them back together.[6]

Figure 2

In the light of using technology to society's favor, it is clear that these technological additions will become a crucial part in enhancing public spaces in communities.[7]

Today the mosque is associated with Islam, but this is not the original role of the mosque. Historically, the mosque was a gathering space for all people, Muslims and non-Muslims, where they could meet, intermingle, and share time of spirituality and social connection.[8] The original mosque was far more than a five-minute prayer room. As the world continues to prosper, religion spaces can simultaneously adapts to life's evolution. Henceforth, the composite of religion and technology can be significant in its outcomes, when challenged to redefine the opportunities the hybrid can produce together.

From a hadith of Sahih al-Bukhari, the Prophet Muhammad (PBUH) explains: "The earth is a place to pray",[9] So, it becomes evident that Muslims can practice prayer any time at any place. The mosque, in its portable functional sense, is a declaration of Islam and it is rare to happen in any other religion to move the place of worship to where people are. That is to say, anywhere can be transformed into a flexible praying space, whether in the middle of the desert or on a boat in the ocean.

The future of the social life of the internet, from mobiles, personal computers to virtual reality and augmented reality, is also able to break the boundaries of what was once impossible within physical realities. The new virtual social life manifests the internet to become a digital place accommodating human needs within its digital world. The aim of this thesis is to explore the opportunities of re-imagining the mosque as a strong social virtual space that connects people of shared purposes together, strengthening communal networks. Taking some of the typological features of the mosque and using them in an extended immersive reality intends to create a new dimension of enhanced, yet adaptable, public space. Within the MetaMosque, physical dimensions no longer restrict the power of social interactions, and instead, a higher dimension is ignited for a deeper connection at any time and any place; all under "a mosque".

The initiation of this project begins with a comprehensive literature review that is expanded with the support of precedents, the case study previously described, and the overview of results to be obtained. Before that, however, the delimitations of the study are presented below.

Figure 3

DELIMITATIONS

This investigation recognizes that technology can disrupt social connection between people, but that is not the focal point of the study. This work shines design and analytic scrutiny on utilizing technology to enhance positive human connection and facilitate community building without spatial limitations. Second, this research revolves around communal activities post-prayer; hence, this thesis will not involve the prayer action itself and the holy rituals of the Islamic practice during the prayers. Third, questions of funding and locations of the MetaMosque across Qatar and beyond are not considered in this preliminary study. They may comprise the basis of future work in the area. Fourth, detailed investigations of gender, social class, ethnic differences, and accessibility issues are also beyond the scope of this study except to say that the MetaMosque may have the potential to help bridge at least some of these gaps through accessibility of the VR mosque experience. Finally, this thesis has been carefully and comprehensively researched, but the design is nevertheless speculative in nature. A finished product for public use has not been formally constructed and prepared.

THEORETICAL BACKGROUND

- LITERATURE REVIEW
- PRECEDENT STUDIES

LITERATURE REVIEW

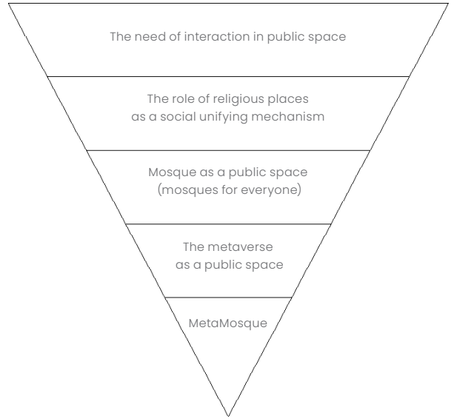

Figure 4: The Theoretical Framework Built on an Inductive Method. Source: by Author.

Figure 5

The need of interaction in public space

"O mankind! We created you as male and female, and made you into nations and tribes, that ye may know each other». [10]

Public space is a reflection of people's togetherness; in fact, it is a place of celebration of individual thoughts, cultures, and backgrounds coming together in a safe common setting.[11] The preservation of public spaces is of utmost importance, especially when existing in the current silicone age that's saturated with accelerated advancements such as high speed technologies and futuristic innovations.[12] Also, one must not overlook the nature of human interactions in a public space. Looking back through history, humans had initial attempts of social interaction subsequently around the fire, by gathering and commemorating coexistence. The medium of fire became a public space.[13] This celebration of coexistence adapted through time has maintained historical authenticity from the early circle around the fire to the evolved of the social gatherings for public events to the circumambulation around the Kaaba even before Islam.

For a public space to serve its function, it must be able to accommodate any form of interaction that is of small between two individuals or on a large scale between communities. A simple greeting is enough to trigger an action between two people and may grow into a deeper communication, thereby developing a stronger sense of interaction. Hence, a small crack in a person's bubble of isolation can encourage interaction between strangers.[14] This concept was studied in William Whyte's book "The Social Life of Small Urban Spaces", in which he he defines this crack that might happen in the isolation shells that people have in public spaces as *Triangulation*.[15] For example, a stranger in a bus stop might initiate a conversation and through this small gesture, strangers will no longer be strangers.[16] *Triangulation* requires mutual trust. "Generalized trust is widely recognized as important for both individual and societal well-being". [17] Studies have shown that communities with higher levels of trust tend to have lower rates of crime,[18] and their people actually are happier.[19] Trusting communities also have higher levels of economic development.[20] Noticeably, trust becomes an essential tool within interactive communities to perpetuate comfort and safety amongst each other. Ultimately, this reflected trust will lead to further development and unity.

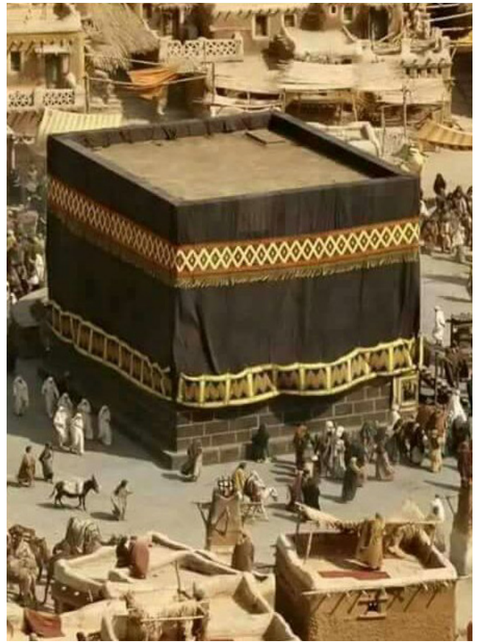

Figure 6

The role of religious places as a social unifying mechanism (a historical background)

This concept of being in one space with a common purpose was social before it was ever restricted to any religion.[21] However, religious spaces have often served as spatial facilitators of social interactions among people.[22] The repetitive yet evolved behaviour of human interaction through time can be evident in the holy *Kaabah* not only nowadays during the *Hajj* season but ever since the creation of Adam. *Hajj* is the annual Islamic pilgrimage to Mecca, in which Muslims from all over the world come together in one holy place all dressed as one in white humble cloths to perform the most spiritual series of rituals seeking for being all united, men and women of different nationalities and cultures, all gathered together under the banner of humanity, far from any classism and racism.[23]

In fact, even before the spread of Islam, the pilgrimage itself was of a high statue as people of the Abrahamic religions used the pilgrimage journey to meet, gather, and welcome others in cultural or commercial events of the season. The pilgrimage route does not only classify with the Islamic *Hajj* in *Mecca*, but is still practiced in Judaism and Christianity as every year pilgrimages compete to travel to Jerusalem, Palestine for sacred blessings and prayers. During those seasons and times, people are stripped of their name, status, and race, simply to be as a unified group with each other in one space to coexist for a shared aim.[24]

It is not possible anymore to depend on the *Starbucks-like* spaces to give a sense of public union yet perhaps it is possible to bring back the essence of what religious places once offered.[25] When first exploring the idea of religious places as social spaces, the thought itself would sound strange to many. The initial questions would be: How can something so holy in one's religion be classified as any secular social space? How can religious buildings become part of a society rather than on top of it? Nonetheless, when looking at the history of religious spaces, holy sites were much more than a place to practice a certain religion. Most religious environments were the only spaces to accommodate social gatherings, business meetings, schoolings, and even political encounters.[26] he significance of social spaces is reflected in settings from Medieval Piazzas of churches to the courtyards of mosques, all of which were designed for the service of people in large crowds.[27]

Figure 7

Mosque as a public space (mosques for everyone)

An interesting but often overlooked dimension of the mosque revolves around welcoming all people. In other words, mosques are for everyone regardless of their religious beliefs.[28] The mosque may be an Islamic symbol and a holy space for Muslims, but its influence carries a much deeper measure in society. "There are already areas where a prayer room or a *Masjid* is used by different faiths as a multi-faith space such as in Heathrow Airport", Mirza A.Baig mentions in an interview. In one of the recent studies done in two communities in Malaysia, it was observed that locales identified mosques as preferred public spaces within their own individual communities.[29] In fact, the results showed the mosque to be an accessible, comfortable, social space that is convenient to maintain social sustainability within their communities. The current research builds on these inclusive ideas and practices to advocate for the mosque to be re-introduced as a public space for people of all religions anytime anywhere, and a space for social gatherings, cultural events, and commercial meetings for the whole community regardless of the faith followed. In fact, the mosque becomes an unlabeled communal space shared by many people for various purposes, only set by boundaries in need to be respected.

One way to blur social boundaries related to religious spaces is through allowing and enabling secular activities in these areas designed for religious activities. For example, the role of the holy mosques, Islam's religious buildings known to host worshippers, is not just in unifying the Muslim communities religiously but also socially.[30] As a matter of fact, the mosque itself is the first house that welcomed people together under the union of a system, one that welcomes everyone. A verse from the *Qur'an*, the sacred book of Islam, reads that "The first House appointed for people was that at *Bakka*".[31] "And whoever enters it shall be safe".[32] Consequently, the prototype of the mosque evolved through history to serve more functions than just spiritual worshipping.

Historically, the mosque has been an institution for collective educational circles for communities where the circle itself is a symbol of perpetuating union: no social division of race, ethnicity, and financial standards. At the same time, the mosque has been an institution for social announcements and governmental decisions the Muslim communities follow.[33] In addition, the *Masjid* (mosque in Arabic) is not merely a symbol of the Islamic religion internationally, but most importantly a great influential factor for strongly and safely tightening the social network of the Muslim communities, especially in non-Muslim countries.[34] Indeed,

Prayer in the mobile mosque at Lusail, Qatar. Source: by Author.

Figure 8

mosques are appreciated socially on a greater level where Muslims are the minorities, as it becomes the community's center, aiding with the familiarization and the socialization of Muslims together within foreign communities.

Moreover, Basim Musallam, a philosopher and scholar, addresses the various types of a mosque existing to accommodate people. The first was the *Makka*, the prime mosque for all, followed by the *Jamih* mosque (the biggest mosque of the city) and, subsequently, the local mosque.[35] The form of each category of mosque contributes to its function. For instance, the word *Jamih* of the *Jamih* mosque comes from plurality and the gathering of huge numbers of people, while the local mosque (*Mosala* or chapel) mirrors the hosting of a smaller scale of people. However, the definition of a mosque is not restricted by scale or within four walls of structure.[36] Indeed, the idea of taking a mosque beyond the traditional framework and making it a flexible setting simply by having a prayer mat and the *Qibla* becomes a reflection of physical adaptability and space versatility.

Narrowing down the scope of the study

Creating a sense of community was always an interest for the people of Qatar, regardless of their faith. However, community change has become a matter of public concern amid intense development activities.[37] When studying the case of Qatar, one can see the scale of the global growth the country has undergone in comparison to its size over the last 20 years. However, despite extraordinarily rapid modernization and globalization within the Qatar, Qatari citizens were able to maintain their cultural traditions.

One can comprehend the social challenges found in Qatar, the only country with an expat-local ratio of 9 to 10, whereas 90% of the community are considered to be strangers, by definition: to be foreign in the country.[38] As Audrey McCollum mentions in her book "The trauma of moving", "When people move to a new place, a new country, their brains lose the working map of their life, and people usually have to start again from square one and make a new map, and it is not easy.[39] McCollum explains the significance of the social framework by: "Successful moving does not only depend on you, it depends on what the new community can do for you".[40] It is therefore beneficial for the host society to include various spaces of interactions for its people that allow for the heightening of communal social bonding.

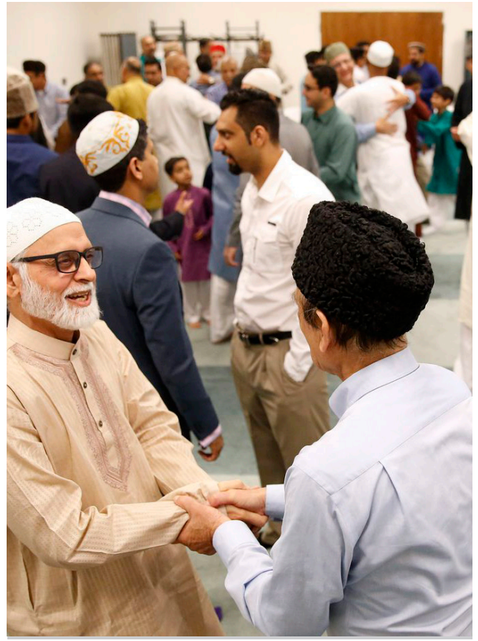

Figure 9

Adding a platform that promotes a social shift and avoids the division of people by labels or race is required to occur in order to achieve maximized socially unified and evolved communities. A social experiment conducted by E.T. Hall in his book titled *The Hidden Dimension* demonstrated the significance of positive social interactions even in non-humans.[41] If a traumatized lab rat is placed alone, it will maintain longstanding trauma symptoms; however, if the same rat is placed amongst others, it will return to normal after a few weeks. Returning to humans, Sebastian Junger summarizes his study of long-term Post-traumatic stress disorder (PTSD) with his finding that, "Relational trauma requires relational repair".[42] It is noticeable how the effect of social life reflects on a person's wellbeing, in which constant human/social interactions may even aid in solving mental or psychological issues of certain scenarios.

For all of the above, community change is inevitable and evolution is mandatory.[43] For people to coexist altogether in one public space, the boundaries that restrict public human interactions need to be blurred, if not abolished. Extending the dimensions of the mosque will contribute to communal union in the Qatari community as it always featured attributes of a *Majlis* (big gathering space) in a *Fareej* (neighborhood).[44] Many *Majlis* was and still is attached to mosque since people in the community were using the mosque as a gathering place for social activities post-prayer, its impact goes a longer way in the creation of stronger social bonds and communal networks because it is seen as part of the *Fareej,* part of their houses, a part they relate to everyday life and routines.

Figure 10

The metaverse as a public space

The need of public spaces is not only fulfilled by physical spaces, but also in the virtual space. The threshold between the physical and the digital public space has to be diminished, in which these two major forms of social spaces blend into one holistic experience. The term metaverse, meta as in beyond and verse as in area of activity distinguished,[45] arose in the early 1990s, as a method of public relations using digital spaces.[46] Neil Stephenson, in his sci-fi novel *Snow Crash*,[47] introduced the metaverse as a digital world explored with VR headsets.Over time this concept became fully integrated into the world of gaming and software applications, enabling people to become digital avatars who come together to socialize, build, explore, and play in the virtual beyond.

In this digital age, the smartest way to re-establish a united community is to make use of the social potentials present within people's reach wherever they are. Facebook, Instagram, and Snapchat are other examples of the current forms of a virtual metaverse in which people are able to bypass physical spatial limitations and interact socially. Facebook founder Mark Zuckerberg has proposed a new metaverse within which the virtual presence of people together will no longer feel virtual nor digital. According to Zuckerberg, people would be "able to do almost anything you can imagine get together with friends and family, work, learn, play, shop, create as well as have completely new experiences that don't really fit how we think about computers or phones today".[48] Zuckerberg's comments highlight the capacity of a virtual reality as a form of social space where people can engage with one another and in so doing, build a sense of community. So, this platform will be accessible for everyone as it accommodates not just digital names but also human feelings.[49] Zuckerberg uses the VR technology in order to stimulate a virtual and global society to present a method of digital public relations, indicating that the future of social interactions is expanding to comprehensively include various aspects of our lives into an immersive world.

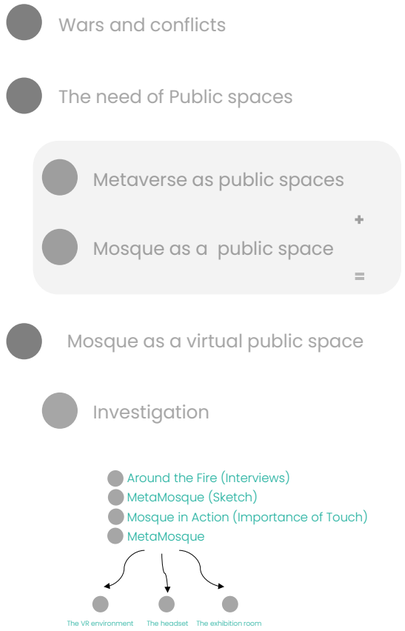

Figure 11 : the thesis hypothesis structure

Literature review conclusion

In conclusion, public space can be mainly defined by the type of interaction that occurs within a space. As the global cities continue to grow at a fast pace, social distance between people is growing respectively at the same time.[50] That slow isolation eventually will allow for losing the essential dialogue between people that reflects on people to space. The issue of isolation increased with the Covid-19 restrictions, leaving more people yearning for social interactions and public life.[51] For that reason, technology and specifically, the digital realm, can be utilized to bring people together socially despite geographic distance.

The future of the digital world undergoes constant development to grow further and explore the impossible, resulting in advanced possibilities for people to experience mixed realities and take part in more realistic interactions. Advancements like high-end headsets with built in eye, face, and hand tracking greatly enhance the immersive journey. This thesis' journey focuses on re-visiting the mosque as an interactive public space using the virtual immersive experience. Correspondingly, absorbing the fundamental yet historical social role of the mosque will be the core of the study that will evolve to allow the mosque to be technologically enabled. Case studies and further investigations will re-shape the intentions into more tangible research.

PRECEDENT STUDIES

- STRANGER ON STRANGER By Ryan Brenna
- FREE ICE WATER By John Freyer
- MOBILE MOSQUE By Qatar Charity
- THE CULTURAL CENTRE IN TIRANA By BIG

STRANGER ON STRANGER

Figure 12

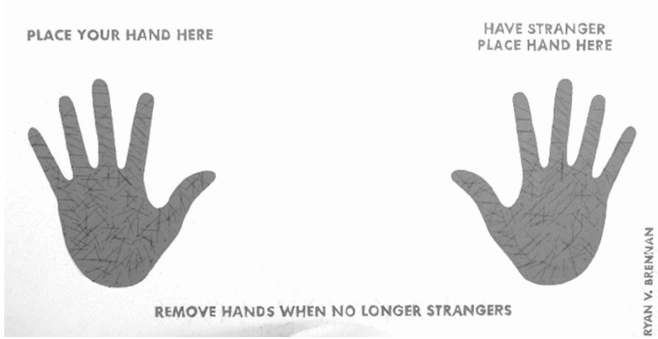

Figure 13

"Remove hands when no longer strangers" is an intriguing phrase that purposely serves to attract people. The poster "stranger on stranger", designed by the artist Ryan Brenna, is a street art experiment that interrupts two strangers' paths by instructing them to place their hands side by side on the poster. They are then allowed to remove them only after they have talked to each other and are no longer considered strangers.[52] Through this abstract link (the poster), it is not only possible for people to communicate with each other in a public space but also to engage actively with the surrounding environment.[53] The initial interaction will trigger a series of other interactions in return: a third person may get involved by observing, a fourth person by taking a video, and even a fifth person by getting encouraged to try it next. Naturally, it will take a lot of patience and commitment for people to wait for someone to join the communal participation and share this experience. However, with that in mind, the main principle of the work's success would be for this trigger to activate small initiatives from individuals. This experiment attempts to initiate social interaction which then creates consecutive social connection every time an interaction occurs.

FREE ICE WATER

Figure 14

Figure 15

Figure 16

Free Ice Water, a public event created by the American artist John Freyer, is an attempt to initiate meaningful one-on-one conversations in a public space. This social experiment uses the medium of a jug of water to be shared by two people as an act of intimacy. The jug of water becomes an object of affirmation between two people, serving as a manifestation of memory and remembrance as the two participants throw a coin in the jar, sign its cover and seal it at the end of their conversation. As the intention is to use that coin to sell the conversation, not the actual water, the jug of water becomes an object of affirmation between two people. In fact, the project relies on creating a setting for pairs to be seated together, comfortable enough to have one-on-one peaceful and undisturbed conversations about intimate critical moments in their personal lives.[54] Through this social activity, more senses are activated rather than just relying on the visual, thereby building a stronger connection between people and creating a longer lasting memory of the experience. This new trust that is gained between the two participants evolves yet into mutual feelings of safety and comfort, that is then reflected within that public space. As more and more people join and share their stories and affections, a broader communal engagement is facilitated, creating a united, socially active environment.

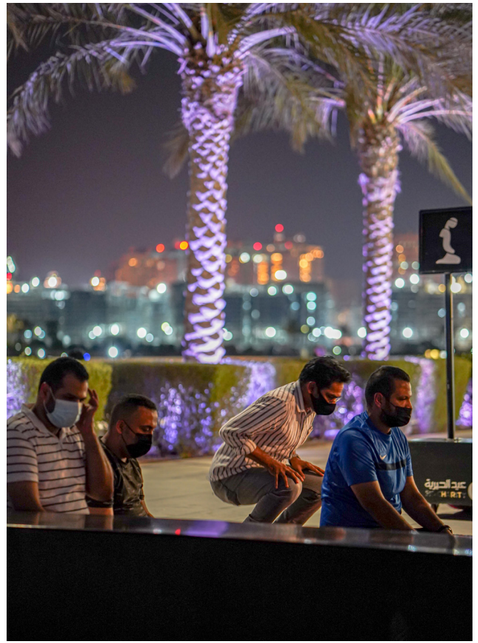

Figure 17

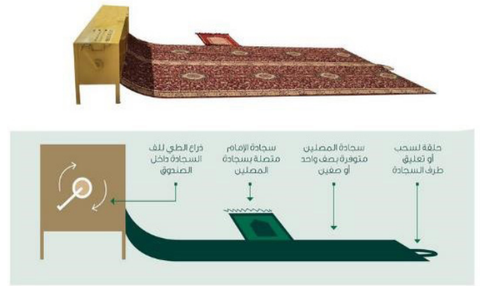

Figure 18

Originating in Lusail, Qatar, the theory of a four walled space with the name of a mosque was revolutionized into an absolute abstraction of place. The installation “Mobile Mosque” is a simple yet highly effective tool that can transform a relative public space into an individual, then communal, holy place, just by adding a box with a praying mat inside. The idea is that one person pulling out the mat to pray on the pavement will encourage other worshippers to join, building their own collective prayer space. It becomes a development of a free social gathering space. Mobile Mosques is an initiative that sparked a new understanding of theories in Mosque architecture and Utopian space accordingly.[55]
Especially in the current accelerated world, mobility has become a necessity rather than a luxury, evolving the society into a mobile, digital world. In addition, this interactive experiment led into further development in research fields of mosque architecture and its future. New theories of mobile or digital mosques using the VR technology are indeed becoming research of interest, as Dr. Hani Alhuneidi suggested in his lecture The Future Mosque.[56] In fact, these theories question how the future mosque can accommodate the sacred yet reflect the collective, while challenging what architectural elements can be kept and what can adapt.

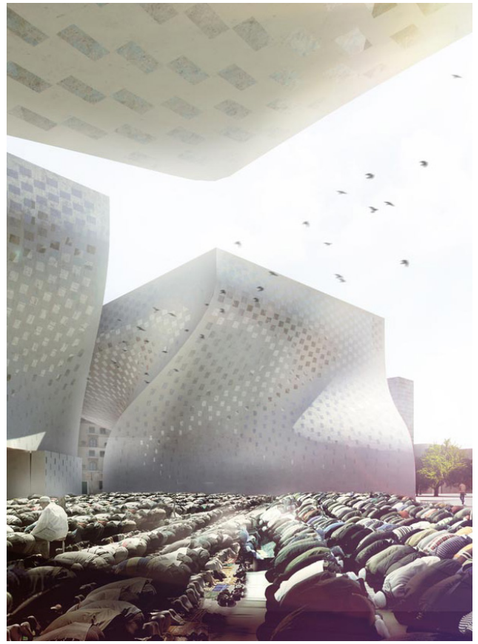

Figure 19

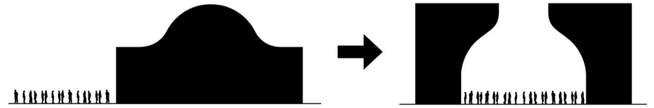

Figure 20

This case study lies in Albania, the pinpoint of intersection for three main religions altogether: Orthodox Christianity, Catholicism, and Islam, that has now new places of worship for all three religions accordingly. "Cultural Centre in Tirana by BIG" becomes an important symbol to accommodate the extended characteristics of a mosque.[57]

The architecture of the Cultural Centre consists of three buildings placed in a triangle, with one side facing *Mecca*. Each of these three buildings curve to embrace a huge public plaza, resembling the domes and arches of the Islamic architecture. This plaza has become an important public space that is now the site for new cultural activities including a mosque, a gathering space, and a museum; expanding the notion of a mosque beyond being a space for prayer only. In fact, the plaza becomes much more than that with its social interactions, cultural activities, and diverse experiences that gather people of all religions together under one curve. Not to mention that having the mosque turned inside out allowed for the public to become part of the mosque's program and qualities, included rather than excluded. This complex accommodates communities of various religions and cultures to "educate the public about Islamic values and serve as a beacon for religious tolerance". [58]

INVESTIGATIONS

- AROUND THE FIRE (INTERVIEWS)

- METAMOSQUE (SKETCH)

- MOSQUE IN ACTION (IMPORTANCE OF TOUCH)

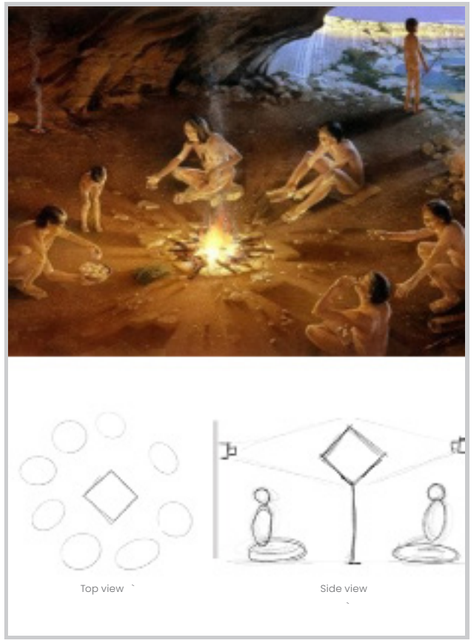

Figure 21

Wars and the global pandemic have once again highlighted the unpredictability of life. When the pandemic started, people did not know how long it would last, the aftereffects, or even whether a new wave of the pandemic might start again. With all that unpredictability, some people feel nostalgic about their basic daily routines that they now have no control over. My father, who prays in our neighborhood's mosque, misses the collective feeling it gives him. In fact, the praying act itself gives him peace, but the collective setting gives him bliss as everyone feels connected to one another in union. As he described once, "They are my other big happy family". In return, how can this strong social bond continue to exist and persist to be a piece of everyday life? One way to resolve this might be building a virtual new world parallel to reality and available to everyone.

The following investigations explore three themes that correspond to the evolution of the research in the thesis, all revolving around the core idea of community building across social and spatial boundaries.

AROUND THE FIRE (INTERVIEWS)

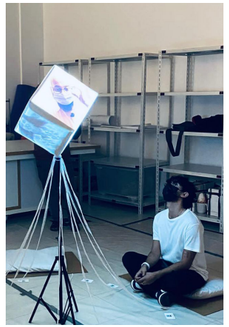

Figure 22

At an early stage of the research, several interviews with VCU's students and staff (all 20+ years of age) were conducted randomly to ascertain opinions on "the mosque as a public space in Qatar". Interview participants included frequent worshippers of mosques, people of the Muslim community, and non-Muslims. Interviewees highlighted the importance of the historical role of mosques in Qatar, and how their presence through time was and still is felt to be a monumental symbol of Qatar's culture and religion. Another interviewee mentioned the mosque as one place for all prayers, which she described more as a comfort spot than a place of duty. Lastly, an interviewee suggested the broader aspect of a "mosque as a community centre", in which the space is used to gather. He explained that the mosque is the place where he would see his neighbours, his nearby friends, and regular worshippers who were initially strangers but had become some of his closest friends.

Scan the picture with Artivive app to see an AR video for this section

Figure 23

These findings highlight how significant the mosque is to Qatari locals and Muslim expats. More specifically, it is the reminiscence of the mosque as a community space for social gatherings that reflects social unity.

Comments from these interviews were displayed in an installation as projections on a hanging tilted cube. Each interview is projected onto an individual surface of the hanging cube, allowing for viewers to go around in a circle following the surface in colour, and audio. The circular movement represents the idea of the first human public spaces: gathering around the fire in a circle. Furthermore, the installation is designed so as to form a united circle with white pillows assembled around the hanging cube. Each face of the cube projects one interviewee with colour and audio at a time, while the rest of the five faces remain muted in black & white until it is their turn to come alive. In this way viewers are forced to be active and kinetic, interacting with each other in order to experience the exhibition to its full extent.

A central theme of this thesis is the importance of community and corresponding sense of being part of a group. It is therefore imperative that these be manifested within the VR experience. Hence, the accessible virtual society the thesis aims to reinvent using the mosque becomes necessary, especially in times of global emergencies and long distances between people. In times of extreme pandemics such as the covid-19 or new abroad lifestyles away from home, there will always be the need and desire to attain a reachable connecting community amongst people whenever or wherever they are.

*Link for the interviews can be found in the QR code below

Figure 24

METAMOSQUE SKETCH

Figure 25

Scan the picture with Artivive app to see an AR video for this section

METAMOSQUE SKETCH
(TESTING THE MEDIUM TO BUILD THE WORLD)

Figure 26 : Metamosque branded headset

Another investigation during the research phase was testing the idea of creating a multiplayer platform as a shared virtual space where people could meet, share thoughts, and ideally, experience a sense of social connection. This version in beta testing was built using MultiBrush on the VR console “Oculus Quest”, a multiplayer version of Tilt Brush that is still in the App Lab. Using the technological advantage to build a virtual public space, the built model included named headsets and controllers rather than avatars within the space; thereby testing an environment where people can virtually meet, gather, or just hang out with others.

The multiplayer platform created in this project resembles a sketch model of an infinite environment. This conceptual sketch portrays the essence of the Islamic principles of practicality and humility by maintaining only one or two architectural elements of a mosque. The VR space breaks the spatial boundaries of a physical mosque by showing a limitless space with no walls or roof. It is solely based on user experience, targeting feelings and senses to be evoked. Hence, the sketch gives an initial idea of what types of interaction and forms of experience can happen within that shared virtual public space in VR such as talking to each other in gatherings, drawing together, and interacting in the immersive virtual community.

The VR headset itself was also used within the making of this experiment, to brand “MetaMosque” as its theme using a dissolved Islamic pattern that is 3D printed on the fabric taking the shape of the headset. In that sense, the headset with its pattern becomes a symbol of the Qahfiya, a traditional Islamic decorated headpiece worn as part of the culture and religion.

MOSQUE IN ACTION

Figure 27

Scan the picture with Artivive app to see an AR video for this section

MOSQUE IN ACTION (IMPORTANCE OF TOUCH)

Figure 28

The third investigation focused on the sense of touch through an interactive sensory installation that prompts the viewers to engage with one another. This experience allow users to move within the physical space while virtually visiting a virtual sketch model of a metamosque and interacting with 3D objects or other users using the sense of touch.

Touch as a sense is accentuated not only in the action of prayer itself as Muslims line up shoulder to shoulder in a prayer line, it is also experienced in after-prayer actions when worshippers shake hands and smile at each other in greeting. When a worshiper asks to join the prayer line, he/she touches one's shoulder as a sign of invitation to become part of the group prayers. To facilitate a similar experience in the virtual mosque, physical sensors designed into the installation were placed on the ground and on the pedestal in front of the participants. When two users physically touch each other, the sensory points will stimulate and moderate the intensity and electricity going through the hands of the participants. Resulting in the change in music and colors simultaneously corresponding to the action of touch. For example, as one grasp another›s hand as a gesture of greeting firmly and excitedly, lights, music and color increase in the installation accordingly. In short, the main aim is to focus on the immersive virtual world and overlook the reality. Further proposals of implementation in physical mosques will in return highlight that touch such as in greetings not only sustains its significance in the real world but also extends to the virtual one.

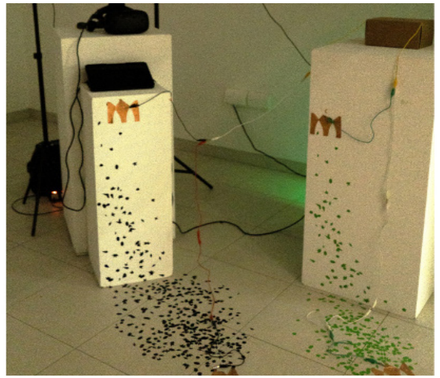

Figure 29

THESIS OUTCOMES

MetaMosque

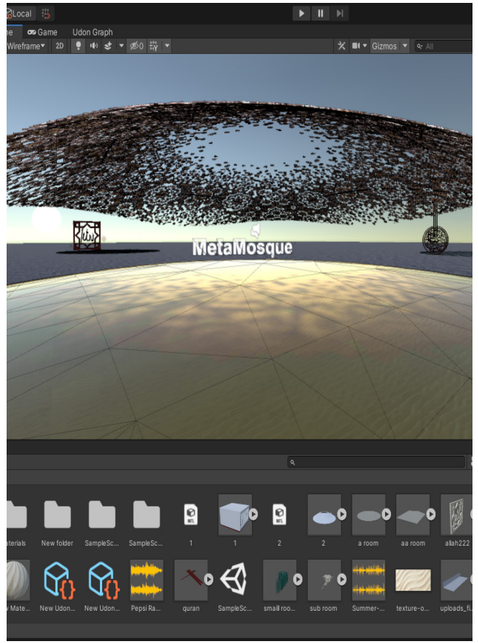

Figure 30

Scan the picture with Artivive app to see an AR video for this section

Creating a communal (religious) gathering space in the virtual world that is also parallel to reality requires a flexible medium to enhance the experience. Hybridization of the physical and digital social worlds is of utmost importance as they are meant to complement and complete each other. Hence, it is necessary to evaluate the medium used to produce the work in this thesis.

During the early stages of the research, I physically spent almost 200 hours on provided metaverse applications and platforms, only to discover that available metaverses lack purpose. I have come to the realization that what is more important than the existence of a public space is the purposefulness of that public space. The investigations that play and experiment with the purposefulness were a necessary part in the research, showcasing the importance of having an aim and a meaning behind a virtual social platform where people can meet for a reason. People follow active people.[59]

Incorporating a VR world with articulated elements of the mosque and public spaces aids in creating new spaces designed to facilitate and enable simple yet impactful interactions traditionally experienced within physical mosques. These interactions can vary from educational interactions in which people read *the Quran* and make *Du'a'* together, social activities as people gather together to talk and socialize, and even technology-based activities as people watch videos together.

The goal is to build this environment that is neither foreign nor alien, to the essence of the mosque, in which a virtual space is created with a flying dome that has no column support, resembling the large span domes found in Islamic architecture, and an oculus that admits light for the spiritual value it adds to the ambience.

The details of the VR space

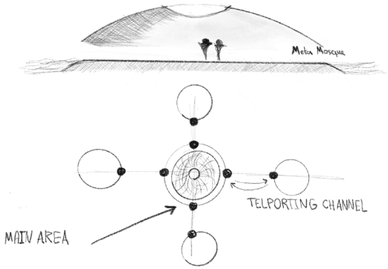

Figure 31

THE FINAL HEADSET

Scan the picture with Artivive app to see an AR video for this section

Figure 32

The space consists of one main space in the centre and four smaller rooms with virtual ground slot used to teleport between them. The main space contains Mashrabiya patterns that are dispersed, dissipated within the decorations of the space, and projected as shadows within the hall. It also functions as a space for solitude when needed with a solo mirror attached. The space then extends around the main one to four smaller rooms with virtual doors and symbols such as "*the Quran*, the Mashrabiya sphere, *Bismillah* (in the name of *Allah*) , and the word *Allah*. Each room hosts various functions that heighten social interactions amongst people in circles like; educational and cultural circles of reading, gathering, watching, meditating, and much more.

In essence then, one can see that the virtual mosque experience has been designed to gather people of shared purposes together, in which connectedness, the basis of community, is promoted. Regarding the specific technologies, part of the external materiality of the headset in this experiment emerged from Investigation two, as the headset was branded and "Islamised" to look and feel familiar. Then, VRChat, a free app on Steam VR, is part of assembling the internal VR world that will not only be accessible to all but will also be available anywhere and at any time.

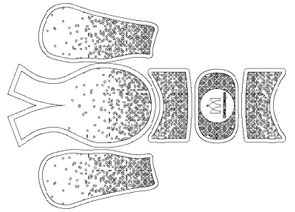

Figure 33

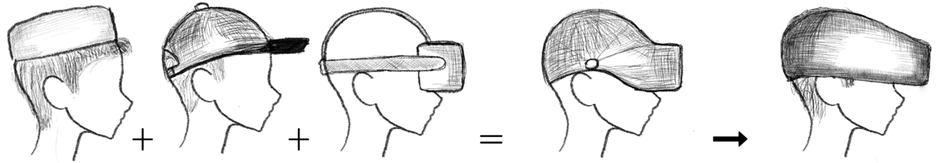

Figure 34

Figure 35

Scan the picture with Artivive app to see an AR video for this section

It does not become merely about the easy accessibility and what device is being used to access this virtual society whether that is from a personal laptop, a public PC at the library or a VR headset; but rather, the focus shifts on the immersiveness in that virtual world itself from the inside. In fact, some technologies are already in existence. Such examples include Zoom and Microsoft teams for schools and meetings that fall into being restrictive and limited. However, initiating the virtual society of the MetaMosque considers the freedom of choice of the user while avoiding ambiguous aimlessness.

As part of the exhibition itself, the walls and floor have been painted black in an attempt to make the place darker and focus on the prayer rug with the infinite mirror effect. Similarly, this rug is mirrored in the VR simulation used to teleport from one room to the other. Using the rug becomes a symbol that both of parallel worlds' share; in which it is used to teleport from physical reality to the virtual one. Also, some sensors such as touch and vibration sensors will be connected across the room to give life to the space, in which any interaction with people (like touching or walking around) will reflect on the physical space and have a simultaneous parallel sensory effect in the virtual simulation too.

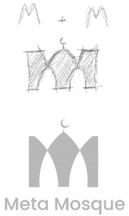

Figure 36

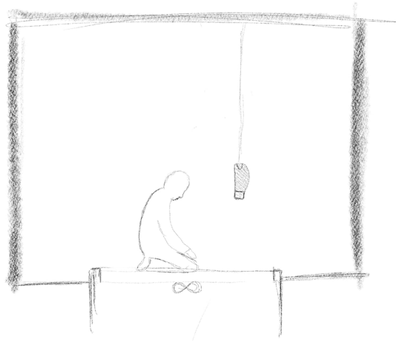

Figure 37

CONCLUSION

Religious spaces were playing a great role through history uniting people across all social boundaries. Historically, the mosque has created this opportunity, providing a shared space not only for prayer but also for community-building.[60] The study of the mosque is crucial in identifying its evolution through time, as a praying space and as a public space. However, in current times with conflict and diseases such as Covid-19 fragmenting societies, people have resorted to virtual spaces for connection. In this context, the mosque is challenged as a physical space and then extended into the virtual space through metaverse and its reachable virtual platforms.

Some case studies are taken into consideration in this research to advocate for the role of the mosque as a public space. The result of the investigations and the outcome mainly revolves around the accessible and purposeful communal building within a virtual public space. An extension of the mosque's public space, beyond the spatial limitations of a physical space, allows for the creation of virtual communities that feature and facilitate spiritual and communal functions of a holistic experience

MetaMosque becomes an extension of the mosque's physical boundaries rather than a replacement; an inclusive communal public space that is mirrored virtually to create a more accessible virtual community. This re-invitation of the mosque in the metaverse accentuates an expansion of the boundaries of the public space of the mosque anytime, anywhere for all. In short, the framework of this thesis is to further activate our platform of interaction by updating them and pushing them to speak the language of today, This thesis tested some of the available platforms to envision the MetaMosque, mainly using the VRchat, to present an investigation on accessible technology reachable to everyone anytime anywhere; advocating that the same technology responsible for the fragmentation of societies shall be accountable for the re-union of people.

A comparison between the public and the private spaces of the mosques

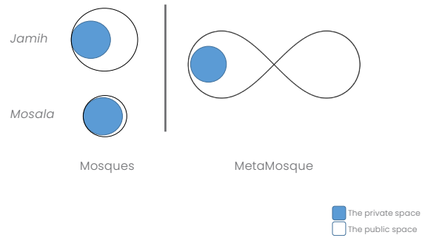

Figure 38

FUTURE DIRECTIONS

In future times, the immersive VR experience may be implemented and tested to become a proposal to be placed in the physical mosque as an expansion of the mosque's public space potential. The definition of a mosque does not end by its physical boundaries, and this proposal refrains from replacing the mosque. In fact, it aids in achieving unlimited virtual gathering spaces accessible by people anywhere anytime in daily routines. It is a mere balance of crossroads between the real and virtual society, in which one does not exhaust the other, but completes each other. Indeed, one can already see digital overlap with mosque-related activities in the local community as Qatar has initiated an increase in the number and extent of digital Islamic shelves with books and Qurans through apps that are accessible to anyone with a mobile phone, emphasizing the availability and integration of the mosque in our daily lives. One might argue that the proposed virtual MetaMosque is a logical extension of these initial dialogues between social connection and the digital world.

EXHIBITION

MetaMosque
Alaa Albarazy
MetaMosque
Envisioning the Mosque
as a Virtual Public Space
MAIN ADVISOR
ASSOCIATE ADVISOR
READER

MetaMosque

LIST OF FIGURES

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