In Madrid's Shadows

Abstract

Madrid is its cultural identity in the historical centre. Two neighbourhoods, in particular, are under significant pressure; La Latina and Lavapies. The city is at risk of losing the rich culture these neighbourhoods contribute, while problems such as gentrification, globalisation and global heating threaten them.

This research aims to prevent the cultural identities from disappearing from the centre through architectural interventions. Using the research-by-design method, various architectural interventions are considered and tested for their physical and psychological qualities. The findings will lead to suggestive solutions that can be applied by architects during the design process.

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Preface

Before the paper begins, I want to give you a glimpse into my thought process and motivation for writing this paper. Below is a small passage from Peter Zumthor's book "Atmospheres" (2006). It captures a moment where he finds himself in total bliss, a moment where everything is perfect as it is, a moment where nothing else should be.

"Sitting in the sun. A grand arcade – long, tall, beautiful in the sunlight. The square offers me a panorama – the facades of houses, the church, the monuments. Behind me is the wall of the café. Just the right number of people. A flower market. Sunlight. Eleven o'clock. The opposite side of the square in the shade, pleasantly blue. Wonderful range of noises: conversations nearby, footsteps on the square, on stone, birds, a gentle murmuring from the crowd, no cards, no engine sounds, occasional noises from a building site."

This is it! A setting, perfect for being. Being emerged, being active, being being. The picture below from Ivanova (2019) served as the cornerstone throughout my graduation project. Similarly to the passage from Zumthor, it captures a moment of how architecture can create such personalised comfort. A visual representation of such an immersive state of being which Zumthor wrote about.

Later in the passage, Zumthor questions himself, if he can achieve such a place where people can just be and enjoy themselves. This research will be my test to conclude conditions which create a space where people can feel like they belong.

Ivanova, L. (2019). *Madrid. Street Life.*

Introduction

What happens in Madrid's shadows? A lot!

Madrid's historical centre is losing its cultural identity. La Latina and Lavapies are two adjacent neighbourhoods that are very different but are facing the problem.

La Latina is a traditional neighbourhood in Madrid, with a strong social core. Madrid, as the capital of Spain, wants to compete economically with its Northern European neighbours. Unfortunately, prosperous globalization has negative side effects on a smaller scale. The Madrileños' daily routines, such as the siesta, do not fit into a 'Western' 9-to-5 workday. Not only development is a looming factor, but the temperatures that the city reaches in summer, due to global heating, make life on the streets almost impossible. What used to be a lively habitat for adults to enjoy and share becomes a place of survival where people move from shade to shade. Making this rich and vibrant outdoor life we all associate the Spanish with close to impossible.

The other neighbourhood Lavapies consists of a rich mix of cultures. Various groups of immigrants live together yet separately, divided and clustered throughout the neighbourhood. Previously, the neighbourhood was not an attractive living area, but it has become progressively more popular over the years. As a result, Lavapies is now on the verge of being completely overwhelmed by gentrification. The neighbourhood being this mix of ethnicities, lacks a united front, ultimately resulting in them being left in civilizations shadows.

This research does not delve into the catalysts of the aforementioned problems but focuses on the result: the disappearance of culture. Both neighbourhoods, with their differences, can complement each other to arrive at more grounded solutions. Architecture as a means to safeguard the culture of both places will serve as a common thread throughout this research. This can be summarised in the following two main questions:

- How can architectural design benefit the revitalization of cultural practices, providing innovative solutions that bridge the gap between traditional routines and modern urban living?
- How can architectural interventions effectively counteract the negative impacts of gentrification happening in the neighbourhood of Lavapies (Madrid) by connecting the immigrant population with the local Spaniards, creating social bonds instead of living parallel lives?

By considering architecture as a tool to safeguard cultural routines and bring together population groups, a practical method has been chosen; research by design. Through the use of models at different scales, iterations are studied for their applicable potential. Each chapter starts from this basic free space of the model on which conclusions will be drawn through literature studies.

The first chapter begins with establishing a framework of reference. Various mass studies have been conducted to analyze their spatial qualities. Reflecting on the studies through Christopher Alexander's book "*A Pattern Language*" (1977), duplicating his structured approach.

The second chapter adds an extra dimension to the reference framework. It addresses how contrasts can have different influences on a space to map the effects of architecture in relation to its users. Using Peter Zumthor's and Juhani Pallasmaa's knowledge about senses, the worlds of architecture and psychology are bridged.

Finally, in the last chapter, the findings of the previous two chapters are combined. Sequences of spaces and contrasts are outlined here. These sequences will serve as examples of how effectively the knowledge of spatial quality and atmosphere can contribute to customised architecture for a target audience. The literature used mainly corresponds to that of the previous two chapters, including some additional sources.

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1. Embodied Spaces

The thought behind starting with spaces is that it is the essence of architecture. There is a need for a habit, a purpose, which ultimately always happens in a space.

1:500 served as the scale for the model studies. This specific scale is because of its ability to efficiently visualise volumes. The small models made from cardboard, foam, cloth and nails capture how the shape of a volume dictates the spaces around and within it. Showcasing the affordance of these spaces around and within.

The essence of this chapter lies in comprehending human behaviour to leverage it to create effective architectural solutions. To reflect on the models, the book *A Pattern Language* by Christopher Alexander (1977) was used. The book provides good substantiation for human-centred design, approaching it from a spatial and material viewpoint. The chapters of A Pattern Language are copied and referred to here to relate to Christopher Alexanders' way of thinking. To prevent repetitive referencing; this chapter is solely based upon Christopher Alexander's book (1977) unless otherwise mentioned.

A selection of the models will be touched upon as some proved more interesting than others. The volumes were based on typologies local to Madrid and additional input from the book *Operative Language* by Anthony Di Mari & Nora Yoo (2012). A book that shows how simple volumetric alterations change architecture's substance.
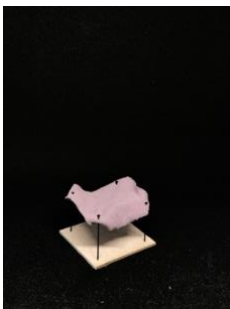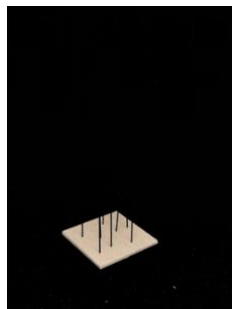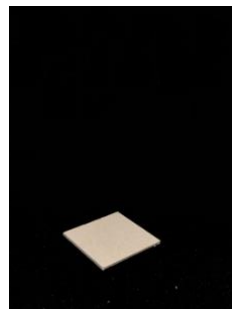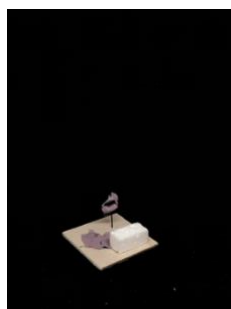

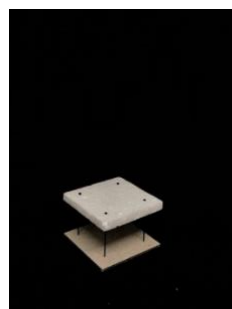| 1.1 Sun Sail | 1.2 Trees | 1.3 Courtyard | 1.4 Empty Space | 1.5 Nooks |

| 1.6 Games | 1.7 Tower | 1.8 Cultural Elements | 1.9 Roof | 1.10 Terrace |

1.1 Sun Sail

<u>101 Building Thoroughfare</u>

Awnings are a common way of providing shade in public spaces in Spain. Besides their climatical benefits, they also play into the psychological. The awning draping down embraces the space below. Improving the atmosphere and experienced comfort below.

1.2 Trees

<u>60 Accessible Green</u>

"People need green open places to go; when they are close they use them. But if the greens are more than three minutes away, the distance overwhelms the need."

Madrid lacks parks in its dense urban fabric but is rich in plazas. Altering some of these concrete jungles into green space could greatly improve health, mood and comfort.

1.3 Courtyard

<u>69 Public Outdoor Room</u>

The courtyard embraces a space, protecting it from the fuss outside of the yard. The space within is typically used as a hot spot to practice everyday leisure, a space where people have their daily interactions with each other.

<u>40 Old People Everywhere</u>

One of those people who use the courtyards as their meeting place is the elderly. Christopher Alexander carefully mentions the requirements for this group; close in proximity, capacity for small group gatherings and the preservation of their independence. The characteristics of a courtyard being publicly accessible yet enclosed from the main public space serve as a perfect space. Providing a sense of safety while also preserving their independence.

<u>57 Children in the City</u>

Children need to be able to explore the whole of the adult world. Because if they are not able to get in touch with the adult world around them they will have a hard time becoming an adult in the future. Children learn by doing and by copying. Adults' ethos, composure, propriety, vocabulary and so on are picked up by children which step by step helps them grow up.

A Pattern Language argues that children nowadays have a hard time in modern cities as they are child-unfriendly. A sheltered space such as the courtyard provides the perfect circumstance for kids to run, play, copy and try to develop themselves into the adults they ought to be one day.

1.4 Empty Space

<u>58 Carnival</u>

An empty space gives opportunities for bigger events such as a carnival. An event that benefits people to let out their inner weirdness, in a social setting that does not lead to them becoming socially destructive.

<u>61 Small Public Squares</u>

The book mentions how it is important that squares shouldn't be excessively large. Being too grand can evoke a sense of desolation. Something which is often experienced at big monumental squares. The smaller cosy squares are always the ones tourists visit and locals accommodate.

1.5 Nooks

36 Degrees of Publicness

People are different, some like the fuss others like the quiet. A layout which allows for both in a shared setting attracts both and hence will create a feeling of peace between this contrast. Often people feel in conflict when one needs to be an extrovert while the other is an introvert.

1.6 Games

68 Connected Play

"*Children need other children*". One of the ways to connect different neighbourhoods is through their children. Kids bear this innocence to connect to other kids regardless of their beliefs, upbringing and background. They ought to set the example to bring together those whom people could not imagine at first.

Not only kids but also adults like to play. The lottery as well as card and board games are very popular amongst the Spanish. Furniture that invites such games can catalyze to bring people in contact, which will result in them learning from each other and ultimately respecting each other.

1.7 Tower

62 High Places

Climbing is one of humans' great instincts. Being at a vantage point allows you to survey the world around you. In the context of European Christian tradition, churches are widely recognized as venues that offer elevated spaces. These places instantly become landmarks as they stand out above the rest and are easily recognisable from afar.

64 Pools and Streams

The book argues that we humans come from water as our bodies are largely water and thus water plays a fundamental role in our psychology. A need for constant access to water burns inside us. Densely built cities lack this connection to water which was once very prominent, as most cities originate along big rivers, Madrid being one of them. A tower does give a view of the river Manzanares that could easily be overlooked when being drowned by stone in the urban jungle.

1.8 Cultural Elements

63 Dancing in the Streets

Plays, singing and dancing used to be a common sight in cities. Unfortunately, the pace of life has become so high that there seems to be no time anymore to enjoy such activities. Zumthor (2006) argues about the importance of such activities. He speaks about how living rooms and other interior spaces are decorated by personal belongings which give a house a certain characteristic, an atmosphere. These cultural elements that express identities bring awareness to their richness and are an asset to Madrid's street life.

1.9 Roof

117 Sheltering Roof

"*The roof plays a primal role in our lives. The most primitive buildings are nothing but a roof. If the roof is hidden, if its presence cannot be felt around the building, or if it cannot be used, then people will lack a fundamental sense of shelter.*" This encapsulates precisely the way architecture can dictate terms for the experience of a space. An object as basic as a structure above one's head creates new affordances such as shelter and a place for being.

1.10 Terrace

39 Housing Hill

The difference in scale between Christopher Alexander's book and the model is not to be overlooked but the theory remains. Modern high-rise structures are obstacles to social interaction. The connection to the earth is lost as well as between one floor and another. Terraced structures, as they are orientated also horizontally afford more of these connections in comparison to the simple vertical box of a high-rise.

73 Adventure Playground

A makeshift space where children can create their play. The stairs of a terrace-like space afford the perfect opportunity to shape their world. Each step can become its world, and each ratio between the two steps is a different storyline.

Conclusion

Various spaces afford various activities. As Madrid has been developing its metropolitan characteristics the smaller-scale interventions have been diminished. The theory of Christopher Alexander (1977) resonates over and over again with how important minor nuances are when focussing on human-centred design.

The qualities of such spaces determine their degree of being approachable or privateness. Alexander also talks about the different population groups, what their needs are and what they offer for social networks. Kids are often used as examples for their spontaneity and naivety to explain the possibilities of a space as adults see more limitations.

On the scale of a neighbourhood, a simple object can create a social network. Connecting strangers with strangers. The nuances determine the feeling of a space, determining whether one feels comfortable practising the siesta. Christopher Alexander talks in detail about how these elements are linked to our basic instincts as humans, which for the Spanish mean their daily outdoor rituals.

A Pattern Language has multiple other chapters that also have to potential to be applied to the spaces discussed in the chapter. Because of the scale of this research, the theory by Christopher Alexander is contained.

2. Contrasts

The previous chapter examined how volumes create spaces, set boundaries and evoke feelings. This chapter dives deeper, into determining how non-physical boundaries create spaces within a space. The abstractness which will remain throughout this chapter is intentional, concepts need some slither of vagueness to be applied to solutions freely.

One of the main things that defines a contrast is feeling. A feeling can determine that there is a boundary, although there physically might not be one. Feeling is a direct sensation of the senses and what the senses tell you is related to how you feel. Peter Zumthor and Juhani Pallasmaa are the frontrunners when discussing the senses within the realm of architecture. While both discuss architecture and the senses, they take different approaches. Peter Zumthor moves from architecture to the senses, whereas Juhani Pallasmaa proceeds from the senses to architecture.

2.1 Shadow and Light

The most obvious contrast of them all is light and dark. The use of light in our daily lives do most of us take for granted. Yet in the more rural parts of the world, it is still one of the most important elements to survive. Nomadic tribes centre their life around the shade of a single tree, as this shade is the only comfort to be found in the desolate environments they find themselves in (Kite, 2017). On the other side of the spectrum, some artists manipulate the light to their advantage. Peter Zumthor is known for mastering lightness and darkness to create atmospheres, zones and spaces. One way he approaches these zone-defining abilities of light is by looking at a building as a mass of darkness. The path within this building can be created by adding light, bit by bit, carving out the dark mass, letting a new mass of light seep in. (Zumthor, 2006). The shadow affords architecture by allowing light. This can also be found in one of Corbusier's (1923) most famous quotes *"Architecture is the masterly correct and magnificent play of masses brought together in light"*.

Kite (2017) says that to create the sublime, the atmosphere should be *"dark and gloomy"*. In the absence of light, darkness prevails. Thoughtfully allowing light to emerge has more impact than creating several shaded spaces while being surrounded by light. One way to make an object striking is by making it as different as possible, which colour can do, but also light. Going into a room filled with light after coming from outside gives little to no phenomenological triggers which going from the light outside towards a dark inside would. A space we can relate to where this happens is in pubs, the heat, and smell combined with the darkness of the stained wood and weathered atmosphere instantly connects with you once you enter. Multiple senses start tingling, your eyes must readjust, your skin feels the change in temperature and starts sweating, and your mouth starts producing saliva from a pleasant smell.

The dark is more imposing than the light. Pallasmaa (2012) also confirms this as he explains how homogeneous bright light paralyses the imagination in his book *The Eyes of the Skin*. Further on he mentions a method of mental torture where the use of a constantly high level of illumination is used that leaves no space for mental withdrawal or privacy. Warning the reader of the danger of excessive light.

The Spanish also prefer the dark. With Madrid's heat during the summer, most activities in Spain happen inside. They close their windows off with shutters blocking out all the daylight to create a more comfortable environment while practising their siesta. The authentic Spanish version of the pub is the Taberna (picture below), a dark place where they grab a bite and drink while having a chat with the person who happens to sit next to them.

2.2 Rough and Smooth

While discussing the multisensory experience within the realm of shadow and light rough and smooth surfaces go way beyond that. To confirm this statement, look around the room. You will know how a certain material feels on your tongue although you have never licked it. Similarly to touch we also have an idea about sound. We associate materials with a certain sound, concrete sounds dull but wood squeaks. The eye tells you what the body feels. (Zumthor, 2006)

This feeling becomes an embodied experience which will guide us towards or away from a space. Our past experiences have taught us what to associate certain materials with. Pallasmaa (2012) mentions that architects, like painters should master the skill of chiaroscuro. A technique where light and dark are exaggerated to amplify its effect. The same can be done with material surfaces, a different finish of rough-/smoothness will transcend different feelings.

2.3 Colours

Light and shadows determine where colour may exist, yet for colour to thrive the circumstances must be all harmonious. A location that excels in the use of colour is Venice, although the Italians are great colourers in general. The exterior is light and the interior dark – *"the facades are white and the walls black."* (Kite, 2017). The canal next to the façade elongates it, reflecting the continuance of its beauty while mingling it with vivid blues and greens. Yet in the dark the colour shifts, the vivid colours come a rich brown reflection of the facades, reflecting their darkness.

For colour it is quite banal as to what its effect can have yet through other art forms analogies can be found that illustrate its effects. Silent movies had to compensate for the lack of sound by a demonstrative manner of overacting. (Pallasmaa, 2012). Modernism has a similar take, removing all colour for white unburdens the user of distractions. Putting the focus solely on shape and detail.

Colour should be celebrated for its ability to change depending on its material, texture or light. Pallasmaa (2012) loves the door handle as the perfect example of how architecture is a harmony of the embodied experience. He talks about how the patina on the door handle tells a story. "*It is a pleasure to press a door handle shining from the thousands of hands that have entered the door before us.*"

2.4 Natural and Synthetic

The wear of the door handle is determined by the material choice. Natural and synthetic materials have been a debate between the purists and progressivists for a while now. Industrialisation has introduced the mass production of synthetic materials. Krier (2011) argues how it has corrupted authenticity. While building technologies have greatly advanced, traditional construction has become more obscure.

But natural materials are not always superior. Materials also bear a certain 'temperature' with them as Zumthor calls it, but even he acknowledges that he struggles with defining this feeling. Wood can oppose the feeling of the exterior. A hot day outside gives a fresh feeling inside – a cold day outside gives a comforting feeling inside. But steel does the opposite, it either drags the temperature down or boosts it. Both can be extremely uncomfortable. (Zumthor, 2006).

Yet there are still a lot of arguments to keep using natural materials and traditional craft. Utilizing traditional construction methods and natural materials is still a very valid method to guarantee the structural, architectural, and aesthetic integrity of a building. Although the initial investment may be slightly higher, it is typically justified by enhanced durability, decreased maintenance expenses, and, in the end, a more visually appealing and superior structure. (Krier, 2011)

Pallasmaa's love for the patina on a door handle has already been introduced. But this wear exists on most natural materials. Natural materials express their age, as well as the story of their origins and their history, enriching the experience of time. (Pallasmaa, 2012). He finishes his plea by mentioning this new fear of people for the ageing of material, which has resulted in the rise of synthetic replacements. He says that this fear of experiencing ageing has to do with our fear of death.

Spain's most prominent architectural feats are a celebration of their use of natural materials. The cathedrals show off the skills and patience required to build such monuments is still what draws us towards these architectural giants when on holiday. Not only after the completion is this celebrated. Gotthard Booth has said that there is nothing that gives men fuller satisfaction than participating in a process that supersedes the span of their individual lives.

Conclusion

Talking about this concept of contrasts quickly becomes an abstraction though the examples make it tactile and relatable. Oversaturation of light kills the room for interpretation and mystery and material surface texture as well as colour either lure or deter. Natural and synthetic materials each have their appropriate place and time. Natural materials convey a narrative through their use, while synthetic materials remain unaffected by the passage of time.

The examples lead back to the senses, our associations with the contrast. The beauty of the relationship between architecture and the senses is that it becomes a universal language. Different upbringings and backgrounds might have different associations but all experience a similar trigger of sensations. To sensibly attempt to embed Lavapies' people in Madrid's social networks, it is crucial to grasp the importance of all of the above properties. How one influences the other and how as a whole it will create a certain atmosphere. This way a space can be either enjoyed or prevented. The Spanish have very specific routines, they like the privacy while at the same time being very social. This thin line is important to emphasise and remember while making design decisions.

3. Sequences

This final chapter will build on the foundation laid in the previous chapters. Here the characterized properties of a variety of spaces are combined with the ability to intentionally shape an atmosphere. These sequences of space, material, boundary and so on, portray architectural scenarios to be a testament to the theory talked about previously. Although this chapter continues on the theory of the previous chapters new literature will also be introduced. This literature will mainly serve as analogies to relate these conceptual and abstract designs to real-life experiences.

The models used to create these sequences of contrasts and spaces are made on a scale of 1:50. Materials of foam and coloured paper are used to set up a scenario. To enhance the visibility of the functionality of the sequences an additional layer of drawing with a pencil is added on top of the images. The sequences maintain an abstractness yet the intentions are clear. An over-detailed example would take from the imagination, something which is necessary in this test. Something that Zumthor (2013) also advocates. Peter Zumthor (2013) mentions how Bachelard says that a phenomenologist must be systematically naïve. I like to think that that is the perfect mindset to enter this chapter. Not every person reacts the same, generalizing to a certain extent is mandatory to draw conclusions and come up with innovative solutions.

3.1 Colour Entrance
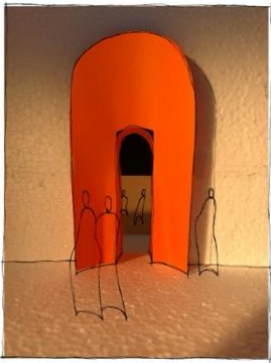
This model illustrates the power of colour, grasping attention. Along with its graceful shape that gently opens up it presents a welcoming gesture for entering. However, there is a third layer that helps to accomplish this. The contrast between the bright exterior and the dark interior creates tension. The opening reveals silhouettes inside while their activity remains uncertain. Juhani Pallasmaa (2012) talks extensively about the transition from one room to the next, going through a door opening. Calling it one of the most immersive embodied experiences.

The experiencer's senses start tingling, he wonders what hides in the dark, what will he see. Although the picture does not allow us to view what is inside and leaves us to wander, *A Pattern Language* advocates that if a view is beautiful, rather than spoiling it with a big opening it is better kept small and intentional (Alexander, 1977). This tension between what can be seen and what should be imagined is also strong in Japanese culture. Tanizaki would relate this space opening behind the entrance to a Japanese bowl of soup. The Japanese lacquerware is dark enough to hide its ingredients, the broth clear enough to get a hint, every bite being a surprise of what one might encounter next (Tanizaki, 2001).

"A proper door simultaneously protects and invites; it mediates gestures of privacy and welcome, courtesy and dignity." by Juhani Pallasmaa 2005. As one of the goals is to mediate connections between people through architecture, the entrance should have the same meaning and the same impression for everyone. Where different backgrounds can trigger different responses it is important to understand all. In this manner, the gesture becomes truly universal.

### 3.2 Rough surface, smooth shape
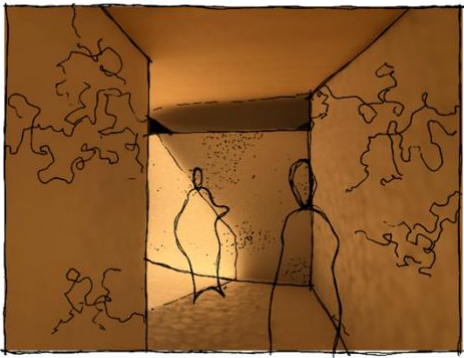
A smooth surface is complemented by a rough surface. Not only is the surface smooth but also the shape adopts a sleek appearance. The desire to explore the wall persists as one traces the path that the space leads you towards. As discussed in the previous chapter, there is a strong connection between a human and its tactile sensations. Architecture possesses the capability to combine sight and touch as the picture illustrates. The beauty of this combination of senses, it is more certain and less vulnerable to errors than sole vision (Pallasmaa, 2015).

This continuation becomes a rhythm, it keeps you moving, flowing, experiencing, and enjoying, until it doesn't. Like a novella can architecture grasp someone's attention but the architect should be careful to not overplay his tricks. In a book, the reader sometimes needs a break to catch up with his thoughts, in architecture the experiencer also needs breaks to understand what he just experienced.

In this context, the light and dark in the passage also serve as guiding mechanisms. The sleek surfaces cast clean shadows while the rougher surfaces create more irregular patterns of shade. Christopher Alexander (1977) echoes similar sentiments by elucidating how individuals instinctively gravitate towards the light.

3.3 Stay Place
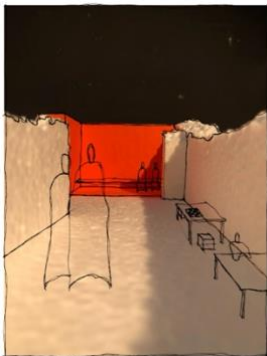
The corridor offers a variety of options to explore. There are multiple places to stop and stay to spend time while serving as a passageway at the same time. The space is more than just a space for passing through, it offers a different experience. The experience of being able to stay, to be.

Another of Zumthor's (2006) concepts is '*Between Composure and Seduction*'. The idea is to allow people the freedom to roam; and to create an environment that is more about enticing than directing individuals. This thin line between seducing and dictating has also been the springboard for this research as the opening passage explained.

Zumthor highlights the importance of balancing continuous space with carrying levels of intimacy. In this case, the size of the play tables or the colour of the space can either be inviting or repel. The beauty of this ploy is that people feel invited in a stimulated way to participate and join in. Board games like chess are a perfect example of building new connections through this ploy.

The game does not require traditional language, as the game is the language, therefore the barrier that would otherwise be there fades away.

3.4 Elemental Zoning
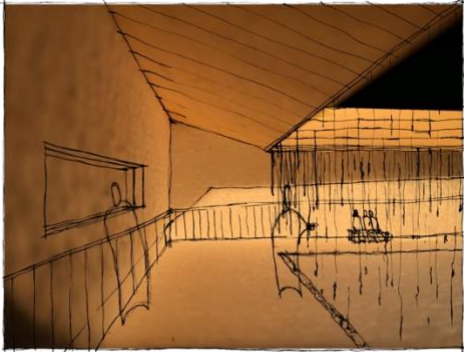
Not every space needs to revolve around the movement of oneself. The elements can also come from external factors such as rain. The stream of water forms a boundary between the pathway under the canopy and the courtyard. In Madrid the climate is typically dry and hot thus rain can become a moment for celebration, a moment when the city cools down.

The boundary created by the rain brings, like any other boundary, tension with it. The canopy, usually the shield against the sun now serves as protection from the rain. This new scene gives the space below a new atmosphere as the rhythm of the falling drops adds the dimension of sound to the space.

3.5 Embodiment of Steps

Pallasmaa writes that a staircase, besides a door, is the most sensory interaction the human body can encounter. (2005). Each step has to be perfectly in sync with the previous one, as the slightest difference in step will disturb the rhythm. Alvar Aalto (1972) even links the importance back to Dante's book *Inferno* in which one of the worst punishments was letting a man walk an uneven staircase.

Christopher Alexander (1977) also writes about the power of staircases. He mentions how internal staircases reduce the connection between upper stories and life on the street to such an extent that they can do enormous social damage. He means that people can become disoriented whilst following long internal routes. Creating viewpoints from staircases and other logistical elements is thus mandatory to help people understand the space, where they are and where they want to go.

3.6 Two-directional Design
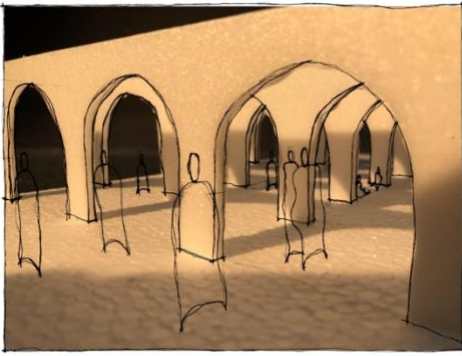
The rows of walls and the rows of arches intersect each other, creating this two-directional design. The grid creates different zones. In this orthogonal grid, different layouts start to exist depending on the needs of the people inhabiting the space. Some axes become corridors while between the two axes, a space starts to define its boundary.

To effectively control the outcome of such a space it is essential to consider the number of individuals that will accommodate it. For instance, a skyscraper has too many people spread over too big of a vertical distance, making it almost impossible to effectively design (Pallasmaa, 2015). Therefore the crux lies in comprehending and identifying the target audience to create a lived space rather than merely a physical one. In today's world, various actors attempt to dictate our actions, determining where we should sit or stand. This excessive control stifles spontaneity and freedom (Pallasmaa & Zumthor, 2013).

Yet you do not want to create this feeling everywhere as Zumthor (2006) carefully points out that there are circumstances where people need to be guided with certain composure to prevent them from running around and feeling lost. There should be looked for a balance, a place where you can be surprised. The best things in life have always been gifts (Pallasmaa & Zumthor, 2013).

3.7 Shadow Zoning
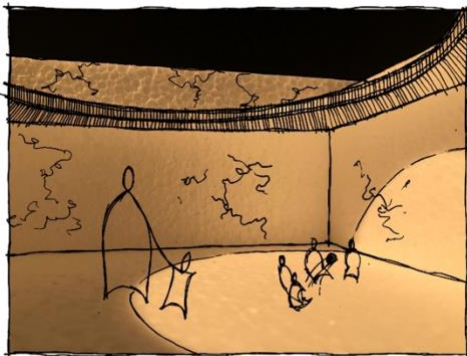
These spaces in the shade draw to one's imagination. Imagination is universal, everyone has it, and it can bring people together, especially youngsters as they are less bothered about others' opinions. Hence why kids are drawn in the circle. They do have this ability to connect in a space which others might not see the potential of. And this is a real beauty. Zumthor (2013) even goes as far as saying that parents must permit their children to be bored as it is only boredom that initiates such internal mental activities and interests in minus things.

In Spain there is a phenomenon called *Sol y Sombra*. It refers to the western part of the bullfighting arenas where the seats are covered with shadows. The prices of the seats are dictated by the sun, those in the shade are more valuable. The contrast in space, the quality of a space determines its usability and desirability.

Tanizaki (2019) would approach the children as a reflection or an echo. As the sun moves, the circle moves, the children move. They participate in this pattern becoming the pattern. Abstracting this rhythm is similar to the raked sand garden of the Ryoan-Ji Zen as the dance of sand keeps happening, each grain moving around the other. Until all of it becomes this unfocused way of looking, evoking a trance-like, meditative state.

Conclusion

The chapter visualised how both spaces and contrasts come together. Complimenting, amplifying and opposing each other. The models enhanced with silhouettes explain how the experience from such a space can be. Making the abstract theory of the previous two chapters tactile.

It became evident how people and architecture are linked. The embodied experience of the senses working into our perception of architecture resonates throughout the theory from Pallasmaa and Zumthor. People even become part of the architecture, playing an active part in its function and shape. This is important to understand as many of the Spanish routines are static, a nap or having a coffee with a cigarette while standing around a table.

This multi-layeredness of architecture is also traceable along the axes, both vertically and horizontally it is important to maintain a connection between the different levels of space. Losing connection makes the experiencer confused and counters the embodied experience. Its function and orientation of spaces determine the rhythm of these axes. A corridor can have multiple functions to make it more than a space to pass through but also a place to stay. This way people can enjoy each other's company throughout a whole building instead of a few designated spaces.

4. Conclusion

The first and second chapters come together in the third chapter. In the last chapter, the concepts became real-life scenarios. The models showcase how people can be brought together with the tool of creating contrast. A slither of shade becomes a space of its own, a staircase becomes a viewpoint and a surface lures someone to continue walking, continue experiencing. Approaching architecture as a tool to work towards solutions for socially oriented problems proves promising. By creating spaces where people feel like they belong they are willing to stay and spend more time. Practising their daily routines instead of continuing in their daily slur of life. Yet it is important to again emphasise that there should be enough freedom in such spaces. Restricting is counter-effective while directing people to act a certain way, psychologically people like to make their own decisions. Although architecture can influence these decisions, it raises the debate over whether people are making these choices themselves or if architects are merely allowing them to believe they are.

The concepts regarding the senses are universal. Although people with different backgrounds might have different interpretations, everyone has some kind of association with it. Thus it is important to understand who you are designing for. Lavapies containing all these different backgrounds and nationalities will not lead to a single solution that works for every scenario. Creating multiple levels of the same concept, such as privacy, can help bridge the gap between individuals with varying preferences. Creating an overarching design where all feel comfortable will effectively bring them into contact with each other, ultimately leading to them getting to know each other and strengthening the position of Lavapies' population in the area.

5. Reflection

Although I understood the importance of embodied design, as Juhani Pallasmaa calls it. I never truly understood what he meant. How one small nuance can dictate so much, from an individual level to a whole neighbourhood. This research has been a testament to me how impactful architecture can be when thoroughly considering the user, the instrument and the goal.

Knowing now how an actor can become part of the architecture, playing a direct role in its function is a side I never considered. The circle, formed by the shade through the shape of the roof, becoming a defined play space appropriated by kids served as a great example.

By using the method of *Research by Design,* the findings of the research are very tactile. Through the use of models, the concepts became three-dimensional spaces and much more relatable. The models also serve as great examples, ready to be applied in my studies, as they are abstract enough to adapt to various contexts.

Architecture can serve as a tool to counter these sociological problems, but this research lacks actual testing. While the ideas are supported by literature, testing in real-life scenarios would solidify their effectiveness.

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