

Statement

I will be exploring the topic of fluidity and space. I will attempt to answer the questions such as what is fluidity, what is space, and how do they relate—providing examples of things that are fluid as well as things that are not. I chose this topic because I have always been intrigued by the feeling of water—it's free and flowy, and I find that inspiring. I want to learn more about how fluidity and space can achieve that feeling, how others have used it in their work, and how it can relate to design. To do this, I will research different avenues of art and design, including but not limited to architecture, industrial design, and design theory. Architect Zaha Hadid is a great example, as seen in her design of the Heydar Aliyev Cultural Center in Baku, Azerbaijan.

Understanding the foundational concepts behind fluidity and space is valuable because it relates to everything in the world. If we look around, the world we live in is made up of micro and macro spaces. Space makes up everything, and it is where we as beings exist. Fluidity is what makes us able to interact with everyday things and each other. It is how we can move from one place to the next. People can find fluidity evident in language, transportation, technology, and environments. For example, there is fluidity in using vehicles to travel to different spaces: cars, buses, and trains. However, the design of transportation as we know it is not completely fluid, as seen when there is traffic, accidents, and delays. When things are not fluid, we become stuck or stagnant, unable to move freely. We can still move, but it is not as easy, it takes more effort, and it is not enjoyable.

If we can learn more about fluidity and space and its fundamental ideas, then we can better understand how the world can work to serve people. And if we can do that, then we can become impactful designers.

What is fluidity and space?

To begin this exploration, I will first define what both fluidity and what space are. Fluidity is the ability of a substance to flow easily. It is the ability to seamlessly move throughout one thing and on to the next, in an easy continuous movement. Fluidity is used in many things in life such as in language—when we speak to one another using words or to write a novel. Or in art when we create and experience a composition—how our eyes move through a piece or how the notes in a song combine together. Space is a continuous area or expanse which is free, available, or unoccupied. This is oftentimes thought of three-dimensionally because that is the most readily available perception of space. However, space makes up everything that we know and have an understanding of. We can think of space in terms of the internet and technology—where digital items take up space on a page or as storage on harddrives. We can even think of space in terms of our minds—our thoughts and ideas take up space in our brains and in our memory. These are just a few examples, but anything and everything that exists lives in some sort of space.

Research

An important field that uses both fluidity and space in all of its study is architecture. Javier Senosiain uses these concepts in his own unique way, as seen in his design for The Organic House. The design for this house “arose based on the requirements of the elementary functions of man: a space to

live together, with room, dining room and kitchen and another to sleep, with dressing room and bathroom” (Caballero). Senosiain looks at what is needed in a home and builds off of that—beginning with the necessities, and having the design come from it. “The original concept is defined in two large spaces: one day and one night, looking for the feeling that inside the person will enter the land, that was aware of the uniqueness of this space without losing integration with the exterior green areas” (Caballero). Mentally and physically, we are in a different space during the day and during the night. We think about completely different ideas like in the morning what we are going to accomplish that day, and in the evening while ending our day, we reflect on what we did and what we interacted with. We have different routines for when we wake up and when we go to bed, so by designing the space with both of these times in mind, Senosiain creates the ability to visualize our daily routine in each separate space of The Organic House.

Senosiain also believes that “Before we’re born, we’re floating in our mother’s belly, like astronauts in space or a permanent Jacuzzi, but then we’re pushed into a box, a crib, and we move from one box to another throughout our lives — playpens, bedrooms, square houses — until we die and are put in another box. We make life for children very square, killing off liberty, spontaneity, and creativity. My designs want to go against this rule of life” (Ballesteros). Rather than the classic rectangular shaped building, The Organic House is similar to that of a mother’s womb or shelters adapted millennia ago, such as the igloo. It invites creativity and unique thoughts into its structure. We live and learn from our environments, and it is believed that whatever surrounds us plays a big part in the way we think. Knowing this, it is interesting to see how much of our world continues to be made up of squares.

Our lives are made up of squares and straight lines—from a sheet of paper to the shape of classrooms, all we see are these repetitive shapes. However, when we look outside, the straight line is pretty much absent from nature. We are surrounded by organic free forming shapes, but when it comes to man made items, these organic shapes disappear. To bring those shapes back into his environment, Senosiain designed The Organic House with the goal to “create spaces that completely embrace the human body, adapting to its scale and morphology without taking any notice of conventional preconceptions about what a proper house should look like” (Ballesteros). It is important in architecture as much as in any other avenue of design to think from an empty slate, questioning if the standard fulfills its purpose. Many times, what has been done comes from repetition, comfort, and ease. There can always be better ways to think of design than what is conventional, and a great place to begin is by avoiding what is already done.

“Senosiain’s deep understanding of harmonizing structure with environment results in the space taking advantage of what already exists” (Wheless). He thinks not only about the structure of his building, but also the surroundings and how they interact with each other. In his design, “The earth and the grass protect the membrane from the sun, the wind, the hail and the wet-dry cycle; avoiding dilatations and contractions that cause fissures and consequently humidity. The green dune is the envelope of the interior volume that is almost invisible. From the outside we only see grass, shrubs, trees and flowers. Walking on the garden is walking on the roof of the house without realizing it” (Wheless). As designers, we must take into account how our designs interact with the natural world. “While buildings are mostly still linear, the physical laws governing the dynamics of fluids, heat, light,

sound, and force are mostly non-linear. The processes of growth and decay occur, not in straight lines, but in curves and cycles. Yet we continue to design and build rectilinear straightjackets that constrain and block natural energy flows” (Pearson). In order for a design to be fluid, it should follow the flows that surround it while maintaining sustainability and do its least to disrupt nature.

We can see that much of Senosiain’s work is influenced by minimalism as well as the natural world. He begins his process with thinking about what the space is needed for, how to achieve that without taking notice of conventional preconceptions, then he designs with consideration of harmonizing structure with environment. In studying his designs and his process, we can learn from his work and apply his ideas into other avenues of design. Another architect who uses these concepts in her own unique way is Zaha Hadid. Her design for the Heydar Aliyev Cultural Center is “continuously self-transforming in all directions, there is little sense of boundary and no indication of terminus: It’s an immersive bath of space” (Giovannini). Hadid designed this building with the intention for it to feel like we are surrounded by the space and move with the curves of each wall. The idea for this building was to “take the plaza and shape it into an architectural environment, to create a continuous flow between inside and outside, to create a certain infinity,” Hadid says. “You don’t know where it all starts and ends.” Rather than being influenced by nature as Senosiain is, Hadid is influenced by mathematically continuous topological surfaces. As the “calculus of computer programs has, over the last decade, liquefied form and space—she has smoothed the three-dimensional force fields of exploded forms into flow fields” (Giovannini). With the changes in technology and the new

discoveries in the field of math, her buildings have also changed into futuristic buildings we know her for.

There is a clear distinction in both of the architects' work. While Senosiain uses his inspiration from nature and the past—creating shapes similar to a womb or igloos, Hadid uses mathematical equations to create and form her shapes. Learning about both of their processes, it is clear that there are many different means to think about these fluid structures. “The shapes and forms of internal spaces affect our feelings. Maybe because natural forms have many positive associations, they evoke feelings of harmony and wellbeing” (Pearson). One thing in common between the two architects is that they both use fluidity to create spaces that evoke creativity and free flowing movement throughout the structure as well as its visitors.

There are also many things in life that are not fluid, making our lives more difficult and frustrating, that could be better designed. One great example of something that is not fluid are Norman doors. These are doors where the design tells you to do the opposite of what you're actually supposed to do. Don Norman says, “I push doors that are meant to be pulled, pull doors that should be pushed, and walk into doors that neither pull nor push, but slide. Moreover, I see others having the same troubles” (Norman). We all have come across these doors before and they make absolutely no sense. Who thought it was a good idea to put a handle generally meant for pulling on a side you are actually meant to push? These types of problems are typically disregarded, accepted as a part of just the way things are. But if we have trouble with the design of something as simple as doors, how can we expect to design something more complex? If we take a moment to look around, so many of the things

we interact with are poorly designed. If we come across a problem, chances are other people also have the same problem. The world is made up of poorly thought about designs that keep us from moving throughout our lives fluidly.

Consider our daily experience—a non-fluid system design that we interact with daily would be our transportation system. No matter which type of transportation we choose, each has their own inffluidities. If we choose to drive, we get stuck in traffic and get into car accidents. If we choose to take public transportation, there are delays. If we choose to walk or bike, it takes a long time to get to far away destinations. These inffluidities occur because these systems are run by humans. “It is relatively easy to design things that work smoothly and harmoniously as long as things go right. But as soon as there is a problem or a misunderstanding, the problems arise” (Norman). The problem is that these systems only work perfectly if we act exactly as they were designed for. But the thing is, sometimes humans do illogical things. Humans are not perfect and they make mistakes. Therefore, when designing things to be fluid, we need to also think about the inconsistencies that could occur since we are humans instead of perfect machines.

Another non-fluid system that we interact with daily is our food. Naturally, the system is built perfectly—we harvest the food, prepare and cook it, eat it, and then it evacuates our body and returns back into the Earth. However, there are so many aspects that go into it that are not accounted for. For example, all of the perfectly eatable food that goes to waste each day. There are many reasons for why that is—having to do with economics and politics, but we can not deny the clear problem. While there are people starving all over the globe, we continue to trash the food that would save them. Another

problem with our food system and waste is the packaging that comes with it. “Single-use food packaging is taking a huge toll on our environment. As our landfills and waterways are increasingly clogged with plastic bags, Styrofoam food containers, disposable coffee cups and more, it’s clear that the convenience of food packaging is outweighed by the waste and pollution that the packaging leaves behind” (Klemperer). Each time we order takeout, we are also ordering the disposable packaging and utensils that comes with it. Each time we buy groceries, we are also buying the disposable packaging that comes with that as well.

The Project

The food packaging system we have in place is a system that is far from fluid. In order for it to be fluid, there should be a cycle in which things are used. The problem is that in the United States, approximately 4.9 pounds of waste is produced per person per day. That means that after one full week, a household of 4 would accumulate about 137 pounds of waste. Recycling is an option, but many families recycle improperly, resulting in much of it ending up in landfills (only 9% of plastic ends up being recycled). Along with that, many cities around the US do not even have a recycling system in place. One of the largest producers of this waste is packaging. “Packaging is a design flaw,” Bogatireva says. “I think we just have to reimagine things in that area. We can make a difference, of course, but I think on a large scale, the only solution would be to reinvent packaging in general” (O’Shaughnessy). In order to begin seeing a change towards a more fluid food system with a sustainable future, we must change our mindset altogether. The idea of packaging is a disposable material that’s used to wrap and protect goods. What happens when we remove the idea all together?

I am designing a campaign for a fictitious company called Yvessel to force customers to rethink the idea of packaging, with the goal to reduce packaging waste. To best achieve a sustainable future, we must begin to think of it rather as containers to hold the items we need. This campaign is aimed at young and middle-aged people with an environmentally conscious mindset—some of whom are also appreciative of art or creating. I will be using the idea of bulk bins at grocery stores, acknowledging the issues which are currently present. (1) Oftentimes, the containers offered are plastic or glass, viewed as items for one time use. (2) The process seems intimidating—people may be interested but don't know how to begin or what to do, putting people off from even trying. (3) The customers need to be engaged with this concept outside of the store because they have got to remember to bring their containers. This campaign will be designed with all of these issues in mind.

First and foremost, there will always be emphasis on the importance of reusing containers that customers already own rather than purchasing new containers, especially ones for one-time use. Yvessel will also offer containers, but rather than using plastic or glass, it is important to choose materials that are not viewed as something to be used once before being disposed of. The containers should be something that people want to keep, to reuse time and time again. Yvessel will offer ceramic containers and fabric bags, neither of which should be viewed as items to throw away. Clay is an abundant and natural material, which is more sustainable and environmentally friendly. These containers are handmade at the store, each with its own unique design. Yvessel will also offer customers the opportunity to create and glaze their own containers, making it even more appealing since people

are able to use their own creations. For certain items, ceramics may not be the best material so reusable fabric bags are also offered.

Next, in order for the process to not seem intimidating, the branding and identity needs to feel friendly, approachable, and inviting. Customers are not alone in feeling confused as it is not the typical system. Along with that, it needs to be something that customers feel excited about so that they remember to bring the right containers before even reaching the store. I will design an app that will allow customers to think of it beforehand. This campaign is a way to introduce customers to a less wasteful lifestyle. I want to change the idea that this type of lifestyle is intimidating and complicated. It can be something that is both fun and rewarding.

This project is an exploration of how the food packaging system could become more fluid. It is always important to explore other alternatives if the systems in place are not as effective as they could be. If we can design a more effective food packaging system—one that follows a cycle that is sustainable and takes into account not just people, but our environment—the space that we occupy—as well, it creates the opportunity to influence the rest of the world's systems. It sets an example of how the world can work to be more fluid, allowing the ability to easily interact with everyday things and each other.

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