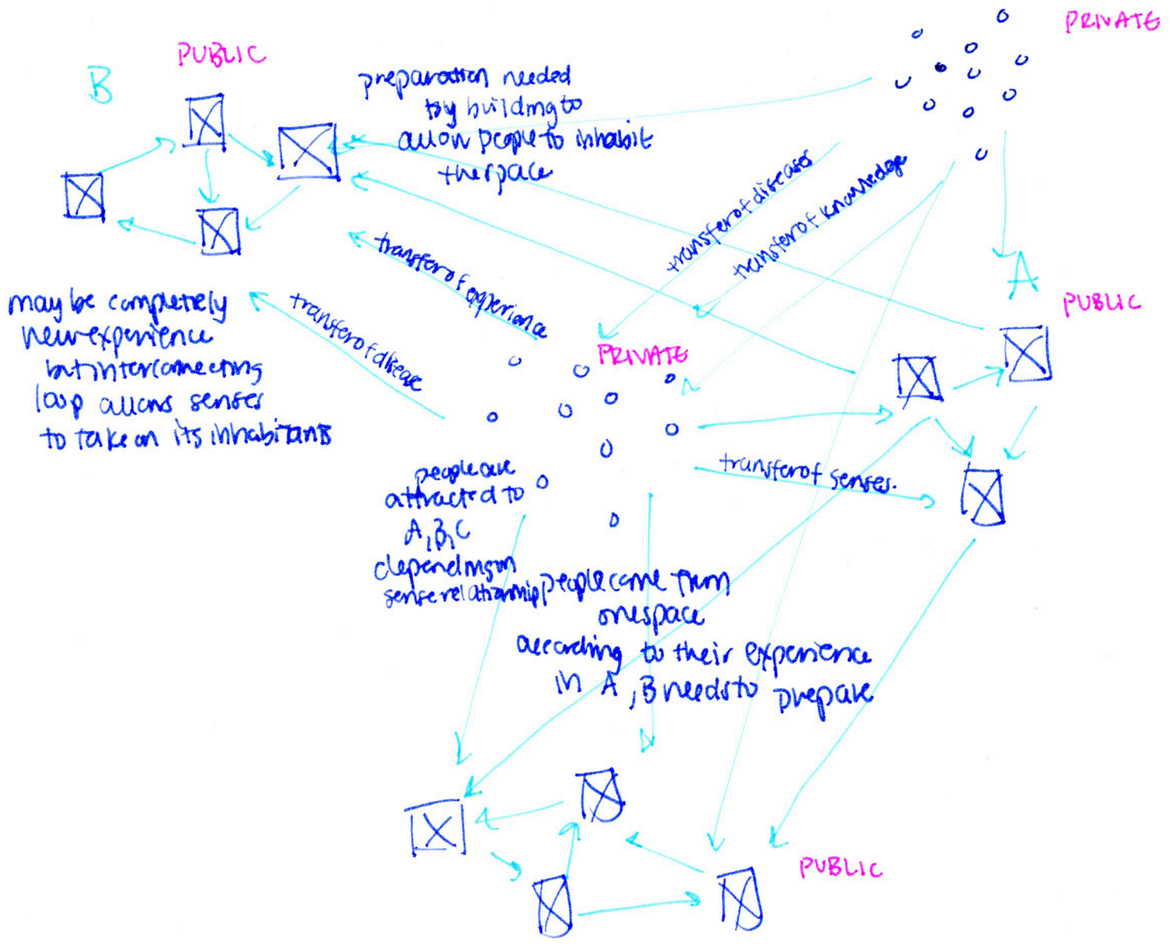
There are five main senses that play a dominating role in a humans day to day life. Sight, hearing, smelling, touching and tasting gives one the ability to understand and become familiar with their surroundings, as well as aware of self-location within the environment. Each of these senses use a variety of different synapses for delineating a specific environment of multiple perceptions. Over the course of a day, a humans body can go through a number of different experiences, whether stationary or in movement. With these actions and dependent on the participation, the senses interact and streams of information are transferred and integrated in brain wave activity, causing a representation of the dimensional environment. Touch, smell and taste provide information occurring in the near space, whereas vision and hearing are efficient in perceiving events and objects that are located outside the immediate sphere of a species. 1

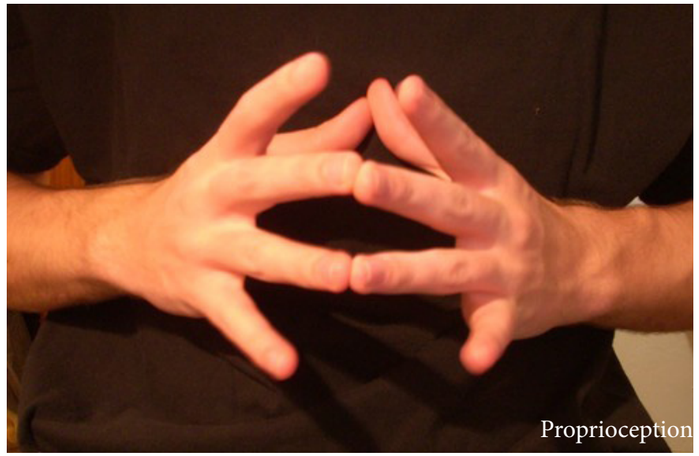
In today's ever changing world, some may argue that there are in fact more senses than the original 5. The role of the body, both chemically and physically, is essential to experience and take a hold of what we have surrounding us. Whether it be the use of the sense of touch to help us protect us from a hot stove or the sense of vision where it is vital to be able to see and interact with your atmosphere, our body is constantly on the look out to keep ourselves in the most comfortable state possible.

How we perceive our surroundings is registered through our senses. Do our senses work together in order to create a specific feeling? Distinct notions in our built or perceived environment trigger individual senses and allow us to have different emotions that pair with such involvements. For instance, one may correlate a graveyard as a somber and cold place depending on how they are sensing the space, yet another could relate this space as a time to celebrate ones life. Architecture plays a huge role in this involvement in that precise design articulations can trigger ones memory and something completely different for another person. Is this what architecture succeeds to do or do we as we designers aim to compose a built environment that is sensed similarly?

In order to take full advantage of what is around us, there were some additions to the original 5 in order to assist and further be able to perceive our built environment. With additional senses, each and every perception is varied depending on the experience yet how do we create a built world that can incorporate and support all of its users? Each observation should be particulate in which the user prefers, yet we need our environment to be able to support all walks of life, and not just the ones with the five senses.



Proprioception: This is the sense of the position of neighboring limbs. It is a combination of exteroception, where one perceives their surroundings, and interoception, where ones perceives pain, hunger and the usage of internal organs. 4


Proprioception

Nociception: This considered sense allows ones to feel the intensity of pain. This can directly correspond to the sense of touch warning your body that something is wrong. Without these senses, species could seem like they are invincible and take more risks or not tending to something that is in need.

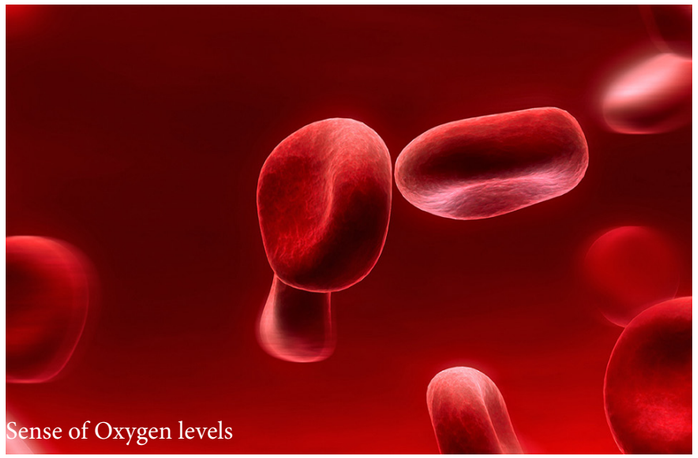

Nociception

Itching: This may be an additional sense in that it causes the reflex to scratch. Itching may be streamed from the sense of pain where both originate in the skin however the information relayed from each of these feeling is conveyed centrally to two distinct systems that both use the same nerve bundle. In addition, both of these feeling are both considered unpleasant sensory experiences leading to specific reflexes that help in the feeling. An itch sends a message to the brain letting the body know that something is not entirely right. Without this sense, painful experiences can occur and without the effect of scratching things may get worse. Scratching is an action that is able to remove some things from the skin that are a painful sensation, in turn relieving the pain.


Itching


Thermoception

Thermoception: This is the sense by which a species perceives temperatures. Mammals have two of these sensors, one that detects hot and the other detecting cold. Some other species that take advantage of thermoception are pit viper and boa snakes, vampire bats, and fire seeking beetles. This sense is to our bodily functions in that it works together with thermoregulation for homeostasis, which is the process that occurs in the body to keep our systems operative. 2 This sense allows us to adjust to our surroundings according to the conditions in the environment.


Sense of Oxygen levels

Sense of Oxygen levels: Better known as peripheral chemoreceptors, this additional sense regulates and monitors the oxygen, carbon dioxide and pH levels in the blood stream. With this knowledge, this sense allows you to exhale at the correct rate, if there is too much carbon dioxide in the body and to stop breathing in when there is too much air in the lungs. This sense is obviously a vital step because without this regulation, the body would not be able to handle the excess of carbon dioxide of oxygen for that matter. The bodies in which these receptors are located are most sensitive to changes in the pressure of arterial oxygen and pH.3


Vestibular Sense

Vestibular Sense: Sense of balance. This is regulated by your inner ear and allows you to be able to keep your balance.

The layout of a city is apparent in the way it performs. Dependent on the population, cultural diversity, or the ratio between public and private spaces, each city has a unique way in which it reacts to its inhabitants as well as other buildings. With roadways, transportation networks, electrical grids and waterways intertwined within each other, the design of a city has to encompass all of these networks together in order to supply its user. In the 1920's, the ideas of modernism became intertwined with urban planning techniques.

According to Le Corbusier's new skyscraper techniques, the new modern cities worked to eliminate disorder, congestions, as well as "replace the older cities with pre planned, widely spaced freeway and tower blocks set within gardens." This idea has be brought into today's world and the aim within a modern city is to decongest the spaces, yet is difficult due to the rising populations in many of the larger cities.

Looking further into the systems that are composed within a city act similarly to a humans bodily functions. Comparing the way a taxi moves through the city during rush hour is similar to how blood is transfused through the body. Picking up and dropping off species (persons and oxygen) in the most congested parts of the day. However, looking at how these 'things' are encapsulated, a person has to hail down and tell the cab where to go whereas the oxygen in the blood is transferred directly into the material and dropped off where necessary. These actions are then transcribed and begin to interact with the brain allowing for this muscle to relate the messages to the rest of the body.

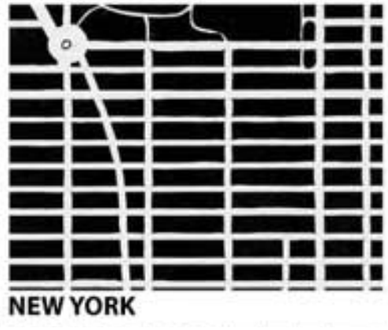
There is a reason why urban planners picked a gridded system when planning and laying out a city scape. The orthogonal street system was originally orientated with the main axis directing north to south while secondary streets acted as a cut through and additional layout buffer zone pointing the opposite direction.

Ancient Rome was one of the first urban cities to take advantage of the proposal of the grid layout. The skeleton of the system can still be seen in Rome today. This matrix and interconnectivity created the integration between major landmarks and monuments for optimal viewing. In addition, for technical reasons, the gridded system was intended to help provide optimal structural and technological integrations within the city. Each additional service worked similar to that of how the structural aspect of the human body performs. If there is an issue at point A, point B will be able to react and inherently respond to point C and inform it how it should react.


COPENHAGEN


BARCELONA


LONDON


NEW YORK


ROME


SAN FRANCISCO


PARIS


TORONTO

Ever since architecture came into being, public and private spaces have been the primary way of dividing each of the spaces. The outdoors, for many people, have been considered as highly public spaces. Whether it be a public square to sit and each lunch or a city park to socialize on your days off, public spaces can always be found in the outdoors. Public spaces can take many forms such that they can be created and orientated for specific events. Not only does public spaces include those squares and parks but also the interstitial space such as streets and paths that connect us.

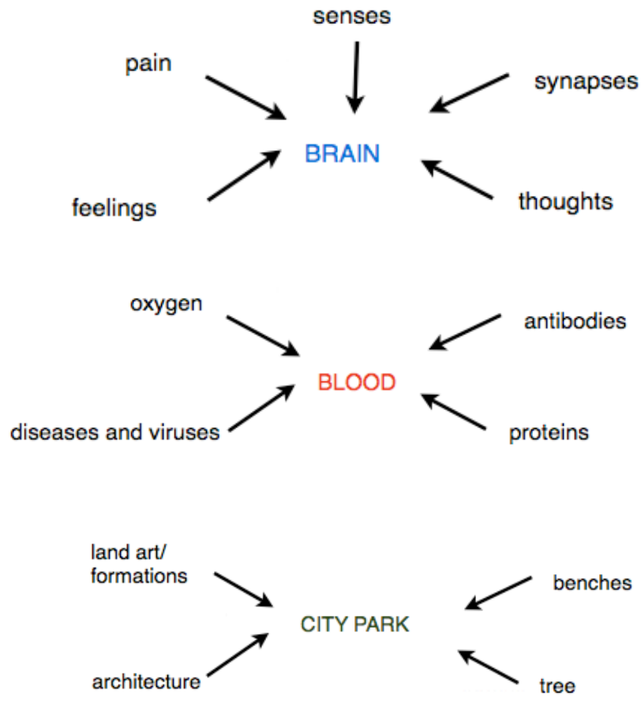
On the other hand, private space is also important and seen in our built world. There are multiple different scales of private spaces. When compared to public spaces, private spaces tend to be smaller which also limit the occupancy within each space. Consider your bedroom. The bedroom is less public than the living room and the bathroom is the smallest and most private of them all. Whatever there is that is not appropriate for public spaces is also found in private.

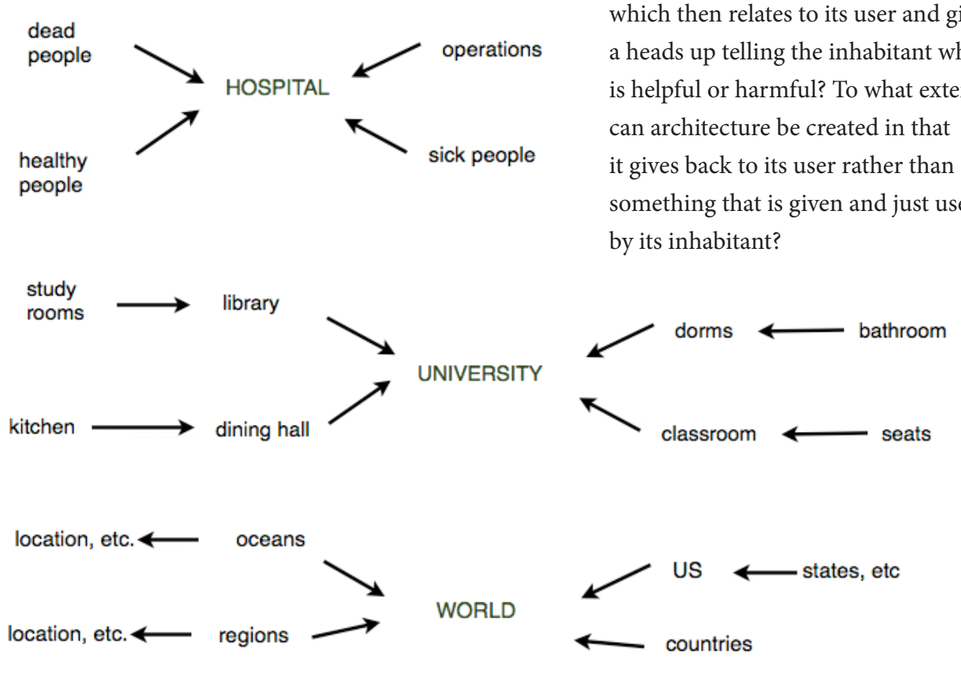
As of the today and what is in store for the future, we find ourselves in spaces that are considered public over private. These spaces have found themselves overlapping and in fact shifting over time. Technology over the past decade has taken a huge toll on the condition and type of space and has assisted in this shift.

The information is already on the internet and for all of the viewers to see it, learn about you, and in fact be you. This overlapping of spaces is seen through technology in that people that often use their private spaces to socialize are now communicating through a public forum where the private group could get the necessary information along with the rest of the world. This increased connectivity may negatively impact our interactions with the public. 5

However, could architecture challenge this idea and switch the roles of such entities? By knowing what delineates public and private spaces, can the architectures' senses interactions with its user and create an ideal scene for all of its inhabitants? The 'interconnectivity' between species definition may change, not only pertaining to the human on human interaction within such architecture but the human and architecture connection where its architecture becomes a living species.

Grid layouts also provide greater space planning for cities with larger population similar to that of London. Patches of grid are stuck within the urban landscape to further promote growth and to compensate the user. Similarly, the grid plan would give ride to New York City's massive development through the 19th and 20th C.





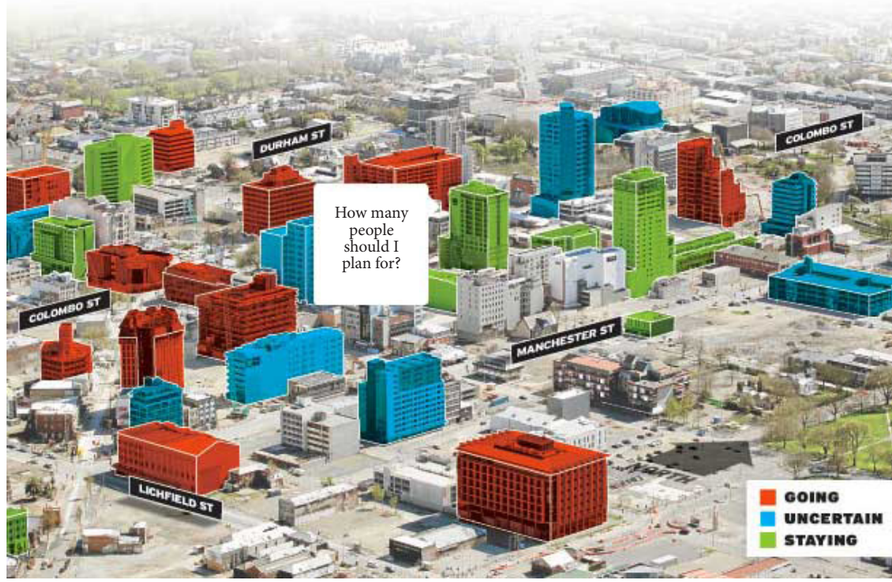
This layout not only accommodates the public spaces but also allows for the intimate private spaces to come alive that are strategically located within the urban-scape.

To what extend is a city considered public and when is it private? How do such devastating events transfer from public to private and vice versa. The talk about transferring diseases could begin in a private body however once you touch a door it could become public until another soul comes by and touches that same spot, transfers the disease and it becomes private again in a different persons body which may help or hurt them. Can one sense when a public entity is apparent that may be harmful to them? Can an architecture sense the same thing which then relates to its user and gives a heads up telling the inhabitant what is helpful or harmful? To what extend can architecture be created in that it gives back to its user rather than something that is given and just used by its inhabitant?

The Archigram 'Walking City' was a proposed mobile building that was designed in a way to freely roam around the world using its own intelligence and moving to wherever resources were needed. How does such a body of art recognize what, how and where these resources are needed? Dependent upon technological advancements, status updates, check-ins and posted pictures, this recognition can further enhance the ability to do just this. Furthermore, regardless of when Archigram was interested in this literal moving mass for supporting technology, computers have become the base of our learning, living, and structural life and future. In today's word, technological advancements are able to identify ones position by the longitude and latitude and what their favorite color is just by tracking what they have searched over the past few hours.

Moving into my thesis focus, could an actual functioning city perform tasks to assist in ones life to the extent that the disconnect between the built world and what is built inside of us has a seamless interaction? What if buildings could sense with the same experimental senses that humans have? An architecture that physically breaths, eats and sleeps in order to perform day to day tasks to commingle with its user. Instead of the user taking advantage of a city, both structures co-exist with each other and have the ability to create a feedback loop in which other buildings can learn and join in on the events. Can architecture talk to itself? If the user is within one building, can there be a relationship apparent in that a building on the other side of town can receive information to be able to prepare for that next relationship with the same species?

Clearly, depending on the city and spatial organization of the space, each experience can change drastically, yet with this interconnected loop between the interior/private structure of the human make up and the structural features of our build environment, could an exchange occur regardless of dimensionality? Using interstitial spaces as a passage way similar to the idea in which blood is able to move about within the body, communicative responses are able to be processed through multiple angles allowing for this exchange between the built and the senses in the built to occur.



I have a pH level of 5 when I tested my water. How can I change this? Has anyone else experience difficulty?

There are 150 people in my cofer-ence room right now talking about the how to stop global warming. They are all wearing suits.

Diesease X present in the lobby, stand your ground.

I have low work pro-ductivity. is anyone else experiencing the same issue?

No one has visited me today :(

Mechanical system failing.

Oxygen levels low. SOS Need help. Peo-ple dieing rapidly.

Does that mean that they are special and important?

Keep away from disease X, do not let it spread, Keep away.

Have a good day!

Nice weather today. How can we react to weather patterns?

Maybe I can help with your water pH issue. I will track your tests daily.

New technolog-ical knowledge. Can assist and pass along.