IN SHADOWS WE BOOGIE

LIGHT, SHADOW AND THE REPRESSION OF DARKNESS

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The space and atmosphere created within the shell of architecture has always been of particular interest to me. It appears that the way one processes space might be based on less physical elements than architects seem to usually imply. Since perception is not only based on the tacit, but also visual stimuli and memories of past interactions with space. This reasoning is in line with Böhme's thoughts of architecture and art as generators of atmosphere: *"that what makes a work an artwork cannot be grasped solely through its concrete qualities. But what exceeds them, this "more", the aura, remained completely undetermined. "Aura" signifies as it were atmosphere as such, the empty characterless envelope of its presence."* (Böhme, 1993) This seems to be the reason that architecture must be considered an artform, even if, so often the process tends to stray from the artistic, towards the corporate. Yet, the topic of atmosphere is slightly too disconnected from the physical to be of interest for investigation for me. As I am more interested in the characteristics of the void or space that is created within the architecture the words of Endell resonate more strongly:

"Whosoever thinks of architecture initially always thinks of the elements of the building, the facades, the columns, the ornaments and yet all of that is of second rank. What is to most effect is not the shape, but it's inversion, the space, the emptiness that spreads out rhythmically between the walls, is delimited by them, and that vibrancy is more important than the walls." (August Endell, 1995). This would pose our perception of architecture as a consequence of the phenomena that it causes, rather than its concrete qualities. What then would be the phenomenon that most strongly shapes the way we process the world we perceive? In this essay I aim to substantiate that it is light and shadow, as immaterial materials, that allow architectural space to eclipse its physical materials.

Shadows are not only imperative in our perception of space, but also appear to have been given a prominent, yet differently characterised, status in our cultures. The status of shadows has a dichotomous nature, as is exemplified in the difference between the stories of the origin of knowledge, by Plato and origin of painting by Pliny the Elder (Stoichita, 1997). In Plato's allegory of the cave, you have to literally free yourself from chains and turn your back on the world of shadows, the cave, to ascend to a place of understanding and knowledge, which casts shadows as cruel and sadistic. Whilst in Pliny's love story Corinth creates the first painting by tracing the shadow cast by her lover, which puts shadows in a more positive light. Strangely, the positive myth seems to be the one that has slowly been forgotten in the west (Stoichita, 1997). Eventually during the renaissance painters started to experiment with usage of shadow in paintings, yet still only using them very sparingly as they were deemed ugly and dark. Masaccio would be one of the first to combine the newfound usage of perspective with the depiction of accurate shadows and even going beyond that and painting a story about shadows, the story of Saint Peter, whose shadow cured illness (Stoichita, 1997). It seems that the inherent darkness of shadow has given it an insurmountable negative connotation that persists even in current cultures.

Yet, shadow is more than just the subject of stories and myths, it has an intrinsic connection to some of the oldest forms of measure. Shadow can ubiquitously be found as a marker for the passing of time, as astrological devices and sundials can be found all over the world. Further the size of the earth was first calculated by Eratosthenes some 2300 years ago, by measuring and comparing shadows.

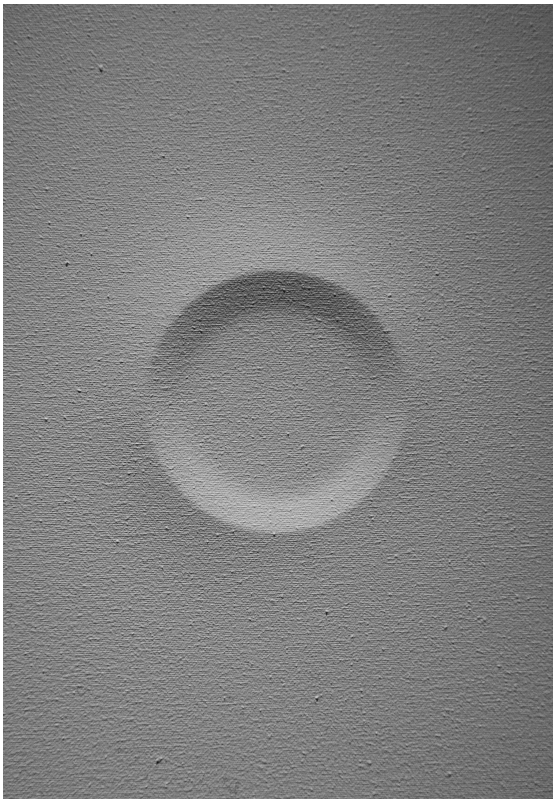
From an aesthetic point of view there is a distinct difference between the western and eastern interpretation of the value of shadow. Where in the east emphasis is placed on the value of gradation, the west has done away with nuance and intermediate tones in favour of dramatic contrast (Tanizaki, 1977). Where the act of passing a threshold ought to be accompanied by a dramatic intensification of darkness (Kite, 2017). With the advent of modernism however, the value of contrast seems to have diminished in the west, as shadows were banished from buildings in favour of shallow ambient light (Brandi & Brandi, 2002).

The human eye is theorised to create a two-dimensional impression, mostly consisting of discontinuities in luminance, to relay whatever is presented in front of it to the brain (Brandi & Brandi, 2002). Then there would be no way around the fact that these differences in luminance are at the very foundation of our understanding of space, matter and time. These differences can be expressed in all sorts of ways, from gradient like shading to stark shadows cast by the bright sun. Even though shadows are paramount to our understanding of space it takes a considerable measure of concentration to consciously experience shadows and consequently study them. Considering the speed with which we perceive the world it seems then that we somehow process shadows by comparing them to a model or database of previously found situations, rather than concluding anything from them in the moment (Brandi & Brandi, 2002). A side effect of this way of understanding through reference and a few basic rules is that some situations might be misconstrued. It seems, for example, that one of the rules is that the light source is always static. Which means that if the light source moves, it might sometimes appear as if the objects around it are moving instead (Mamassian et al., 1998). In this case the confusion is usually easily cured by focussing on the object itself.

Fig 1. Example of cartesian understanding overshadowed by complexity.
(all images courtesy of the author unless otherwise specified)

These rules, however, are not only to be broken in dynamic situations, but can become fuzzy even in completely static situations. This occasionally leads to a phenomenon where the cartesian understanding of space from its shadows is broken by the very shadows that usually create it. Especially when viewing intricate patterned or layered shadows the depth of an object is eclipsed by the depth and detail present in the shadow cast upon it. Effectively creating a multidimensionality in the shadow that overshadows the three dimensions of the object. Possibly letting us get a glimpse into a world that we can not quite understand, just like a two dimensional being would struggle to understand the basics of light and darkness (Square, 1884).

Just as shadow can overrule our traditional understanding of space, the rules can interfere with each other as well. It seems all visual capabilities work at the same time and overrule each other when deemed appropriate. Casati found examples of this when turning images upside down, turning concave shapes into convex shapes. Which he presumes to be caused by our brain consistently assuming that light comes from above (Casati, 2002). Another example of this is when looking at an image of a mask from the front or the back, both appear to have the shape of a normal face, even when the shadows of the back of the mask correspond to the inverse shape of a face (Casati, 2002). It seems object or facial recognition warps perception to fit the expected representation, most likely to aid in recognizing people faster, rather than trying to figure out whether it even is a face in the first place.



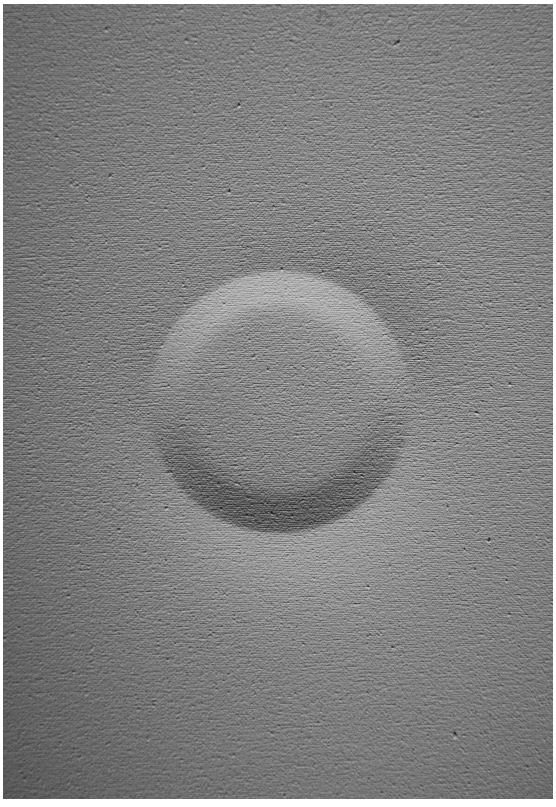


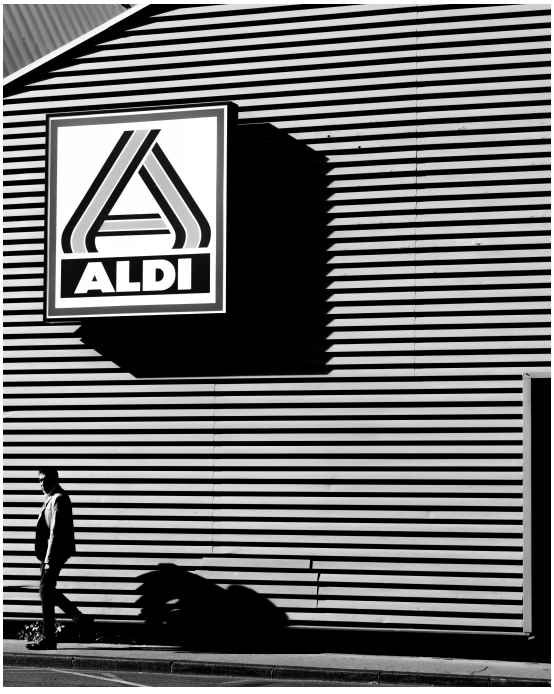
Fig 2. The image of a concavity in a canvas seemingly becomes a convexity when turned upside down.

Fig 3, 4. (next page) Excerpts from the photographic mapping of Marseille.

Just as light does not exist until it touches matter, for our visual perception matter only takes form when light hits it. It is this moment of becoming, where the dichotomous and transitory nature of shadow rears its head. At once allowing us to understand and misunderstand the scene in front of us. Misunderstanding implies a value, or truth, to one of the two perceived instances that the other does not possess. I would question the value of 'truth' in this case, as it seems to me that the material 'realness' does not matter if the emotional response is a consequence of perception. This relates strongly to an inclination towards space as experiential, rather than purely functional.

To better understand this moment of becoming, as it presents itself in space, the relation between shadow and perception must be investigated. Considering the meaning of "drawing with light", photography presents itself as an appropriate medium for mapping shadow. Photography however has traditionally been essentially representational, which is not the point of this exercise. As Malevich has shown the death of representation in painting in 'Black square', the movement beyond representation is not new, nor impossible (Stoichita, 1997) the painting appearing vaguely like a negative that was developed without being exposed through a camera. This photography without the use of a camera, is what would become non-representational photography, this however strays too far from capturing perception to be of much use in this mapping either.

The approach of non-objective photography lends itself to mapping from within the phenomenon of shadows, as it allows photography to stray from dealing only with the truth (Rubinstein, 2013). This is especially relevant considering shadows' ability to disassociate themselves from the cartesian truth. This implied dissociative nature of shadows renders the whole notion of cartesian truth of the city irrelevant, making an analog approach to photography favourable. The temporal displacement between closing the shutter and seeing the final developed image encourages a stronger emphasis on the photograph as perception of the city, rather than the memory of taking it, adding to the dissolution of meaning (Shields, 2014). On these grounds analog, black-and-white photography was used as a medium for generating images.



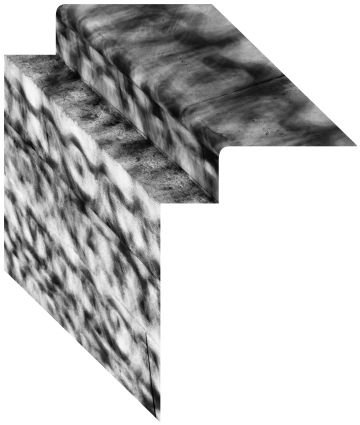
Photography as a mapping tool allows for a large amount of information to be stored within a single image, however there is a limit to the information carried in their arrangement. Space is experienced through an aggregate of experiences, overlapping perspectives, changing of light and a series of partial views and synthesised experiences (Holl, 1994). This points to a missed opportunity for analytical depth when mapping the phenomenon through a sequenced collection of photographs. Collage and photomontage possess the same aggregate quality that the perception of space has, where the original identity of the individual experiences can gain meaning through association with others, as well as the meaning acquired by metamorphosis into the overarching entity (Shields, 2014). Photomontage could serve as a much more convincing medium in which to reconstruct space from shadow.

Photomontage might not be the right word considering one of its defining characteristics being that it is a combination of multiple images. For the purpose of recontextualizing the image according to the shadow present within it, a single image is cut up. Etymological pragmatism aside, the resulting image also hardly resembles a traditional photomontage.

To unravel the synthesised perception of shadow as it moves through time and space we follow its edge as captured in the photograph. As the edge changes direction, be it due to the caster, the casted upon, or some intermediate matter, we cut the image and align it, as if the shadow never changed direction. In this moment, the world enters the state of becoming that shadows normally exist within. If the image is taken at a different time, or approached from a different angle, the result is changed, but the shadow remains the same straight line. This reversal of cause and effect generates a new understanding of a non-physical space. It instead renders light and shadow as physical and object only takes form after it is placed along the line.

Fig 5. Photograph. Fig 6. Cuts. Fig 7. (next page) Inverse Relationship.

An inverse relation between space and light might never be perceivable within the confines of the human experience. Yet we might be closest during these moments where the light falls, as seen in figure 8, just so that we do not understand the cartesian space that seemed so obvious moments before. As the stepped edges of the stairwell, clearly visible in figure 9, can not be anything but a plane in your eyes. It is these moments that equally leave us speechless and with a headache, as we are forced participants in their perception.



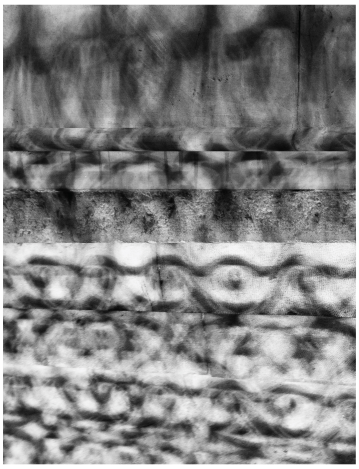


Fig 8. Stair Edge. Fig 9. Section. Fig 10. (next page) Plane.

Shadow is a central theme in our cultures and has proven to be fundamental to our perception of space. Both in regards to understanding space as it is measurably present and in understanding space as a non-physical phenomenon. Light and shadow add a richness to space as they not only define it, but also push it beyond its physical boundaries, drastically changing the way it is perceived. Even though it might be non-physical, shadow is a spatial element that must be reintroduced into the architectural discourse from which it was cast by modernism.

Since we have repressed darkness we have forgotten the gesture created by slow movement of light and shadow in space through time. In our current age of light pollution nearly everything has become uniformly illuminated and in doing so bound architecture to simple, inert relations. To amend this regression we must reintroduce light and shadow. Not the light that renders space useful, but rather the light that gives objects existence and the shadow it conjures that gives them form. Light as an immaterial material, that does not become, nor is given form, until it touches a body. Be it made of stone, glass or steel, does not matter, architectural space eclipses the material when light is pulled in. To this effect architectural form must be simplified and materials limited. By minimising expression one must attempt to operate light and shadow to give form to architectural space. To create, through movement of people and natural light, a dynamism that can only exist and be appreciated within simple space. To achieve an experience that changes throughout time and space and invites conscious perception of the relation between viewer, object and light. To pursue an eternity and monumentality of objects that can only be established by shadow.

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