

Spatial Translations

Being (Neither) Here nor There

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The Conditions



Philosophers, artists, and scientists have been questioning throughout history, but what is the current question? In fact, in today's world of continual unfolding, knowledge and technologies are acquired at an exponential rate, in an overwhelming chaotic accumulation. Ours has been an era of information proliferation, and yet, there is an overload of confusion as we continually witness what constitutes an answer, or in the case of architecture a technological or design solution in one instance, is being invalidated by the next moment of revelation, or "game-changing" technological advance. In the modern condition of our contemporary world, there are no longer absolutes. Thus, where no answer remains fixed or absolute, the relevancy of the question is put into doubt. The intended destination of the question, its answer or solution, is no longer of any consequence.

In spite of no fixed answer, it can be argued, that the question is continues to be extremely relevant, and even more so today. When there are no answers or solutions, why is the question so vital?

Without certainty, and no fixed boundaries, our world of today has become a "global space of exchange". In the continual ebb and flow of our times, the nature of the question has entirely changed; it becomes a vehicle to perpetuate movement, to fuel the journey, knowing there is no fixed destination possible.

In reference to our time, Nicholas Bourriaud authored the term Altermodern, and speaks of this current state as:

...a focus on the present, experimentation, the relative, the fluid. The present because the modern ("what belongs to this time,"...) is a passion for the current of today understood as seed and beginning... in a manner that distinguishes our modernity from preceding ones...Experimentation, because being modern means daring to seize the occasion...It means venturing, not resting contentedly...to become a test pilot. To be equal to the risk, it is also necessary to call into question the solidity of things, to practice a generalized relativism, a critical comparatism unsparing of tenacious certainties, to perceive the institutional and ideological structures that surround us as circumstantial, historical, and changeable at will.¹

Changes in movement and modes of transport have heralded new eras throughout history, Today, once again, movement is key, and creativity is the vehicle or transport technology of our time. Considering this, perhaps our role now as designers and architects is not about the "relevant" question to evoke meaning, but the potent one which sets wonder in motion, fuelling inquiry. In this way change is not just an unavoidable inevitability, something one must race to keep pace with but, at its accelerated rate, never can.

Movement is now the essential feature, effecting the collapse of Time (measured in speed of distance traveled) and merging of Space (virtual and physical). Strategies to remain relevant need to shift to accommodate movement. The energy of this rapid rate of change can be a facilitator, with the question becoming a tool which sets discovery in motion.

The question with no answer, or at best, shifting answers, in its role becomes that of a contradiction or paradox. The power of the paradox being that it gives potent rise to wonder, and wonder propels us forward to discovery, a perpetually moving process. Today we inhabit a paradoxical space. This space has the power to keep us in a constant state of oscillating flux, but also the opportunity to experience all the potential of a highly energized and fluid space.

The potential nature of this space is what this paper seeks to explore, with the intent that the ideas conceived through this exploration will be furthered through a realized design project as a complete master's study.



The Site of Inquiry

Indeed, the contemporary world we now inhabit and operate in, places us somehow suspended between that of the real physical plane and the virtual world, the two ever increasingly merging into one as they reflect back at each other in a “co-reflective” infinite dance. In the context of our current techno-centric state of being, whereby we constantly shape and are being shaped by mass media, how we see ourselves both individually and collectively as a society is formed. Yet at the same time this disorientating state of “being” and “not being” places us in an ambiguous space, existing in a state of suspension. Seemingly between these two mirrors of the real and the virtual, we are in constant flux and never fully defined, reflecting ourselves, held in a paralysed interplay of never-ending self-referencing resonance. One “realm of being” is a duplicate of the other, but increasingly the question is asked which is the authentic or real, and which the copy?

When two mirrors look at each other, Satan plays his favourite game and opens a perspective on infinity.²

As Benjamin's statement reflects, our spatial domain is situated somewhere between these two mirrors. This is the void we are seeking to contemplate/consider, explore, discuss, and perhaps inhabit during the course of this paper.

Not unlike the social space which Lefebvre speaks of as a site for reconciliation between the physical and the mental, concrete and abstract, this space of “in-between” mediates the physically embodied space and the digitally virtual space in which we exist today.³ It is a space of transition, a zone of multi-directional perpetual shifting, the fluid, boundless, and disorienting condition both Bourriaud and Benjamin refer to. Being dynamic, it is an energized space of not only great impact, but with powerful potential.

Indeed it can be further asserted that an inversion process is taking place currently wherein the virtual is no longer only copying, or even being influenced on some level by the physical, but in fact the physical is increasingly being influenced by the virtual.

As such it is valuable to consider deeply the implications inhabiting this in-between space has had on us. What shifts in our spatial concepts as human beings has occurred as a result, and what this could mean in creating outcomes in our physical built environment, our architectures? How might our shaped physical environments resonate with and be relevant to these extremely current circumstances of our lives?



Observe



There has been a huge and undeniable increase in the dominance of construed or abstract visual space, in our everyday world; the rapid rate of infiltration has made this all the more stunning. In fact the dramatic increase in the experience of space in the absence of physical presence may well mean for many of us that now this is our prevailing experience of space.

PREMISE – THE STARTING POINT:

We increasingly experience space as projected animated artificial light.

Question



QUESTION – THE LAUNCHPAD:

How might we utilize the contemporary concept of time and space that has resulted from these digital spaces, to expose hidden space in our increasingly confined physical built environments?

Inspire



THE NAVIGATIONAL TOOLS

Restore to the world that which multitudes have passed by.

- Lao Tzu



IMG_QUOTE>

The history of modern art is radical history, typically most of our histories are homogeneous, that is once we have a concept in place and on the basis of the permanence of that concept we build these very elaborate complex structures that we call civilizations...and they are spectacular. On rare, very rare occasions we're confronted with a contradiction and we do the natural thing, we essentially for awhile set it aside. Since everything else is working, I am working away and since everything else is still functioning within my discipline, I can set it aside, as an anomaly of some kind, then a second question, which I set aside, then a third, depending on your personality as some pt you have a problem, an existential dilemma, everything else is still working, nothing falling apart, but you have a set of questions which cannot seem to be answered, so you do the obvious thing, that is you discipline, you run them through your methodology, your run them through your process, system, seeking an answer if they do not reveal themselves.....you have a REAL existential dilemma, that is you have a set of questions Which cannot be resolved by everything you know and understand, and you are forced to do what is the most difficult thing a human being is forced to do, that is, to question not only your constructs, but your beliefs. If these have been around and functioning for a long time, its very very difficult, because how do you ask the question, you do not even have a place to begin?

- Robert Irwin*

Decoding the Question

Discussions concerning the affect of the digital age on architecture has been predominantly focused on the technical advances that such technologies enable. This exploration is rather an attempt to consider the potential for re-framing of architectural thought enabled by the shift in our perspective and notions of space, such technological advances have effected.

As the mediator between the digitally synthesized virtual and physical embodied architecture, much research and technical development is being carried out surrounding the integration of the physical interface of the monitor and other modes of projection in architecture. Smart materials, and use of sensors to create responsive and mutating physical architecture are other predominant research areas surrounding technologies. The aim of this exploration is to discuss the ramifications such manifestations of technological innovations has on space, and resultantlly its human habitants.

Instead, this study is concerned with researching and evaluating how the conditions of our highly digital time have effected and shifted the underlying notions and perceptions of our surrounding space, and to consider the implications these newly emerging perspectives and their potential, have to influence our physical built space.

Rather than a discussion about the use of technology itself to form the built space, we seek to explore the implications of technology in shifting and re-shaping our contemporary concepts and perceptions of space. In that, it is asserted that there exists the potential for a significant shift in how we consider, shape, and inhabit embodied built physical space. One in which the impact of the conceptual or virtual space, which integrates time and movement with light can merge with the physical, yielding a much more kinaesthetically integrated and richer spatial experience.



From our very first imaginings, image and reality that mutually reflect one another have been a condition of man. In fact everywhere from cemeteries, where we connect with, often speaking to, those which we can no longer hear and see in the physical world, to religious places of worship wherein we connect with a “higher” or divine power, to ancient sites of cave paintings or the astronomical gardens of India, we have sought and built links or portals to virtual spaces “beyond” our physically experienced environment, generally consider to be “reality”.

The power and allure of that void is something man has experienced since he first encountered the vastness of his surrounding landscape and peered into the expansive space of the heavens. While we acknowledge the changes in lifestyle the proliferation of new digital technologies have affected, celebrate the ingenuity and ability that has enabled us to explore and explain this world we inhabit in greater depth, and marvel at our facility to create complex virtual worlds of our own making through their use, indeed, the virtual world is nothing new.

If we are to consider and accept that our navigation of the virtual is not entirely a recent development, how does the current interplay between the virtual and the physical worlds in our contemporary times differ? What exactly is the great perceptual shift that has indeed occurred in the human position, most specifically in terms of space, as a result of our latest technologies?

Siting the Virtual

Two Mirrors Facing Today's Context & A Virtual History

As stated in the essay: "Exploring a New Concept of Inside and Outside and What it Means to be Virtually Home!," "...a new awareness of space is generated in which the absence of presence has become normal..."⁵ Even if we consider our previous assertion that the virtual, as well as the physical, is part of the innate human condition, today the digitally created or "synthesized virtual" has displaced and co-mingled with the physical to a much greater extent than ever before. In the technologically developed world, we have shifted the dominance of the physical environment. Our physical environment has now become increasingly more integrated with the virtual, and the virtual is no longer an unusual or extraordinary condition, but is closely integrated into every aspect of our daily existence including our spatial reality. Author Stephan Doesinger highlights this further for our consideration.

Where are you actually when your ring from your mobile? What reality are you in when you have your iPod in your ear and the acoustical space is uncoupled from the physical space? What space are you in when you play a computer game, surf the net or in the future take a GPS-linked electronic shadow with you as an avatar?...⁶

Clearly we are "occupying two spaces that emulsified with each other" create "a new, distorted reality." At times we experience even greater impact by what Doesinger refers to as the "parallelism and simultaneous irreconcilability" of these spaces, as exemplified by "the last telephone conversations from the World Trade Center on September 11th".⁷

The American soldiers in Iraq speak of deploying their weapons to the loud music in their headsets as feeling "like an action film", a shocking juxtaposition made possible by our voyeuristic yet digitally enabled current view. Meanwhile others of us remain reliant upon a second-hand physically distanced vantage point of the same situation, yet feel fully effects of this harsh reality. As we "witness" through an intermediary device, ironically, our experience is especially hard to reconcile with the seeming callous distance of those who experience this condition firsthand, while physically present.

These examples strongly demonstrate the powerful impacts our new technologies make through their seamless ability to dramatically alter our context. A drastic shift in our world has been caused through this altering of notions our space. With our embodied presence spatially elsewhere, our relationship to the events we are witnessing has changed. As demonstrated by our long established legal systems, physical presence of witness has long been a condition of establishing "truth" or fact. With events now being spatially re-contextualized through technological mediums, "facts" much be re-examined.

Direct contact has an acknowledged authenticity of immediacy, unfiltered and unadulterated, while increasingly our contact with the world is filtered outside ourselves, mediated and pre-digested. We are distanced at times through many multiple layers of digitally derived intervention, which has shifted our context from that of physical presence. We no longer are experiencing through our own direct perceptions alone, but in association with these devices and influences of their particular modalities. How does this shift in contextual/perceptual distance affect space?



Situating Space Context & Meaning



To understand the power of altering context on the relationship between space and meaning, one need only consider the "Ready-made" of artist Marcel Duchamp. With the Ready-made, Duchamp made evident what Henri Bergson meant when he said:

Objects do not exist in isolation but in relationship to one another, its place in the context of the whole...the universe.⁸

Taking everyday objects out of their usual context Duchamp, in doing so, not only rendered them useless in terms of their original utilitarian function, but also created a shift in their meaning by then placing them in a new context, the gallery. Did the object gain greater significance and value once it had been memorialised in the context of the museum, or was the value diminished once it was no longer functionally useful? Additionally, this questioning in the meaning of the object also called into question the space of the gallery. In specifically highlighting the transformative powers of the "white cube" of the gallery space, he affects a change in that space. The power of the object reshapes the space of its new context.

Thus through the Ready-made, Duchamp highlighted both the power of object and that of the context, or spatial environment, to alter our perceptions in terms of meaning. By displacing an object from its original, "native" context, and re-contextualizing it, when it reappears in a new, "displaced" context we are called to consider how the meaning of both the object and its contexts has changed.

While Duchamp talks about the shift in the object by removing and replacing its context, the artist Christo talks about the shift of the context by removing the object; yet through removal, each reveals. Christo works predominantly within the physical surroundings of our culturally and socially constructed environmental fabrics, everyday places we navigate within on a routine basis. Through this transformative effect, he alerts our attentions to the power of place as symbol and image with associative meanings. These are meanings that human structures of civilization and society attach to place, both constructed and natural.

Whereas Duchamp displaces, Christo wraps. Yet both of these artists draw our attention to the relationship of object and context, context and meaning. Through these works, a perpetually shifting focus is put into play between the subject and ground, the object and its surrounding field or context, much like the co-reflecting mirrors Benjamin speaks of, as quoted previously.

The link between the physical place and associated conceptual meanings that both Christo's and Duchamp's works describe, not only draws our attention to the relationship between image and place, but also to a dilemma which arises from the paradox between the original (in this case an object), and its replicate (the meaning symbol or virtual image). A paradox we are continually faced with on a regular basis today. Indeed these two key issues are essential to navigating within our current situation of the co-reflective interplay of the virtual, 2-dimensional digitally generated spatial image, and the 3-D world of physically inhabitable embodied space. In situating our contemporary context, it is necessary to examine the relationship between image and place, and the power of the replicate, and for our purpose, to seek an understanding of how this might form or impact our current spatial notions.



Replicating Reality: The Power of the Replicate

The work of artist Yasumasa Morimura comes to mind. Morimura's conceptual video *Dialogue with Myself (Encounter)*, 2001, which was shown in conjunction with a retrospective exhibition of the work of Frida Kahlo creates a similar self-referencing, infinitely reflective condition both Morse and Benjamin has aptly described.

In this work, two distinct and purposely unsynchronized sources generate a video image of Morimura and of Morimura portrayed/reflected as Kahlo. Seemingly her duplicate, each version of Morimura is seated mirror-like on opposite ends of a simple wooden bench engaged in dialogue with the other. But, this depiction goes far beyond the obvious parallel of two reflected images, both of Morimura, and even beyond the notion of Morimura as a reflection of Kahlo.

Morimura's piece we are referring to specifically, was originally conceived as part of a series of works entitled *An Inner Dialogue with Frida Kahlo*, wherein Yasumasa Morimura takes the role of Frida Kahlo to "reveal her world"⁹, through a number of interventions. What exactly is the "world" in which she is situated?

Kahlo's artistic work to great extent consists of self-portraits. The work of an individual, grappling with her own "being" and identity, and the image-making she engages with is integral to that process. Her self-portraits explore her identity, her place in the context of her relationships with others, and her place as an individual in society. In her paintings she is adorned with and surrounding by rich symbols, thus her images become mediated through the cultural belief systems and conditions of the contextual times and places she existed in.

Likewise, through the use of Kahlo as his "surrogate", Morimura is representing these same notions of cultural identity, his view of himself as an individual, and how the context wherein he finds himself, shapes all that. As viewers, we are situated somehow between these two mirrors of reflection, Kahlo as the symbol of herself and Morimura's duplicate image of Kahlo. From this viewing position the interplay between these two dichotomies goes far beyond the images of these two artists and their cultural contexts, it refers to the similar spatial positioning we find ourselves in today.

There is a distinct difference between Kahlo's identity and her origins and that of Morimura's, and not just in their positioning in historical time nor cultural geography, nor even their gender. Even more applicable to our concern, the identity of each of these artists differs in terms of space, for notions of identity and space have made a marked shift from the circumstances of Kahlo's time, to the current context in which Morimura, and ourselves, are situated. Virilio speaks about this in his interview for the 200X exhibition "Identity and Trajectory" at the Foundation Cartier, when he references the

connection between personal identity and space. He asserts that historically our identity was tied to our place of birth, the "native soil" where we enter this world, or our origin. He makes the connection between personal identity and space by referencing the historic relationship between our identity, and our place of birth. The "native soil" where we enter this world, or our origin, typically defined by borders, formed to mark and distinguish, to assert that identity of place.¹⁰

Jacques Derrida also speaks of this relationship with identity similarly, whereas Derrida considers the placement of boundaries and defence of territory as rooted in identity, rather than place or location. Instead Derrida considers identity as established in a social grouping of community rather than a physical border. Whichever the case, Kahlo's identity is situated in both these ways as depicted by her works. With Morimura, on the other hand, who is living and working in today's context, we see that his identity is not rooted to either physical location or community situation in quite the same way, instead it is placed much the way Derrida describes it.¹¹

With Morimura's portrait, his surrounding space is much more amorphous and undefined. Is it the dimensions of the screen, the virtual world beyond the screen surface, or the room he inhabits as depicted by the camera? There is nothing in his context to place him, instead the cultural referents he is using are attached to his very body directly, or in his positioning of his body itself, rather than his surroundings. Hence he carries these "contexts" or clues to his origins and identity wherever he goes, rather than as his roots to one place. His appearance morphs and transforms before our eyes, much like our own identities today as transmediated by our technologies. While our identities are still rooted by our relationship to the larger context of the world, now technology has altered that context, subsequently causing a shift in our position. Today our identities are formed much differently, and the shifting of both our public and private spaces is enacted through images and networked paths, just considering Skype and Facebook alone as perfect illustrations of this.

Because the nature of our technologies have created a context that is no longer fixed, an amorphous and shifting space. With context undetermined, consequently our identities are also in a continual flux, mutating and being formed and re-formed. In much this same way, in this artwork Morimura represents his position as it exists in these same circumstances of today.

So what indeed is he able to offer us as insight into the context wherein we find this "double mirror" condition? How does this context add to and influence the significance of the copy, whether virtual or otherwise?



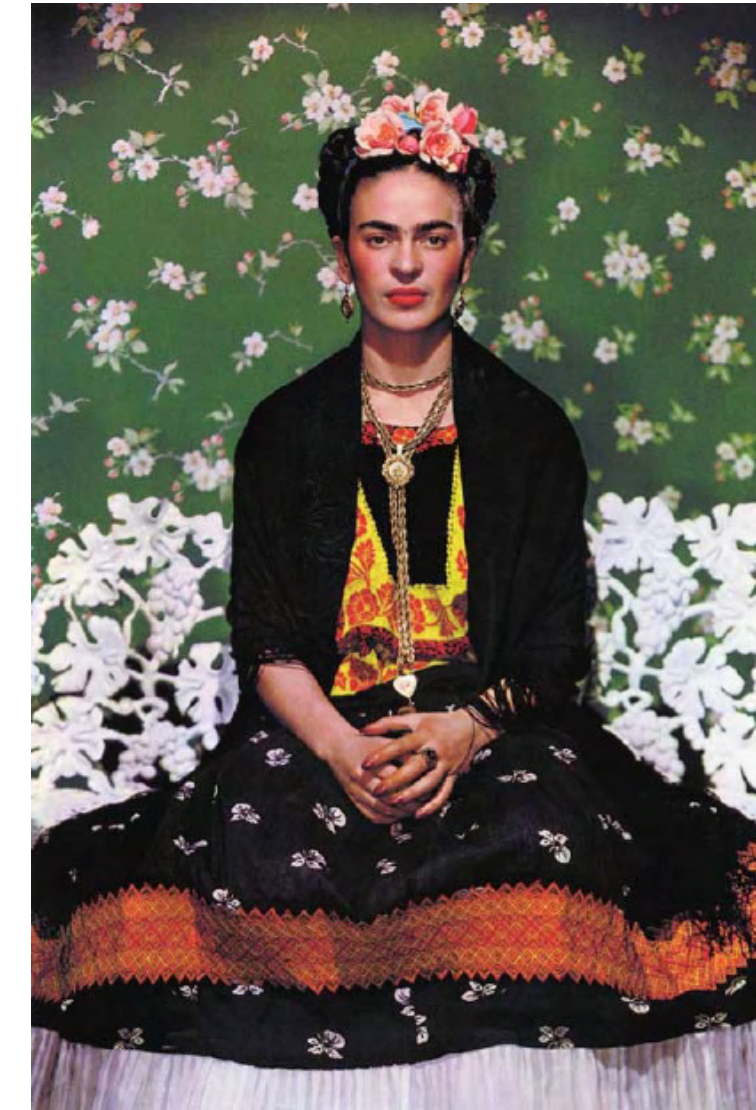
Twin Contexts & Identities

In Morimura's work, as viewers, we find ourselves suspended between Kahlo's very physically real, tactile, and somewhat visceral painted depictions of herself in the exhibition, and this technically polished imagined representation of her in the virtual world that he creates. Most significantly, the transmission of Murimo's image of Kahlo is done through the transitory medium of video, situated in the immaterial space we see on the monitor. He has mediated himself not through his own image but through another image, that of Kahlo as a symbol or image of herself. Having never met Kahlo in person directly, his only experience of her is through her representations, which she created and have now been translated into an art world mythology. Through these works, as a combined narrative life story, she has indeed evolved into a type of cultural icon, a symbol reflecting the "real" Frida Kahlo

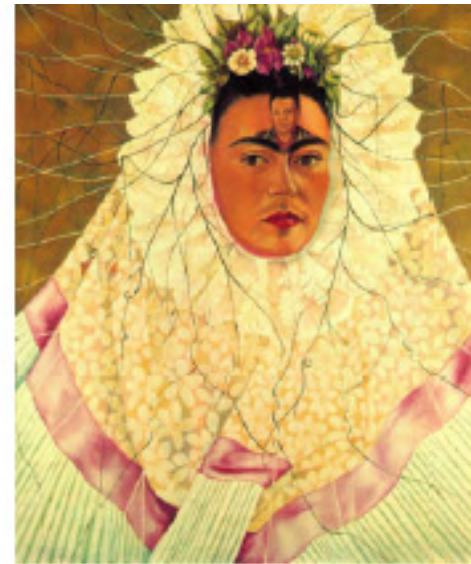
The viewer, occupying this indeterminate space between these two reflections, is between Kahlo's very physically material art, through which she portrays her own image, and the ethereal projected light of the video monitor, which portrays her unreal or mythical image based existence. Yet ironically, Morimura creates this more transitory and second-hand version of Kahlo, through his own very real physical manifestation.

Thus situated, the viewer is left considering his/her own suspended state of being, hovering between their own very real existence and their image, perhaps pondering how they themselves are created and perceived by themselves and others, and the transitory nature of both conditions. Again we see the condition described so aptly by Benjamin of two mirrors facing.

Additionally, as a device of mass media and representative of popular culture, there are implications to the video's "White Cube" museum setting. The museum context signals the activity of reflection and consideration from the viewer, situated away from the onslaught of the digitally primed outside world, wherein it can "recover a mode of contemplation outside the universe of simulation, and fast-speed information".¹²



Suspended Dichotomy



Our contemporary world is fraught with unprecedented levels of ambiguity and disorder that co-habiting in the real and the virtual presents. Through Morimura's synthetic and simplified version of our contemporary position, another reflection is created, that of the viewer's own self-reflection. This imposed conditional state of limbo presents the viewer with the advantaged opportunity to 'see' and make sense of their own state, through distancing.

Through externalization, these representations are a means to make something explicit, giving

“tangible form to the ideas, thoughts, and reflections”¹³

“Models” of a complicated system serve as a frame in which to act and react, a point of departure or question posing device, around which many ideas can be birthed and considered.¹⁴

Today, we are largely self-sufficient to operate in the world. With our own portable technological means of navigating, controlling, and mediating, we no longer require the encumbrances of a host of material objects. More traditional, physical objects no longer have the power they did in the time of Duchamp's readymades, images and data do.

Much as Duchamp did with objects through his 'Readymades', Morimura is re-contextualizing the objectified individual, just as our self-represented images do. Mediated through technologies and social media platforms, we are subject to automation, commercialization, and consumption of the individual. Like the celebrities we worship, we recreate ourselves through technology and then present those versions to our globalized society through the media. Morimura is modeling the reality of that existence for us, through the medium of Kahlo and himself, and in his choice of audio-video technology. By presenting this to us in a new context outside that of our daily engagement with it, he has shown our situation distanced and reflected back at us from an observable viewpoint. Resultantly, heightened awareness and additional levels of sense-making and framing are being enhanced and supported.

Just simply the act of re-contextualizing an exact copy, as both Duchamp and now Morimura have done, in itself, renders the duplicate useful and significant. Morimura in re-contextualizing the self-reflective work of Kahlo, is also re-contextualizing a state of “being”, wherein human identity is transformed and redefined. By highlighting the shift of identity, Morimura brings attention to the surrounding physical space as we seek to “place” the identity by context. If the identity shifts, then perhaps or clue to “who this really is” lies in “where” they are situated, their identity through their

placement. Again, just as the identity is illusive, the placement is ambiguous.

While clearly a modified aesthetic occurs in the shifting of Kahlo paintings as they are copied and transformed into video, a shift also appears in the Japanese origins of the Morimura through the visual references we see in the environmental context he stages for himself. Unlike Morimura's portrait of Kahlo, Kahlo's portraits of herself typically show her in a “cropped” way, where she is shown up close with objects from her cultural surroundings. These objects appearing as props to her persona, depicted objects as images, used in conjunction with her dress and adornment in reference to the mythologies and symbols of her cultural and emotional context. The elements alone allude to a surrounding context. In contrast, Morimura is shown in the larger more staged fashion, viewed from a more distant vantage point which includes his surroundings. This virtual space, viewed through the monitor, is informing us about identity. At the same time the physical space where he has staged the scene for the shooting of the video, with its allusions to a stark Japanese temple, is re-constructed to form an image which helps us to understand both where he is, and consequently through of our spatial and cultural relationship to him, where we are.

Morimura's choice of Japanese referenced staging, dress, and in the selection of Kahlo, with her strongly ethnocentric based depictions of herself, refer perhaps to the transcultural nature of our globalized reality wherein all is fluid, transformable, and easily morphed. A process, due in part to technology's far-reaching ability to proliferate and transmit images. Morimura has now underlined this in a visually parallel way, in his use of some of those same technologies to superimpose cultural references and speak of our global spatial dilemma, the world has been expanded by technology by its ability to connect and encompass, while at the same time collapsing it through the ease of this connectivity.

Furthermore, the ongoing merging of cultures is again emphasized through our own participation, as the act of viewing moving images on screens in cinema and television, is a culturally unifying experience.¹⁵ While we are sharing this experience in a public way, we are at the same time experiencing this within the very private space of our own perceptions, much like the similar experience of being plugged into an iPhone or iPod with a headset while being intimately close to a crowd of complete strangers while sharing physical space on the metro.



Copy as a Re-engagement of Focus on the Object/Subject of Reflection

Also interesting to note, that upon painting on himself, Morimura's transformation is into an image of Kahlo, not Kahlo in reality, for Morimura has never known her, nor seen her in reality. "The Kahlo" that is represented, are her painted images which she made by viewing the mirroring of her own image. They are only copies (emblematic images), made from a copy (her reflection).

Kahlo's "work has been celebrated in Mexico as emblematic of national and indigenous tradition, and by feminists for its uncompromising depiction of the female experience and form." (Facebook – Wikipedia) of a woman. When actors or women apply makeup in preparation for presenting themselves publicly, their individual identity, or meaning is diluted to the essential components of the character depicted. Just as actors exaggerate and characterize themselves in roles, women draw themselves in the way they apply their makeup. The lips are put on in a certain shape, exaggerated in a style that is considered "feminine", an objectifying effect. By doing so, they are putting two-dimensional symbols on a three-dimensional space, just as Morimura has done here.¹⁶ In the case of Morimura, this 3-dimensional image will now undergo the further transformation of digital coding, once again broken into symbols, to be presented again as a 2-dimensional image on the video screen. The self-referencing reflections are endless.



When the body is an expression of an informational pattern, randomness can always intervene to disrupt or change that pattern.¹⁶

In undergoing this transformation Morimura not only speaks of gender roles and the individual's relationship to society, but also our current view of ourselves and each other in society where people's image of themselves are self-created and mediated through digital technology. Through such technologies as social media, we are all packaged and produced, everyone becomes a celebrity, if not a cartoon of themselves, wherein they are simplified down to an exaggerated version or symbol of their own reality and presented to a global audience. This media has not only changed the relationship between individual subjectivity and mass consciousness, but it has transformed the relationship between public and private space, interrupting the spatial pattern of movement between the two.

SPATIAL NOTION

Forming Space Movement + Image + Space



Image has the power to represent both physical reality and our conceptual understandings or memories of space. Image and object relationships, and their associated meanings are critical to relating ourselves to surrounding space, and in establishing placement of ourselves in our spatial context.

The scope and depth of research on spatial navigation and spatial memory is expansive, bridging many diverse areas of expertise. However, all of these disciplines widely accept the crucial role that movement, and the related sensory contact of a moving body (both haptic and kinaesthetic), coupled with visualizations or imagining play, as essential in this process. All three of these, movement, images, and sensory input of spatially perceived information, are mutually dependent on one another in establishing and maintaining the human-spatial/environmental relationships that are key to our survival.

The link between our physical movements through space and our mental imaging systems are direct. This can also be considered the case with the virtual, both the digitally created and the imagined, contexts we inhabit, as we do not change our innate processes and capabilities between different form manifestations of space. In our stages of human development, long before we engage in associating space and image, image and meaning, this process of the interplay between body movement in space and image starts. One need only observe a human infant to see this interplay in action.

“In the same way the body in architectural space, combined with memory, constructs its inner equivalent of the architecture which surrounds it,” we associate memory and interior images we hold, with mental architectures we create as a way to navigate through thoughts in our mind.¹⁷

This can be further illustrated for instance, when considering how we convey directions to a location or place to another person. This is done through describing the series of movements one needs to make in relationship to progressively encountered cues, typically visual images. For example, “take a right at the large church with the big blue doors”. The “right turn” being relative to your own body orientation and relative position, “the church” being an image in the person’s mind who is recalling and relaying the information, as well as a physical manifestation existing in the space, now serving as a landmark for both the person recalling and relaying the directions, and also formed as an image mentally by the listener, then later referenced and by the person who will carry this image to and seek its equivalent out in the landscape as a clue to their location. The person listening must imagine the process of navigating through the series of described movements and construct visualizations of the sequence of landmarks they will be looking for, then physically seek them out. Likewise, when navigating virtually, on an internet website for instance, we undergo much the same process.

Image is the link between our mental or imagined, and our physical places. Movement not only serves to enable us to assimilate the space and code it through images, but also enables us to shift between these two spatial realms, the physical world that surrounds us and the imagined or virtual interior world. The process we undergo is the same, no matter which environment we navigate, and is often described as “cognitive mapping”.



Generating the Cognitive Map

Cognitive maps (also known as mental maps, mind maps, cognitive models, or mental models) are a type of mental processing composed of a series of psychological transformations by which an individual can acquire, code, store, recall, and decode information about the relative locations and attributes of phenomena in their everyday or metaphorical spatial environment

Positional landmarks provide information about the environment by comparing the relative position of specific objects, whereas directional cues give information about the shape of the environment itself." all which is used to map out our environment. Therefore, our context is mapped out for us, through relative relationships we are able to establish by movement between landmarks which we understand through an "image" whether that be visual or through other perceptions. Our movement can indeed be thought of as a relationship between time and space, since we understand distance or space between objects or landmarks, as the duration of time it takes to move between them.¹⁷ Understanding the conditions and layout of our surrounding environment is key to our survival, and this is an innate tool essential to human beings.

This type of spatial thinking can also be used as a metaphor for non-spatial tasks, where people performing non-spatial tasks involving memory and imaging use spatial knowledge to aid in processing the task.¹⁸

The oldest known formal method of using spatial locations to remember data is the "method of loci", which goes as far back as ancient Rome. Realizing this innately powerful connection humans have between place, image, and meaning, this same process of relating our physical context to associated meanings through images, was used to memorize meanings, or facts.

The method of loci involves first memorizing the appearance of a physical location (for example, the sequence of rooms in a building). When a list of words or facts, for example, need to be memorized and recalled, the learner visualizes an object representing that word, then mentally "places" that "image-object" in one of those pre-memorized locations. To recall the list, the learner mentally "walks through" the memorized locations, recognizing the associated objects placed there during the memorization phase and through their image recalling the associated information.¹⁹ Rather than remembering the original information through memorization and direct recall, we instead use our far greater capacity of remembering images of objects and recalling experience of our environments as tied to our physical movements. Thus complex sequences of information can be conceived in the human mind by connecting meaning with image, image as objects, and objects situated in places which can be navigated between through the mind carving a path, much like the physical body does in embodied space.

Whether engaged with our bodies or our minds, the relationship between image, space, and movement, is innate and seamlessly integrated in a constant dialogue between the physical and virtual domain of our being.



Navigating Space: Image/Meaning + Space

Further to the discussion about movement, image, and space, in his book *Image of the City*, Kevin Lynch, discusses this human-spatial relationship, specifically in the context of our process of interacting with environmental space. According to Lynch's research we rely on three important components that appear in our environment together: identity, structure, and meaning as necessary for us to form "workable" images of place. Through spatial interactions such as navigating, way-finding, mapping and by our experience of events, objects, and conditions in a setting, we form images of our surroundings. Identity is first in this process of image forming, wherein we must be able to make an "identification of an object, which implies its distinction from other things, its recognition as a separable entity [or landmark]...Second, the image must include the spatial or pattern relation of the object to the observer and to other objects. Finally this object must have some meaning for the observer, whether practical or emotional. Meaning is also a relation...."¹⁹

Thus, when speaking here of images, not only in terms of pattern and spatial relations, but with the inclusion of meaning, such as social, cultural, and personal significance, "context" is being considered more than just our physical "location". Furthermore, as most relevant to the explorations of this paper, today the "meaning" and implications of context is being increasingly derived through more than the filters of our own perceptions and the constructs of our societal and cultural influences. Images come to us through all sorts of technological mediums, in far vaster numbers and at a more dizzying rate than ever, and these modes of delivery render their own contexts and additional meaning.

In their current formats, we now experience overlapping, rapidly form-shifting manifestations of moving images we have never before encountered in quite the same way. The impacts this has on how we relate to the world through forming images of our environment are massive, especially considering the constant flux and updating that this contemporary condition necessitates on a continual basis. With regards to our spatial perceptions, there are deep implications to this.

Setting aside the language and meanings of the images and their power to be "read" or interpreted as symbols, there are associative very relevant meanings inherent in the technology itself. It is generally accepted, that the filtering through those mediums and their modes of delivery, largely affect their meanings. The technology itself enacts a "translation" of the content, thus altering the message. In the book *The Medium is the Message*, Marshall McLuhan discusses his notion that the characteristics of the mode of transmission, not the image or symbol itself, is what generates the meaning when he says, "The medium is the message."²⁰

He elaborates further:

Each medium, independent of the content it mediates, has its own intrinsic effects which are its unique message.

The message of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs.²¹

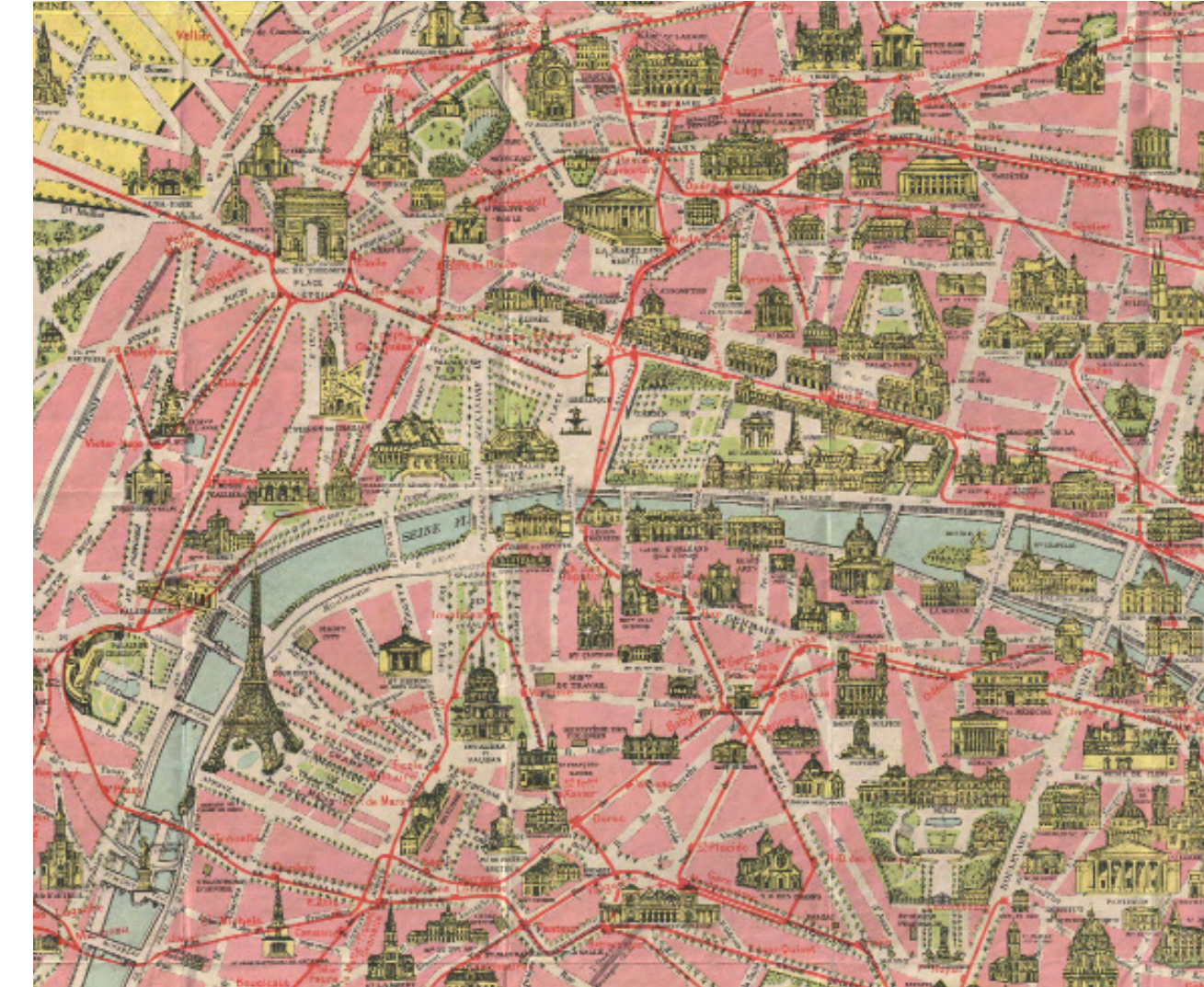
As McLuhan asserts, each medium affects structural changes. Societal values, norms, ways of doing things, are all altered by the introduction of a new medium. If we are to consider his viewpoint with regard to the implications technological mediums have specifically on our notions of space, we must necessarily consider the following:

- the increased prevalence of enlivened images as abstractions of space
- the mode of the conveyance of those images, and the innate link these enlivened images have for us with regards to how we conceive of and perceptualise space.

To consider how today's technological media artificially constructs virtual space, we may begin by simply regarding the affects the movement of images, enabled by the projection of light, have on us, long before their present technological incarnations. One could certainly assert this is not a new condition for us. Indeed the affects of moving projected light on our perceptions, and its ability to induce virtual worlds of powerful inner imaginings, can be said to have occurred since time began through the atmospheric effects of shifting sunlight or passing clouds. Looking more specifically at the interplay of physical image depictions and constructed space, we see much earlier examples of the powerful effects of projected moving images on man's environmental and perceptile experience. Through the shift of natural light and the changing vantage points of the viewers circulating within the space, symbolically meaningful and narratively rich visual pictures created in stained glass windows have long animated the stone surfaces of early churches.

Following forward, with the advent of modern motion film, images began to become enlivened in ways that differed significantly from these earlier forms of projected moving images. With cinema the expanded transformative power of merging image and space on a multitude of levels, in a more deeply connective, immersive, and complex way. Once again, we consider Morimura's use of video in his depiction of Kahlo.

In making the transformative power of the video medium apparent with his blending and shifting of images, Morimura emphasizes that the screen is 'an action surface' or active space, something that is "subject to change and negotiation" enabling multiple identities, much like Kahlo's numerous self-portraits.²²





The Copy & The Medium of Reflection

*The philosopher, the scientist and the artist make journeys into the land of the dead, each of them returning bearing concepts, functions and sensations. Each of these three realms acts as a means of protecting us from pure chaos: the philosopher tries to think chaos, the scientist to minimize it, the artist to make use of it.*²¹

Morimura is well aware, just as Duchamp and Christo exemplified, that the act of insertion gives the object or image the meaning, not the image itself. In Morimura's case, he has chosen to recontextualize not just in terms of space, but in also making use of the relationship of space to time. This is something the nature of video, as a moving image, makes possible. Since the meanings and the viewers reference point are in continual flux, each moment of perception is shifted by the preceding one.²² Once again an emphasis that context, or spatial occupancy, and the image are co-dependent, co-reflective, and engage in highly reactive multi-directional interplay. This re-contextualization is an ongoing process, as language and symbols are constantly redefined, meanings are in a continual process of negotiation and shift, depending upon where objects or artworks are perceived to be located in a cultural system.

Through motion pictures, while meanings inevitably change over the shifting context of both historical time and cultural environment, with the use of the video media, the time element is accelerated, and thus amplified. Changes are enacted so rapidly one no longer has the capability to comprehend and articulate each shift. Unable to couple such accelerated images to related meaning, their use as symbols to be "read" is impotent, instead the focus is redirected to the act of the shifting itself, its rapidity and mode, and the indeterminacy of the context. Once again, space is imbued with time.

Similarly to both Kahlo and Morimura, the viewer of these works finds him/herself caught in the undefinable position of being situated between real life and imagery, while hovering within their own cultural setting and that of a globalized world. We are left reflecting on the confusing interplay of the two and the dilemma in never quite knowing which is which. A situation in which we find ourselves in today on a continual daily basis. Overall, in copying Kahlo, Morimura presents to us in a more revealed and considered way, not only a relevant reflection on the transformative power of our technologies, but the power of the replications they enact.

Just as our position between the two mirrors reflecting, the "physical" and the "virtual" worlds, can be a dizzying and disorienting dichotomy, it can also be a powerful position. Through this positioning, a freedom of movement is enabled that not just allows us to go between these two worlds, but holds the possibility to effect their convergence, thus opening up the potency of new perceptible and experiential depths. This indeed is the power of the replicate.

While clearly being situated neither "here nor there" is an ambiguous state of "being", as the examination the works of these two artists attests, perhaps it is not the zombie-like, immobilizing state Morse seems to have alluded to in his previously quoted statement.



Does the dilemma of two realities or "truths" existing simultaneously make an unanswerable question or does it create a richness and complexity? Either way, it is arguably an energized existence of invigorating potency; for with no definitive placement, it is a position alive with infinite potential.



If everything we know comes from our perception of the world, and reality is really just an experience in our minds, optical illusions may suggest what we perceive and what is real are different and can never be the same. Or, failing that, they at least suggest that there is no way to prove that our senses are telling us the truth about the physical world. In philosophy, we call this the argument from illusion. The argument says that if we can imagine a situation in which we can't perceive the difference between what is real and what is illusion, we can't be sure anything we experience isn't an illusion.²³

Cinema & Space

A Historic Shift in Movement of Time, Space, & Image

Once again we look to projected image as a highly provocative way of duplicating and co-existing with reality.

When further considering image as a duplication of space, many technological and pictorial systems of representation and proliferation, both virtual and physical, come forth. In examining additional imaging systems, the dynamics of the interactive relationship of digital synthetic space and physically embodied space may be further illuminated. In considering the relationship of image and space at the advent of cinema, what set this medium apart from other modern art and technologies, was its ability to fluidly transmit images combined with sound, in motion through time and space. Yet motion pictures brought forth an increased ability to orchestrate the interplay between the physically tangible space and the synthesized experiential or "virtual" space. That altered perception of movement, time, and space is indeed the message of the medium of motion film, which can be summarized as follows:

- Different spaces and places in time can be inhabited simultaneously.
- Time is manipulative and fluid, it can move and be read in either direction.
- Relative movement of and through space and time can be altered. Therefore space and time can be compressed or expanded through movement.
- The time-space continuum, its spatial and temporal sequence, is alterable.

All this is possible through the nature of the medium itself. Motion film has the ability to move seamlessly between time and space. As film can be shot at one time and location while depicting a different time and place, and then be projected and experienced another.

Through its transmission of projected light, film images have specific properties particular to this condition. Such characteristics as reflection, refraction, and transparency, further serve to enable this. The camera's capability to reshape images through such devices as overlapping, merging, refocusing, cropping, and so forth, can be effectively utilized to this intent since these are all properties, we naturally rely upon to perceive depth and space.

Through an altering of the sequencing and by shifting the speed of delivery, film through its movement from frame to frame, also has the capability to reshape time and the experience of both the planar projection space and the volumetric space of the scenes depicted. This can be further enhanced in combination with the rhythms and volumes of sound.

With the advent of cinema, images began to be formed synthetically by others, outside ourselves, that already had a relationship to

space and movement before we received them through our own movement and perceptual processing. While we still undergo a process of perceiving the image, the spatial relationship has been already formed for us, and not experienced through our own movements.

Overall, the message in the nature of film is that things can be viewed simultaneously that are in different spaces, or time, allowing these processes to unfold in ways that are not possible in reality. There is a fluidity of Time, Movement, Space which enables openness to multiple readings and expands our spatial experience beyond what is possible in our physical world, or had been previously possible, through the image-making we had until then, created.

With the objectivity, and comparison such a unique vantage enables, new ways to contemplate and consider came forth, while at the same time this fluidity had the potential to be destabilizing, confusing, dizzying, and disorientating. The selection, sequence, speed, and methods the filmmaker uses to employ these characteristics, particular to film, influence how the viewer perceives the imagery and its message. The resulting change in perception consequentially shifts our orientation, and therefore our position in the world. While like modernist painters, film has the ability to collapse and flatten space, overlap and obscure objects. The inherent characteristics of the motion film medium brings the additional presence of time to movement in space.

In using the camera's characteristically shifting vantage point, those same objects which can be overlapped to compress space, may subsequently become revealed to expand space while once again the objects that are evident, which then are obscured, seem to disappear into a compressed space. This is all made possible through the interplay of time and movement. Objects and characters can appear, disappear, reappear, and change how they inhabit space, at times seemingly occupying the same space concurrently.

Likewise, time can be altered, through such modes as rearranging the sequence of events, overlapping differing events of time, and altering speed.

An additional collapse of time and space is inherent in the viewing act itself, as the relationship of body through its perceptions to the cinematic space co-exists with the physical presence of the body at rest in the audience of the theatre. Through cinema, a shift from audience to participant is achieved when the viewer is transported in and out of the screen through devices such as the camera distance, angle, and focus. In this way, modern cinema may be considered a directly related precursor to virtual reality, the framing and shifting of vantage through the combination of the camera and cinematic screen as interface not unlike that of the computer monitor, in its interactivity and relationship of viewer to animated image.



Replicating Reality



The film-maker Jean-Luc Godard is a master in the use of the inherent qualities of the motion film medium. As exemplified through a selection of his films, we will examine further how the characteristics of motion images impact space, once again considering the relationship between movement, image, and space on our spatial perceptions, particularly through the following areas:

- Moveable Spatial Occupancy
- Occupying Simultaneous Space
- The Collapse of Space and Time
- The Suspension of Time-Space Continuum
- The Cinematic Relationship of Time to Movement & Space
- The Physically Contextual Situation of the Viewing Act – The Theatre

Moveable Spatial Occupancy



Film achieves moveable spatial occupancy by exploiting the notion that the camera is synonymous with the viewer, and through shifting focus and vantage positions. There are times when the camera is a distant, detached observer, even a voyeur, and other times when the viewer enters into and inhabits the scene, thus shifting from viewer to participant.

Such a reconstitution of space and our perceptions of it, is achieved by Godard during scenes in his film *À Bout de Souffle*. One such case occurs when Godard places the camera in the back seat of the car in which the characters are riding. In doing so, he does not show the characters in their most traditionally advantageous way one would expect to find them in as subjects, their full frontal "portraiture" or their profile, as this would necessitate that the camera be positioned in a location that is unachievable for us in our physical realm. since no one could possibly inhabit this position in their physically embodied world (and, at the time of this film-making, this would have be an extremely unfamiliar vantage point.) In assuming such an unlikely position, the fictitious nature or contrived circumstance of the film, would have been emphasized to the viewer.

Instead, by placing the viewer in the viewing position we recognize as the physically habitable space of the car, the back seat, the viewer becomes "present" in shared space with the movie characters. Thus in Godard's acknowledgement of the viewer as a real person with bodily constraints. Through that placement we become more than disembodied and detached viewing eyes and listening ears. The camera angle is not one of privileged observer, but through this assumed vantage point, the viewer is becomes a fellow passenger in the car. By sharing in the "actual" situation of the characters, we are no longer as distant viewers enticed into the complacency by a fictitious illusion, but are activated in "engaged participation".



Just as Godard pulls the viewers into the actors world in this instance, likewise he also alters the spatial relationship of the viewers, when the actors move toward the space of the audience in their “break through the fourth wall”, in *Une Femme Es Une Femme*. Looking into the camera, and hence through the screen to the audience, the actors acknowledge and address the viewer directly. In doing so, they have affectively stepped outside the world they inhabit, to acknowledge and meet the viewer in a seemingly “in between” space, not the viewer’s real world of the theatre, nor the fictitious world the characters inhabit in the film.

In each of these cases, by exploiting the fluidity of space of the film medium, Godard creates a free interplay between Space, Spatial Occupancy, and Movement. He is able to do so, since in the cinema the eyes and ears alone are the input senses, which the camera can orchestrate while the use of physical balancing/equilibrium through kinaesthetic input is suspended, as we remain passively seated in the theatre. But as we will later see, even this perceptual input is open to synthesis through the orchestrated use of this medium. In this position of physical inactivity, the viewer cannot “feel their way around” in their usual, directly tactile, physical relationship to



By engaging them in direct dialogue, the characters are involving the viewer in their virtual film world, yet ironically by stepping out to the viewer’s realm, they are leaving that imaginary world they inhabit behind. Consequently, the viewer is pulled into yet another space that is neither their physical space of the surrounding theatre, nor the film space that they are engaged attentively in through viewing. Through this interplay a new zone has been opened up.

In emphasizing they can step out from their setting at free will, the characters reveal the power of the film medium to not only alter space through movement, but also to time shift, for the film was produced in another moment in time, as well as in another space. By addressing the current audience who were not present at the initial filming, real world time has been rendered irrelevant, time has collapsed, emphasizing again that we are observing a fictitious, constructed space with its own inherent abilities to affect time and dimension. We experience a freedom of movement not possible within our physical embodied world. This shift in what we think we know to be the case in our “real” physical world we inhabit, to the one we are now experiencing sets up the dilemma of illusion.

the space in which he/she is being placed into visually. Instead he/she is reliant on the eyes and ears, to report the experience of the position their body. while in actuality their body remains at rest in the theatre watching. Through the process of recalling past physical experience and recreating it virtually, the viewer experiences a sympathetic physical condition, within the engaged space of the film. Overall, since the viewer is reliant on what is shown to orient themselves in space and feel their position, without the aid of gravity, they must orient themselves according to a new set of spatial coordinates.²⁴ Although not activating the physical body, through this Godard acknowledges and makes use of the powerful innate human mechanisms discussed earlier, the combination of kinaesthetic movement, image, and space we instinctually rely on to orient and position ourselves in space.

Occupying Simultaneous Space

Godard as a film-maker, is extremely well versed in the characteristics and use of projected light. His use of such properties as refraction, transparency, and reflection, innate to his chosen medium, form an effective creative tool in his artistic repertoire

In the film *À Bout de Souffle*, the use of the mirror as a means of reflection is abundant. Through the use of the mirror, Godard creates another world or space, where there is a play between the seen and unseen, revelation and deceit, the inner depths of introspection and the outer surface of reflection. Through the co-reflective interplay of "image" and "reality", the characters as well as the viewers, occupy multiple spaces concurrently, and both the characters and viewers coexist in space. The viewers become "virtual occupants" of the cinematic "unreal" world, and the "unreal" characters break through to the physical "real" world in their acknowledgement of and direct address to the viewer.

In the early part of the film, Michel robs a girl's purse in the intimate setting of her bedroom, thus betraying her trust as she sits before the revealing glimmer of the mirror, with the cloth of her dress pulled up over her eyes.



Another use of reflection occurs when Patricia looks in a mirror, holds-up and compares her "image", this reproduction of herself, with the image or reproduction of a painting, which is a portrait or "image" of another woman. It is a conceptual tunnel of reflections or hall of mirrors. Again the viewer is occupying simultaneous space, situated in another spatial dimension. This is evidence in having both the vantage point of looking into the reflection in the mirror, as if in the cinematic space of the room, while at the same time occupying a position that cannot possibly have been attained since the viewers themselves are not reflected back in the mirror.

This is all possible because of the technical means of film and not just through the characters and situation alone. "Communication" in relationships emerges as a topic. Using the language of visual perception, in this case the perception of the world, Godard can express how this leads to "misunderstanding". As the images overlap and become murky, difficult to place and decipher, he further emphasizes the miscommunications in relationships between people, and the misunderstandings that result as we each translate between our inner worlds and the exterior space between us to relate to one another. He plays with the cinematic ability to effectively alter the relationships between public and private space, to achieve this.

Additionally, Godard brings to light the ambiguous conditions of our co-mingled worlds; the "experienced" dilemmas of visual space, perception, and illusion of the exterior "real" world, as it overlays onto our inner world. In doing so, he speaks about how this human process creates, but also distorts, what we "know", our "reality".

Image here is depicted as symbol or "language", which can be misconstrued, through its translation between inner and outer worlds of people, and between one another, meaning is altered. As a result, our own illusions and reality merge and create another altered "reality". The transition border where change occurs is not only indistinct but merged as subjective and objective worlds blend in a symbiotic space of exchange. This relates back to the progressive merging of figure and ground in painting, and points toward ever-increasing the blending of the digital synthesized space and physically tangible space we experience today.



Collapse of Space & Time



Such a merging of worlds through reflection is also used to collapse time and space. In the scene in *À Bout de Souffle* which takes place in the newspaper office, Patricia after speaking with the inspectors, is looking through the window at the street outside. Her image reflected in the window, is overlaid with Michel's who is in disguise across the street at a café. In this flattening, wherein the characters places, and actions that take place in both locations become blurred and indistinct, Godard affects a collapse of 3-dimensional space, thus reshaping space and time.

Similarly, during the subway scene where Odile declares her love to Arthur, in *Bande À Part*, Godard also uses glass to blur the inside and outside spaces, merged with a reflection of the character's face. All played against the motion of the subway train through the tunnel space, as an additional time element. Seemingly, he presents the characters to us for consideration, of their inner workings. He simultaneously highlights a moment of the character's inner self-reflection, while peering beyond the interior car space to the outside world beyond the glass. Once again, the inner and outer worlds of the character and the more private domain of interior space is blended with the exterior urban environment. In a juxtaposed relationship whereby they are being compared, reflected upon, merged, even distorted, the emphasis is on the examination of all levels of reality simultaneously. All is made possible through this cinematic technique. The merge and blurring of images and boundaries, gives the space an unreal quality, wherein reality is modified and distorted by the reflection, and describes the confused or chaotic state our perceptions of the world creates.

Once again we see a murky space of exchange where Godard emphasized the ambiguity between the private interior worlds of a human being and their image as viewed in the exterior outer world. There is a simultaneous merging and also a disconnect, between our perceived identities and who we truly are. This same type of spatially dynamic interplay of very public and private spaces plays out much the same way in our current space of exchange, through our combined relationship of image and identity, through the strong additional presence of our digital selves.



The Suspension of Time-Space Continuum

Film also affects a shift in the time-space relationship. In Godard's movie *Alphaville*, the Time-Space Continuum is suspended in the intimate, inward focused love scene between Lemmy Caution and Natacha von Braun. In this scene, single shot focused on details of the character's faces and their interaction, one shot following another, yet with no space-time connection time seems suspended.

There is an interplay between her face and his face in an intimate pairing, where their faces merge as one. However one face, and hence the inner world of the character disappears from focus, as they are eclipsed by the emergent visual dominance of the other person's face, then this process is reversed. In this back and forth, there is a rhythm in the sequencing of these shots, a paralysing oscillation, rather than a "real" time forward movement. The vantage points, angles, and range of the camera, serving to create this intertwining and merging of their faces. The camera intimately close in the slow sweeping movement, while the characters remain relatively still as if under the influence of the "spell" of the camera's soft "caress". Any of their occasional movement is quite sluggish and deliberate. As if in slow motion, the characters are seemingly mired in a thick atmospheric substance of the engulfing space,



heavy with the effects of this sluggishness, time seems suspended.

In the space of the apartment interior, while time is slowed in this reflective interaction between Lemmy Caution and Natacha von Braun, concurrently time is being accelerated in the frantic and hurried world beyond. Through the apartment window, we are able to witness the unfolding activity in the street below, with the simultaneous rapid arrival of the police car, and the policemen's rushed and intensely decisive actions. Time and its movement, are not interrelated in these two adjacent places. Although both places share the same framed space of the cinematic screen, they do not share the same time. There is no space-time connection. Time lacks connectiveness and exist disassociated within the same space.

The scene of the street action below is displayed as a flowing narrative of events, unfolding before a still camera. Meanwhile, Godard interlaces this with sweeping images generated by the unending movement of the camera above in the apartment, where time seems to have been suspended. The camera focused on the street is frozen in the position of objective scrutiny, as if fixed in a

watchtower, while the camera on the characters is moving, although they remain suspended in entranced dreamlike state, powerless and unable to run or move from potentially approaching danger. We are aware that both scenes are transpiring concurrently, yet in one space, time is slowed, while in the other it seems accelerated. We have a feeling of pending doom as we wait to see if the two scenes will converge, yet the difference in the movement of time makes it even more difficult to decipher how time relates in space and if it will realign. We remain uncertain if in the future moments, spatial and coincidental convergence will occur. Will time and space reunite to form one outcome or bypass one another to result in another? Our mind races, connecting to the as yet unknown, but implied possible consequences. We are aware of the friction between the two situations but are unable to reconcile them, as they are outside our usual experience of time and space, our awareness heightened by our own emotionally anxious, unsettling state.

Through this juxtaposition of time, it's power, and the relatively powerless inability of humans to ward off its pursuit, is emphasized. Yet this also reveals the power of our technological mediums to shape time in space, in ways that are not humanly conceivable.



Time – Movement & Space



Within the technological characteristics of motion film are held. The ability to combine movement, through images in sequence, with the rhythm of sound and fluidity of space. During the club scene in *À Bout de Souffle*, when Odile, Franz, and Arthur are dancing "The Madison", Godard makes use of the device of sound and rhythm, again enacting the powerful combination of movement with space and image. We become present through the intrinsic link our bodies have with movement and image.

The hypnotic rhythm of the music and the repetition of the dance, sets a trance-like pace, lulling the viewer into involved complacency. We, as viewers, become present through the involvement of the rhythm in our bodies, intrinsically linked to the characters through their movement, and thus we feel present by our participation in the action of the scene. The hypnotic repetition of the dance sets up a trance-like pace, lulling the viewer into involved complacency.

When the music is suddenly stopped, yet the action of the scene proceeds without the associated sound, we are awakened, no longer do we have a fully immersed presence there with the actors.

We are abruptly pushed back into the position of the observer distantly watching the spectacle. Ironically, while displacing us with this action, the narrator interrupts our own inner involvement to reveal the private individual thoughts of each of the characters.

In another mirroring, out of our own state of inward contemplation while recreating the movements within ourselves, we are suddenly immersed instead into the deeper, personal interior worlds of the film characters. Through the rhythm of music and movement, a merging of inner and outer worlds is achieved, time has been altered and space reshaped.

Reshaping Space Through Gesture

Godard has used movement and image to energize the motion image space of the 2-dimensional cinematic screen, and in doing so alters our spatial perceptions. Considering once again the relationship of image, movement, space, it is interesting to look at another 2-dimensional spatial action setting, that of painter Willem de Kooning.

As an Abstract Expressionist, like Godard's cinematic screen, de Kooning's canvas is an environment of movement. In both cases, it is the relationship of time to space, which results in the form. Movement shapes space. Much like Godard's cinema, here the marks on the canvas, or 'image', are a manifestation of time rather than a pictorial reproduction of the object as visual subject, a formalistic art composition, or a manifestation of inner worlds of self-expressed reflections.

Where the effects of de Kooning's chosen medium of painting and Godard's medium of motion film differ, is in the way time and movement interacts with the work. As discussed, film has an ongoing time, movement interplay with space. Objects, characters appear, disappear, reappear, and change how they inhabit space, at times.

With painting, the interplay of time and movement effecting space is direct in the making process, but less so once the work is created. In the viewing of the work, the movement is in the resonance of the painting, how the eye moves across the canvas and elements recede or come forth in relationships to other, the undulation of visual tensions, and in the movement of the vantage point of viewers as they change their position and viewing angle to the painting. In this there is no difference in time-movement dialogue of any other mode of painting. However with De Kooning, we see the affective influences of the advent of our technological time on notions of space, in a way that was not apparent in painting previously. In his essay, *A Desperate View*, de Kooning speaks of space.

One is utterly lost in space forever. You can float in it, fly in it, suspend in it and today, it seems, to tremble in it is maybe the best or anyhow very fashionable. The idea of being integrated with it is a desperate idea.²⁵

Later in that same essay he goes on to speak about the artist's relationship with space.

The idea of space is given him to change if he can. The subject matter in the abstract is space. He fills it with an attitude. The attitude never comes from him alone.²⁶

Here we see that for de Kooning, like Godard, space is an atmosphere, never fully formed, forever changeable, to be acted upon, which at the same time acts as a force of its own, exerting an influence on the shape of one's perceptions. In this way the environment expands beyond the space of the framed two-dimensional canvas or cinema screen, much the way we experience two-dimensional space of a digital screen or monitor.

Godard's and de Kooning's work was not only about this illusive conceptual idea of space, they both viewed their work as an embodiment, a movement in physical space. Their artistic efforts were a by-product of their own unique life experiential process and individual impressions, opened up to the interpretations of others, in a world where nothing is as it seems. There are no absolutes nor constants; all is open to interpretation and perceptual shifts. In each case, film and painting are a type of "documentary", reporting the actual event of creation, the process within which those shifts in perception takes place. A time-based event of artistic process, that through its recording continues to enact a further shift. The work of the artist being the manifestation or artefact of his transformative process of creation, while simultaneously undergoing the further transformation enacted through the particular characteristics of their chosen media.



Godard has used movement and image to energize the motion image space of the 2-dimensional cinematic screen, and in doing so alters our spatial perceptions. Considering this image, movement, space relationship, it is interesting to look at another 2-dimensional spatial action setting, that of painter Willem de Kooning.

As an Abstract Expressionist, like Godard's cinematic screen, de Kooning's canvas is an environment of movement. In both cases, it is the relationship of time to space, which results in the form. Movement shapes space. As such, the marks on the canvas, or "image", are a manifestation of time rather than a pictorial reproduction of the object as visual subject.

Where the effects of de Kooning's chosen medium of painting and Godard's medium of film differ, is in the way time and movement interacts with the work. As discussed, film has an ongoing time, movement interplay with space. Objects, characters appear, disappear, reappear, and change how they inhabit space, at times. With painting, the interplay of time and movement effecting space is direct in the making process, but less so once the work is created. In the viewing of the work, the movement is in the resonance of the painting, how the eye moves across the canvas and elements recede or come forth in relationships to other, the undulation of visual tensions, and in the movement of the vantage point of viewers as they change their position and viewing angle to the painting.

De Kooning too is affected by the influences of his technological time on notions of space. In his essay, A Desperate View, de Kooning speaks of space.

One is utterly lost in space forever. You can float in it, fly in it, suspend in it and today, it seems, to tremble in it is maybe the best or anyhow very fashionable. The idea of being integrated with it is a desperate idea.²⁷

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“A body is not simply in a space; it generates space itself. They are reflected in and translated into the changes they create in their milieu, or in their own space.” Space is experiential, not something to be understood rationally. Lefebvre opposed the separation of phenomena and advocates interaction.

- Henri Lefebvre²⁹



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Beyond this core motivation, both these artists held a number of influential beliefs in common, on which their works were partially predicated. The following shared notions could be considered to be of direct bearing on how they position their work as directly reflected in spatial notions.

- The transitory nature of art and life. It cannot be fixed in time or in one place.
- A belief in the alteration of perceptions, views, or reorientation created by the work that shape how the viewer and the artist then perceive/think about their position in the world.
- The current situational context that the artist and viewer brings are integral to perception.
- There is a dialogue established in the unfolding of the work against the backdrop of context and in the influence/force of context on the work.

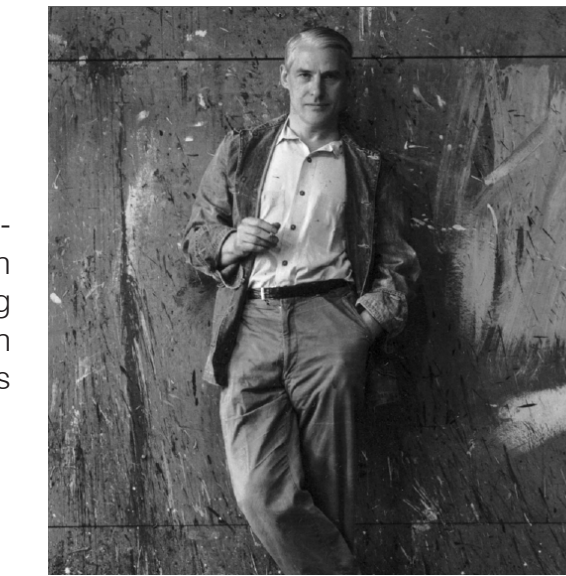
For both artists, the ongoing dialogue of those two dualities, the "real" physical and the "imagined" experienced environments, is integral to their discovery process. In addressing how the works are shaped by and contribute to the shaping of their environment, it is important to consider the following:

- Pictorial Environment - The environment of the medium itself.
- Expansive Environment – The expansion to inhabit space beyond the confines of the picture plane/screen.
- Contextual Environment – The physical environment wherein the works are placed, such as the studio or gallery and the scene or cinema.
- Perceptual Environment – How the space of the work is perceived, interpreted, experienced by the individual artist and the individual viewer based on their context.

One could suppose that art in its transitory, untethered, form-shifting and dynamic nature, may once again prove to be an appropriate means to explore and perhaps begin the unraveling of this dilemma of our contemporary world, the condition Benjamin so aptly described through the metaphor of two mirrors facing, as previously quoted.

Heroic acceptance of one's experience is the only convincing integrity.

-Willem de Kooning³⁰



One feels that if one is sincere and honest and one is driven into a corner over doing something, the result will necessarily be sincere and honest.

-Jean- Luc Godard³¹

Pictorial Environment

The Space of the 2-Dimensional Picture Plane

The pictorial environment of the medium itself concerns the use and habitation of the picture space, in the case of De Kooning, and the movie screen, with Godard.

With De Kooning's work, the canvas is an environment for his movement. He expresses his perception of the world and his life experiences as impressions, filtered through his body, and the canvas becomes the "container" of that output, a spatial vessel. For this reason his work is a relevant manifestation of how we relate to space through movement and image.

De Kooning's painting is a manifestation of a spatial tension. His brushstrokes and figures hover and undulate restlessly in space., his figures and gestures appear plucked out of the three-dimensional context he exists in and moves through. Although the paint captures random moments in that space, it remains illusive. The multi-directional pull of the lines in the two-dimensional work itself, create a gravitational field of their own.

Likewise, Godard's characters seem to be randomly captured in a moment or an episode, out of the continuum of life, suspended in time and hovering or orbiting outside the realm of their context. They are often engaged in their own trajectory of movement at their own intimate pace, while the world swarms around them, being jostled by the inevitable encounter with outside forces of their context and the inward tug of their own desires and perceptions. With Godard, he captures all he encounters in the world in a stream of movement entering into the camera. With de Kooning the impressions of the world enter his body, as "the mediating device", and is translated through his movement.



Expansive Environment

Expanding to inhabit space beyond the confines of the picture plane



Additionally, Godard is able to manipulate the space of the picture plane itself by playing with scale. His scenes often employ the use of the camera's compressed version of space. The methods of shooting within the four walls of the domestic environment of the apartment in *Une Femme Est Une Femme*, emphasize confinement and emptiness, the bareness and sparseness of the screen environment. An indication of a domestic life, which is stale and confined, a stagnant pressurized void, while out on the street the full width of the screen is enlivened with activity and awash in visual objects.

Whereas our eyes imperceptibly continue to scan and have a far wider operative field of vision, Godard has achieved this tightening of the space in the picture plane by exploiting the "tunnel-like" vision of the camera lens. Again, this is not unlike how we pan and zoom to navigate on a digital screen, and the altering of our perceptual space this process enacts.

Irregardless of the differences in the nature of the mediums of these two artists, the collapse of space, which the Modernist Movement started, and heralds this condition in our current time. Just as the Modernists shattered the illusionary space of classical painting, now this painter and filmmaker re-enter that newly reconstructed space, experiencing and acting upon it in unprecedented ways. In a foreshadowing of future directions such as the environmental art, the performance and video art which followed, and the virtual worlds of today's media-based art, de Kooning and Godard were no longer working with the environment of space as a static empty void to be filled, but instead were engaged with the interrelationship of movement, time, and space, interacting with the time-space continuum. Thus their environment holds striking similarities to our current technologically influenced contextual environment.

In De Kooning's work, the dimensions and actions of the body, not the visual constraints of the canvas, determined his space.

Once again we see a parallel with the interactive environment of our digital visual interfaces. At times, De Kooning would paint with his eyes closed, the limits of the canvas, unknown until by chance he encountered an edge. It was intuitive, like the "automatic writing" the Surrealists engaged in. By closing his eyes, his own movements and 3-dimensionality was put on the same realm as the canvas in its 2-dimensions, because now the canvas was part of the space, undistinguished from it, without limits of flatness and edges. He has transformed the 2-dimensional canvas into his 3-dimensional realm, the space his body inhabits, and that of his own movements. This is an extremely current embodiment of space and movement, one that advances any Modernist traditions of abandoning the illusion of 3-dimensional space on a 2-dimensional canvas. Instead of bringing 3-dimensional space into the 2-dimensional realm as with classical perspective, or the flattening of 2-dimensional canvas back to surface as the modernists did, by engaging with the 2-dimensional canvas on 3-dimensional terms, he is bringing the realm of the canvas back into the 3-dimensional world. Through the embodiment of his own gesture, his fully dimensional, moving body translated and transferred into the picture plane itself. The canvas is the residual evidence of that engagement. We can see from this parallel, that by the same token, in our methods of gestural engagement, we exert a 3-dimensional force on the 2-dimensional space of a flat digital monitor in much the same way.

Thus, intrinsic in the form of our technological mediums and the nature of our engagement with them, a new spatial emergence is enacted, aside from any visual illusions of 3-dimensional space the images projected on the screen attempt to create.

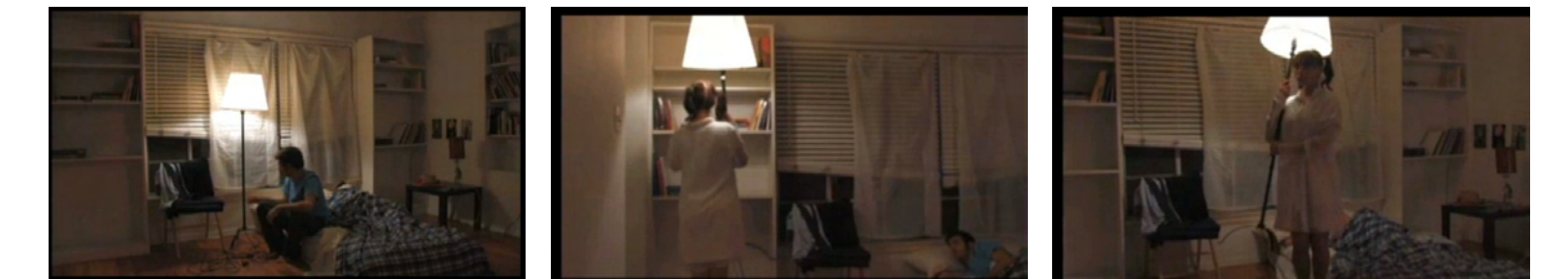
What De Kooning does here through the more traditional materials of paint and canvas, is not far from our immersive experiences today, through haptic interfaces as well.

Both de Kooning's and Godard's work acknowledges that time and space are relative to us, therefore we can measure it by how our body or our perceptions, impressions, and thoughts can inhabit and move through it. Space is an abstraction, an outside force to act on us, be inhabited by us, or to be contained within us. It is what we choose it to be because it is relative. If it is a human construct we also have the ability and freedom to deconstruct it, reconstitute it, re-imagine it, and therefore we can go beyond its physical boundaries and limitations.

Space is absolutely fluid. That reality, now the intimate experience of us all, can no longer be structured by our built environments in quite the same way and still remain relevant within that realization.



Considering this, it is of interest to now consider the works within the physical environment in which they are placed.



Contextual Environment The Black Box & The White Cube



The monumental scale of both de Kooning's paintings and the cinematic screen of Godard, exerts a powerful presence. The force of the work is felt in such way that it that shapes the environment in which it is physically placed. The nature of both the cinematic "Black Box", and the "White Cube" of the gallery or museum, is that of a "void" (intended to be neutral) which gets enlivened and activated by the presence of the work. In this case, the dominance of its physical presence, the atmosphere of its mood, and the manner in which the pieces inhabit the space of their context, act in combination to engulf the viewer, thus altering the physical environment. Through the intentional spatial "neutrality" of the museum or cinema, the context of each of those physical spaces can be newly redefined, itself the "contrived" or created environment generated by the piece.



Perceptual Environment

How the space of the work is perceived, interpreted, experienced by the individual artist and the individual viewer based on their context.

The unconscious inner world or environment of the individual viewer is the final spatial aspect to be explored in our considerations of these works. This is the most expansive and limitless environment we have examined thus far, and much more difficult to focus down to, since it is completely reliant upon the unique vantage point of each individual viewer and artist.

In this context therefore, there are no physical bounds, as this space is a pure perceptible construct and thus Time, Movement, Space fluidity enables openness to multiple readings. Although bringing forth new ways to contemplate and consider, at the same time this fluidity has the potential to be destabilizing, confusing, dizzying, and disorientating. Our perceptual environment is the space of greatest fluctuation, giving rise to ambiguity but, in its ability to go beyond physical limits, also holds the most expansive potential of transformation. This is an environment without a frame to orient and position us, we can no longer establish a hierarchy between images, objects, or environments. Instead we rely on our impressions and our own inner filtering processes. With the dominance of enlivened abstract visual space brought forth by our technologies, our perceptual environment is further expanding.



Entering into the Mystery Box

Having demonstrated the transformative power of the “Black Box” of cinema, and the “White Cube” of the gallery, we now regard another highly expansive perceptual environment.

As was exemplified by the cited works of both Duchamp and Godard, neither of the consecrated spaces of the gallery nor the cinema are the “neutral void” they aspire to be, and, as Christo’s work attests, nor is this the open expanse of the large, outside world. All are spaces of “translation”. Likewise, so it is with the space of technology, which can be aptly described in similar metaphorical terms as, the “Mystery Box”.

The “Mystery Box” holds the allure of deep outer space that the mid-to-late 20th century “race to the moon” and fascination of the science fiction genre, as described by the founder of “Second Life” a virtual community, describes this attraction to outer space as holding the potentiality of the unwrapped gift, from which anything can be revealed, and also all the hope of new beginnings, a fresh start of beginning anew can hold, but with the added benefit of 20/20 hindsight vision.³²

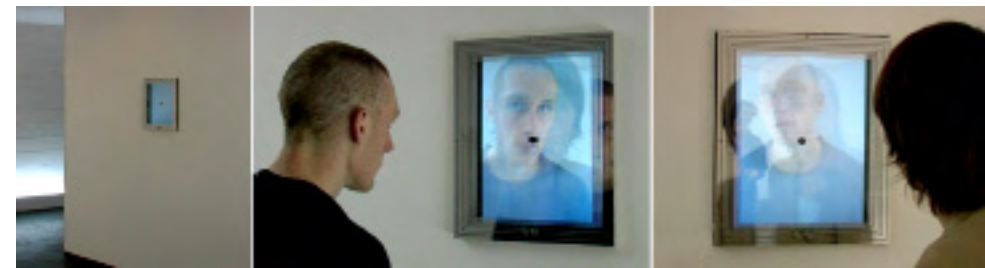
Consider the iPhone. With its slim profile, the entire universe fits in the palm of your hand, awaiting ready access at the touch of your finger. That mysteriously, ubiquitous form of the iPhone, so small in our physically existing world it could not possibly contain much. Yet its tantalizing shiny black screen contains the attraction of the unknown void, its untold depths. As elemental as a stone, this small solid box becomes brightly animated, transformed at our flick of the switch. It springs to life, ready to respond to our commands and fulfil any number of the countless activities we can wish up for it. With an ability to render a “hole” in the spatial fabric of our material physical surroundings through its invisible power to connect and transport us virtually to other spaces, the adoption of the Apple iPhone and its diffusion has been fast and widespread, as touted by Morrissey.³³

As alluded to earlier, in the statement of Doesinger, the space-shifting capabilities of today’s technologies and their persuasive influence cannot be denied, however difficult these transformations are to assess, evaluate, and agree on. Yet this device for all its spatial qualities, is a flat lit surface, a 2-dimensional picture plane wherein we encounter projected light as moving image.



..The ultimate machine is no machine – a little black box he calls it – no machine but the knowledge and control of the forces of nature that bind us all in mutual dependence.³⁴

Technology Affect Changes in Inner Consciousness



Through such devices, the orientation to space, time, and movement, which emerged historically through the advent of cinema, continues to progress currently on much the same trajectory. Today the experience of moving projected light images and audio interactions has shifted our context even further as we are no longer bound by the physical space of the theatre, and the time confines of theatre-going event and, as we have previously established, both context and medium are powerfully transformative forces. The abstract spaces in time which result from these contemporary technologies, has now become an arena we operate in on a nearly continual basis. No longer the novel and unusual special circumstances they were during early cinema, these encounters are not isolated in the special circumstances set up in the context of the movie theatre or gallery space. The heightening of our awareness that unusual environments result in, has been shifted by their ongoing and immersive use. The novelty and artificiality of synthetic environments, has been dissolved with pervasive assimilation. This experience of time - space - movement made possible through the innate characters of the medium have become integrated into our very nature. This is what Ong means when he says:

Technologies are not mere exterior aids but interior changes of consciousness that shape the way the world is experienced.³⁵

Our virtual selves identify and help define our physical selves and the inverse.

Favourite music in your ears and familiar names and pictures on the screen, form an emotional interior within a Teflon-coated external space.³⁶

We carry with us our "digital alter ego" which consists of this "virtual home" encasing us "like a snail shell", and our "virtual persona" embodied in the chip of our electronic and biometric passes, and GPS able smart phones acting "like an electronic shackle".³⁷ Within our current condition we carry a virtual shell of detachment. Now we can use our virtual space through portable media such as our iPods, smart phones, etc. as a way to escape from the physical and material presence of our surroundings. Doesinger refers to these tools as "spaces in transit" which "give us a feeling of home".³⁸ "The house is our corner of the world, our personal universe", indeed it is a domestic extension of the personal space of the body.³⁹ Hence our identity is no longer fixed to a location, our place of origin.

Our home is moveable and changeable, and has gone from being defined by boundaries, whether physical or societal, to one which Virilio considers as "favouring mobility instead". In this accelerated movement, the distinctions between personal, private space, and public, shared space has effectively collapsed.

We create our personal spaces like a surrounding "aura" emanating from the body, and control how we project ourselves into the virtual network of the world beyond. In the process of placing ourselves so intimately in the context of technology, and adopting it to such a large extent through widespread and continual exposure, it has become invisibly indispensable, going beyond being merely a highly effective sophisticated tool. Its evolutionary process has been much like that of the prosthetic limb Doesinger alludes to, which through continued attachment and use we have become absolutely so adept with, as to forget its synthesized origins. We no longer feel these as detached derived representations of ourselves, but now consider these "self-images" as a fully integrated extension of ourselves.

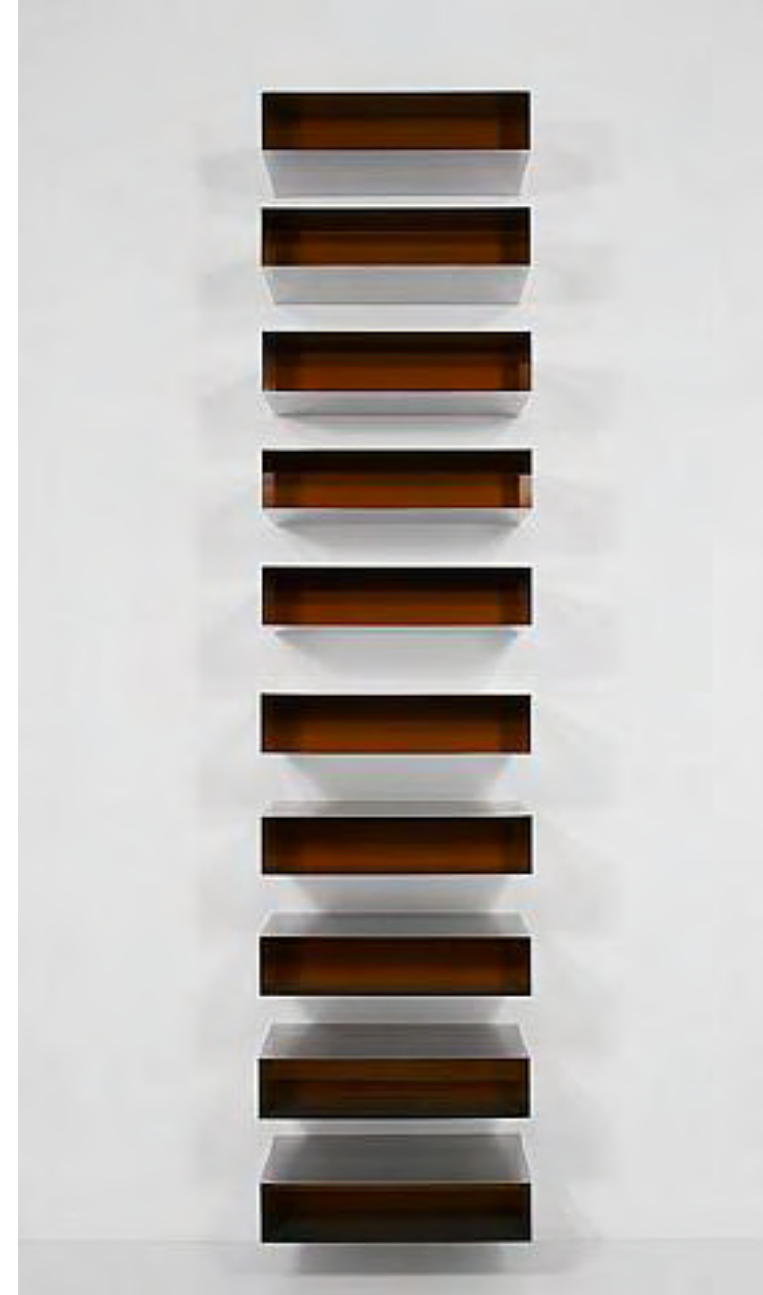
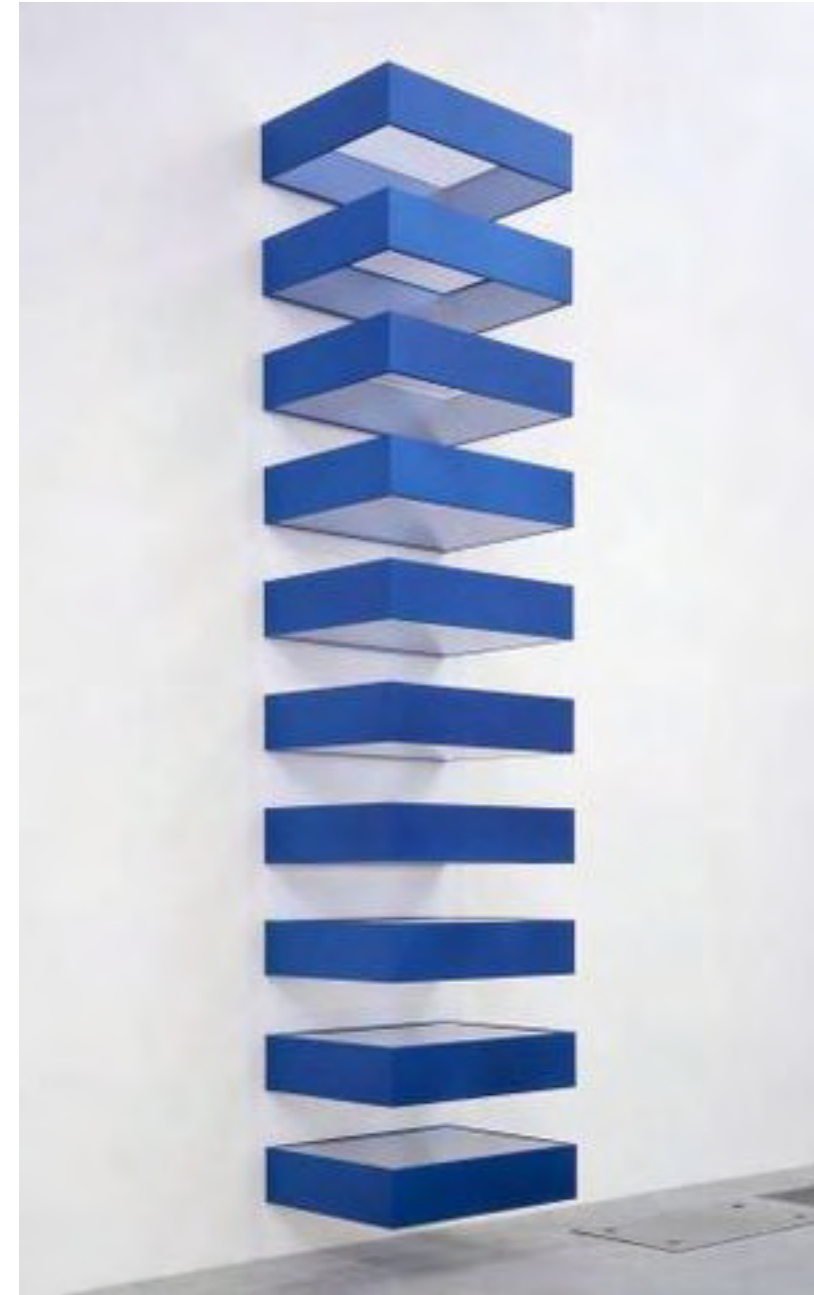
Through the iPhone's mode of delivery, and in connecting with others by way of this virtual extension of yourself, you are projecting your presence, and thus are the generator of the virtual surrounding space. This is much the way De Kooning expands the canvas to the 3-dimensional world of his body.

As previously discussed, the nature of the medium itself, plays a strong role in fabrication and resultant image, as you essentially transmit your own persona through your "double" or digital surrogate. Morse speaks about this condition of our spatial positioning when he says:

the...virtual person is an ambiguous being, neither completely alive nor dead and not entirely here nor there.⁴⁰

Seemingly we are positioned between these two mirrors of the real and the virtual that Walter Benjamin has so aptly described for us. These two states reflecting back at each other in a "co-reflective" infinite dance as we remain caught in the middle of a paralysing interplay of never-ending self-referencing resonance. This is a disorientating state of "being" and "not being", one of constant flux, never fully defined and increasingly merging into one. One "realm of being" is a duplicate of the other, but increasingly the question is asked which is the authentic or real, and which the copy?





Considering all this, the role of the replicate, specifically in terms of space may be examined through the further ways in which we replicate or copy space. Through this process, perhaps we can begin to see where the dynamics of that relationship with image, may effect our notions of and interactions between both physically embodied space and digital synthetic space.

At the advent of modernism, the art historian XX Giedion attributes the Cubists with bringing forth new spatial concepts, by introducing what he considered to be the 4th dimension, that of time and movement. He credits their use of multiple simultaneous viewpoints concurrently, as having a direct influence on the development of the glass curtain wall by Bauhaus architects, thus citing Cubism as having shifted us into the modern era. The 3-dimensional implications of this are still open to discussion, as one could certainly debate the connection between the 2-dimensional fragmented pictorial views of the Cubists with the 3-dimensional unified, continuous and homogeneous architectural space, seen through large transparent expanses of glass.⁴¹ While certainly the time lapse photography of the pivotal series by Muybridge, and the advent of cinema could be credited in much the same way, however, if we take Gideon's assertion with Cubism as our historical starting point, continuing to track the development in space perceptions during the modern era, on through Abstract Expressionism, de Kooning's contribution to our spatial discourse is noteworthy. As previously discussed through de Kooning, the movement of "action painting" on pictorial space was great, and modern art continues forward energized through that trajectory.

With Minimal Art, and such artists as Donald Judd, Frank Stella, and Robert Morris, painting continues its expansion outside of the frame and sculpture becomes displaced off the plinth. The plinth no longer framing or serving as the site, or boxing a separate artificial space for each individual piece. Through the removal of both the frame and the plinth, the relationship of the artwork with the entire gallery space, became direct, the actual physical surrounding space around the artwork, was brought into play.

Three dimensions are real space. That gets rid of the problem of illusionism and of literal space, space in and around marks and colours - which is riddance of one of the salient and most objectionable relics of European art.⁴²

Engaged, activated viewers moved about, the relationship with the artwork shifts their perceptions as their vantage points change

in their movements about the space. The viewer's own physical presence in the exhibition space becoming yet another form of "sculptural object", dynamically occupying space, forming shifting relationships in encountering the fixed form of the sculptures and the surrounding space itself, much like a dancers do on a stage.

The context and the works expressed as integral in these works. Here the gallery itself as context was not just exposed, as Duchamp had done previously, but now the gallery space is "activated". As the gallery became a place of interaction, the authority over the experience was taken out of control of the institution. The curatorial placement of the works was fluidly rearranged by the moving bodies of the engaged viewer. Once the viewer orchestrated his/her own experience with the artwork, a more direct dialogue with the artist resulted. The gallery context was no longer the mediator between the artist and viewer, the work itself was.

In the mid-1960's with Land Art, artists moved beyond the gallery as context, for which art critic Rosalind Krauss coined the expression, "sculpture in the expanded field".⁴³ Here we really begin to see location starting to expand and, in some ways, dissolve as a precursor to our current spatial position.

Much like the effective results of today's technologies, "Locating and placing had ceased to involve the enclosure of space or the creation of definite situations."⁴⁴ Additionally, in inscribing these works in the earth, while freeing them from the confines of the gallery, ironically they were more rooted in their physical setting. Artwork no longer a commodity, was able to be a more saturated experience, accessible and democratization. In today's terms, it became "open-sourced". Under the power of the artist, the viewer, and the natural and tangible environmental effects of time acting in a "real" materially evidenced way.

Additionally, these works were at times evidenced in the gallery through a "surrogate", heralding back to our discussions about Murimoro and Kahlo. Robert Smithson's term "non-site" was used in reference to works that were assemblages of materials from various sites which were brought into galleries. Their very real presence, served to indicate an invisible or absent site elsewhere.⁴⁵ These fragments and artefacts from the distant site now becoming objects cohabiting with the viewers in the gallery space. Just as spatial relationship is enacted through the viewers movements about them, through that interaction these objects also become landmarks of the physical place of their origin. These excavated and displaced fragments, in collaboration with the viewer, become an "image" of the environmental artwork present elsewhere out in the exterior physical landscape.



Many of those who viewed the work in the gallery never went to the site beyond, and these evidences or "images" of the referenced works as preserved by the gallery institution, in numerous cases far outlived the actual artwork referenced. The intervention in the physical environmental site which was conceived as rooted in both time and space, was then erased by both these same forces. The site-specific artworks, were replaced by a timeless replicate, preserved by the very contextual institution the works sought to displace.

This is what Henri Bergson refers to in Matter and Memory when he said, "image" is something not quite the "thing" nor only that representation of that "thing". Objects do not exist in isolation but in relationship to one another.⁴⁶

Referring once again to Kevin Lynch's work, the relationship between objects informs us about space, we map space through the landmarks of objects, navigate from object to object with our eyes and through the movement of our bodies.

As representations, the "images" in the gallery setting present a site-specific artwork that is not physically present. They are symbols of something that are only present at that moment in that space, "virtually" in the viewer's mind, yet the materiality and corporal presence of these "representations" is undeniable, as is the existence of the vast natural site of their origin. This is much like our condition today where digital visual and sound "image" experiences become a passage to another space, often outside the time we typically associate with the physical act of moving between these distances, for example Skype.

Of course this brings to mind the other expansive possibilities. When we further consider the removal of the object through distance of location, and even its directly corresponding indicative sign altogether, the reading of the object is free to bring forth links to other ideas or associations. When the object or symbol is still present, and with that a "reading" remains possible, but where the originating source since it indicates is no longer present, we are open to "read" the object otherwise, thus expanding the idea of it. The work is now created primarily in the mind and no longer the environment, much aligning with the intentions of Conceptual Art. Once again, the viewer is equal to the artist in the works creation. This fully acknowledges not just the individual's power in that process but also the unique art piece that would be the result for each.

Here context of the work is countless, as it exists through their perceptions, in the mind of each viewer, bringing with this the multitude of possible associated meanings.

Considering this progression in visual culture, it becomes evident that the 2-dimensional spaces of digital technology which mediate our 3-dimensional space of bodily existence, are part of this historical evolution in the increasingly merging of 3-dimensional space with spatial depiction and modeling.

We have seen here the slow mergence of image and object, figure and ground, space and drawing. In other words, "The Problems of Form" both collapses the boundary between "real" and "pictorial space" and in some other way seeks to preserve a clear distinction between them. To the extent both physical and pictorial space are construed synthetically in the human mind, the difference between truth and illusion is only a difference of degree.⁴⁷

If we start from a point of view that the "pictorial space" of the iPad surface or digital monitor, is a 2-dimensional space, as distinct from the 3-dimensional space implied within its depiction of "virtual space", we can see that this development of pictorial space in our visual cultural history has undergone a transformation.

Overall in our engagement with surrounding images, we have gone from one of a relatively more passive viewer, to one of engaged participant. As an outcome, we have progressively developed spatial notions which have primed us for this digitized virtual experience of space. The mediated space of the Ipad, is not unlike the 'non-site' as described by Smithson, it's "image" perhaps a porthole linking us to this "other place". In both cases, the scale of the environmental space is distilled as a representative or "image" and brought down to the confines of the gallery/frame of the screen, all the more easy for us to access, navigate, and form an overview. While the images on the screen can be "read" as representations to other objects, they are also more expansive than traditional "sign" systems we have used throughout our history. We actively interact with them and shift their form, context, and relationship, in new ways than previously. All which alter meaning, through our rapid constantly fluctuating interaction with them. They are fluid, in constant flux and easily directed, so they both recombine through their own movement, and we can exert influence on them in all sorts of new ways. Since limits of proximity of both time and space is collapsed all new combinations are possible. This is all happening at hyper-speed, and in every direction simultaneously, a co-relationship of individual input and feedback that being part of a larger web of communication and inter-relatedness enacts.

While the motion picture images of Godard at first glance may seemingly be a more direct link to our digital technology today, the bodily co-habitation of the 3-dimensional world and the 2-dimensional pictorial picture plane of de Kooning, is just as relevant



in considering the spatial conditions our current virtual technologies affect. Devices such as haptic sensing interfaces seen in X-Box, Wii, and so forth, and even the touch-screens of I-pads, I-phones, bank and retail service counters, all rely upon the physical enactment of our 3-dimensionally present bodies, digitally translated to the 2-dimensional virtual world through our interaction. It is equally clear that our perception of space is closely tied to the movements of our bodies and the paths it creates in both the 3-dimensional physical world and our digitally synthesized environments.

“Environmental images are the result of a two-way process between the observer and his environment. The environment suggests distinctions and relations, and the observer – with great adaptability and in the light of his own purposes - selects, organizes, and endows with meaning what he sees. The image so developed now limits and emphasizes what is seen, while the image itself is being tested against the filtered perceptual input in a constant interacting process. Thus the image of a given reality may vary significantly between different observers.”.....etc.⁴⁹

Our processes whereby we engage with and conceive of space through movement and image-making are innate and unchanging, thus they remain the same whether the environment is physical or virtual. However, in our sensory engagement with this digitally derived space, the technology becomes a mediator between us and the space, no matter how direct and seamless that has become, there is no longer direct contact.

Through engaging our innate association between image, movement, and space, there is an instant, although at times, alarming rate of mastery of the physical gestures required to manipulate and respond to its technology. Today’s technologies have tapped into this instinctual inquiry, so basic to our very existence, as can be observed in the fundamental response of toddlers to the I-pad. One need only watch the many videos of toddlers engaging with I-Pads which proliferate on YouTube to see convincing examples of this. In manifesting this shocking affinity for and absorption of this technology, once again it can also be argued that the virtual is part of our innate human nature.

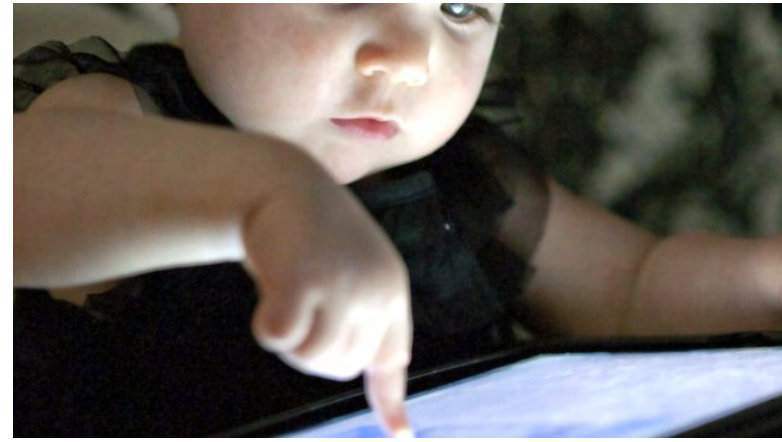
To a child lines are very real so that you move in the space between them. It's a special space that exists before the possibility of drawing something arrives...There is some point where that kind of topographical reality changes to pictorial reality.

--Artist Tom Marioni ⁴⁸

At the young age of a toddler, there exists an immediacy in experiencing the world through physical movement linked with visual and perceptual imagery, even before languaging and its associative meanings have been learnt. Although the I-pad is often regarded as nothing more than pixels on screens, digitized representations or symbols, it is apparent that there is more happening for an infant than that. Similar to the relationship of gesture to the space of the picture plane we discussed with De Kooning, their involvement goes beyond a “reading” of this pictorial surface as a representative of content.

As shocking as the speed and capabilities of this technology are to our culture and society why do toddlers seem to embrace and navigate it so seamlessly?





When toddlers interact with the iPad, they are engaging directly with this “virtual space” on equal terms with the space of the physically embodied world. In fact studies have been conducted wherein toddlers who learned of the location of puppets in a physical room elsewhere, through interacting with a simulation on an iPad, and then were placed in that actual corresponding room full of objects would seek out and find the hidden pop-up puppets in that space with equal success to toddlers who learned about the same environment by directly observing the physical room viewed through an actual opening in the wall, before being placed the room itself. A third group of toddlers who were shown details of the room, the puppets, and their location, through printed pictures alone, did not make the connection between the printed images as information, and the physical situation. Thus confirming they lacked the ability to “read” images for meaning. Those toddlers did not navigate the physical space knowingly, nor did they seek and find the hidden puppets. Both the iPad and the book were 2-dimensional images which represented the 3-dimensional environment and the objects contained therein, however as the results of this study suggests, the “virtual” depiction was more closely analogous to 3-dimensional “physical” environment, due to greater diversity and range of engagement.

Data is organized in the digitally synthesized world using the most powerful symbols for human beings possible - images/pictures. Images are universal, and as we can see from observing toddlers, developed spoken language is largely irrelevant to how we use images spatially, while it would appear from this study that the delivery mode, how those images are delivered, has the ability to elevate that power of those images even further.

If we consider the distinct similarities of an iPad to perhaps a conventionally printed paper book or picture, both can be considered pictorial representations of 3-dimensional “reality” or physically embodied space. Yet seemingly, we are no longer outside of the pictorial space, detached viewers, when we are interacting with the viewed space of an iPad.

What we perceive through the other senses as reality we actually take to be nothing more than a good hypothesis, subject to the confirmation of touch. Observe how often people will respond to a sign reading, “Wet Paint.” Quite frequently they will approach and test the surface with their fingers for themselves.⁵⁰

Our understanding of the world originates from the sensory spatial relationship between our body and our environment, as directly experienced. Much work has been done on the role of this

relationship from the vantage point of every possible discipline, a subject of concern for neuro, biological, behavioural and physical sciences, explored philosophically and psychologically, addressed in the work of sociologists, anthropologists, military strategists, and through the discourse of artists, mystics and religious figures. However, all accept the notion that our engagement with our world is through the process of perceptual discovery (both haptic and kinaesthetic).

Through assimilation, assessment, action and reaction, translations occur. This is ultimately wherein any discrepancies in approaches and theories arise. However all agree, the key to the essence of who we are, is found in this mediation we make as human “beings”, during the process of engaging with the environments we continually encounter.

Embodiment is the relationship between meaning and action, and “the process of grasping a meaning is performed by the body.”⁵¹

Thus, the methods for making sense of action and the methods for engaging in it are the same methods.⁵²

If one considers how infants encounter and explore the world, in a purely perceptible, fully engaged and “in the moment” experiential way, it becomes evident how inner processing of space occurs. Spatial mappings and images form long before language and symbols with their learned cultural meanings come into existence for us, through this method of probing and interacting with our world. It is elemental in our development, occurring in infants at the earliest of stages, perhaps even prior to sensorial information becoming influenced, organized, and rationalized to any large extent.

In tests on monkeys it has been observed that “the premotor cortex contains neurons that discharge both when the monkey grasps or manipulates objects and when it observed the experimenter making a similar action.”⁵³

There is part of the primate brain that directly connects the visual and the kinaesthetic. As discussed earlier, this powerful combination of movement and imagery, is our strongest link to how we conceptualize space. Hence like the viewer of Godard’s “Madison” dance scene, perceiving for the mind, is the simulation of doing. Even a change in posture, while maintaining identical sensorial stimulation, alters neuronal responses.⁵⁴

When observing movement or actions of others we simulate our own experience of the movement, mirroring behaviour in brain activity. The automatic and integral cognitive mechanism that allows us to make the connection is one of recollection/memory. It is a

process of kinaesthetic empathy based on what you know or have experienced before.⁵⁵ That participation is all the more “real” for us since it is on many inter-related levels, much like our “real” world participation.

Although *perceiving* is not always the simulation of *doing* for our body, for the mind it would appear that physical and virtual space is no different. Again we are combining the power of image and movement, by which we derive our ability for spatial perception. Like in our surrounding 3-dimensional space, we are using movements on many integrated levels of reinforcement; the tactile sense which “refers to awareness of stimulation to the skin”, and the kinaesthetic sense, which refers to “the awareness of limb positions, movements, orientation and muscle tension”, even if only a mental simulation of this based on recall of this same type of actual physical experience.

On the simplest terms, it is inevitable that whatever we consider the essence of a human “being” is in this interaction. We as human “beings” mediate between the exterior outside or physical world we encounter, and our own private interior world through this method of innate processing, just by the very fact that we are human.

The everyday world of experience is continuous. Living consists of constant experience across the senses: visual, auditory, tactile, proprioceptive, etc.

As the previously cited study showed, the Ipad took on the same spatial explorative value as that of a physical opening which allowed the toddler to learn about the physical space directly. Both the physical movements of interacting with the touchscreen and the movement of the images on the screen, combine to create what Dourish refers to as “the duality of representation and participation.”⁵⁶

Hence, through our interactive participation, there is a total dissolution of the boundary between pictorial and architectural space. While this may just be a seamless and natural transition for a baby, this may be a confusing and difficult leap for those of us who have fully formed our basic notions of space far before we encountered synthesized digital space. In such cases, our patterns of movement, imagery, and environmental spatial connections have been previously established, and this newly acquired mode of spatial navigation and shaping is an adjunct to that engrained patterning. On this basis, if the the digital and the physical seem to be in conflict, misalignment is experienced, whereas the infant sees no such disconnect, having established this as pattern as part of an integrative whole of their overall learned spatial experience. As technology advances, what is a new or expanded notion of space for existing generations, becomes the base learned spatial patterning for the next, holistically integrated in their perceptions with no distinction possible.

An environment which is ordered in precise and final detail may inhibit new patterns of activity. A landscape whose every rock tells a story may make difficult the creation of fresh stories....what we seek is not a final but an open-ended order, capable of continuous further development.⁵⁷

Unlike turning pages to navigate through the stacked and bound 2-dimensional pages of a book, with these digital technologies the variable effects of light in combination with our physical interaction, give us a 3-dimensional experience much closer to the way in which we navigate and map our physical world. The reading of a book remains a learned activity for infants, based upon a coded and learned cultural behavior no matter how archetypal, yet the navigation of the Ipad is instinctual for these children.

Just as we do in the physical world we inhabit bodily, we are able to navigate the space of the Ipad in much the same way, reaching, pulling, sliding, touching, to affect movement and change in our visual field. The digitally derived virtual world relies on how we perceive and process what we encounter in this manner, much as we do in the physical world.

Encountering, congregating, avoiding, interacting, dwelling, eating, conferring ...themselves ... our activities constitute spatial patterns.⁵⁸

While the same powerful gestures of the body, link and activate the natural processes of the mind in perceiving both physical and virtual space. In these digitized spaces, we also experience the exhilaration of greater mobility than is possible within the constraints of our physical world. We are able to move about freely, zooming near and far, panning beyond the frame of the screen to other space beyond, making nearly instant passages to other places through hyperlinks, and so forth.

While digitized synthetic space, commonly referred to as “virtual”, has increased its immersive pull, “you cannot carry all the world about in your bag. It's important to have someplace to go.”⁵⁹

With this in mind, we consider a reversal of the process, how conceived spaces go from the virtual realm of “idea” or imagination, to that of physically built space, and the relationship of image, space, and movement in this process. To more fully understand this transformation, we consider methods and the tools used for the depiction and mapping of space.

Spatial Imaginings – Perspective Imaging

Considering virtual spaces manifest themselves to us through extremely sophisticated imaging systems, it is surprising to consider that our digital computers still use the same method of modeling and charting space we have been relying on historically for centuries.

“Perspective” is a system used whereby a visual effect observed in the world, is extracted from the rest of our perceptual process of experiencing space, isolated, then modelled mathematically, to deliver to us a 2-dimensional image or symbol, as spatial representation. By placing coordinates of points on 3-dimensional objects or in space, these points are then projected onto a 2-dimensional plane.

In mapping the development of our current spatial notions, it is necessary to look at the impact the historical use of perspective has had, and continues to have, on our physical space.

Today’s system of Perspective, which has been in use since the Renaissance, is in fact not the earliest invention of such a system, as based on methods going back as far as the 5th century B.C., with strong roots in the 4th century B.C. optical theories and systems of geometry of Euclid, although it could be argued the art of ancient Egypt with its overlapping and foreshortening to imply depth used a “vertical perspective”.⁶⁰

Largely accredited to Brunelleschi, the system in use today is overlaid with the Cartesian grid system of Descartes, for further detailed articulation. This well-established system has become indispensable to all aspects of our world, including technology, as we continue to rely upon perspective. With its pervasive and long-standing acceptance as a true visual depiction of the 3-dimensional world, we rely upon it as a reliable method to not just depict 3-dimensional space in 2-dimensions, but also to create a 3-dimensional version of our envisioned spaces. Perspective remains strongly entrenched in our western culture, as the way we “see”, largely colouring our vision of the world, in spite of its basis as a human-derived mathematical construct. Alberti’s statement, “Painting is nothing but the intersection of the visual pyramid following a given distance, a fixed centre and certain lighting” implies an equality between the image in perspective and visual experience that survives to this day.”

“The convention of perspective, which is unique to European art and which was first established in the early Renaissance, centres everything on the eye of the beholder. It is like a beam from a lighthouse—only instead of light traveling outward, appearances travel in. The conventions called those appearances reality. Perspective makes the single eye the centre of the visible world.”¹

Perspectival representation does not equate to the visual experience of two active, stereoscopic eyes; it is instead the experience of a monocular abstract point. The problem is that it claims, and is believed, to authoritatively represent reality. That “reality” being constructed by the disembodied viewer “separated from the seen (the scene) by Alberti’s shatterproof window.”⁶² Yet we are so deeply immersed in its use that this system is generally regarded as an accurate model of the visual appearances of our physical world and its contents.

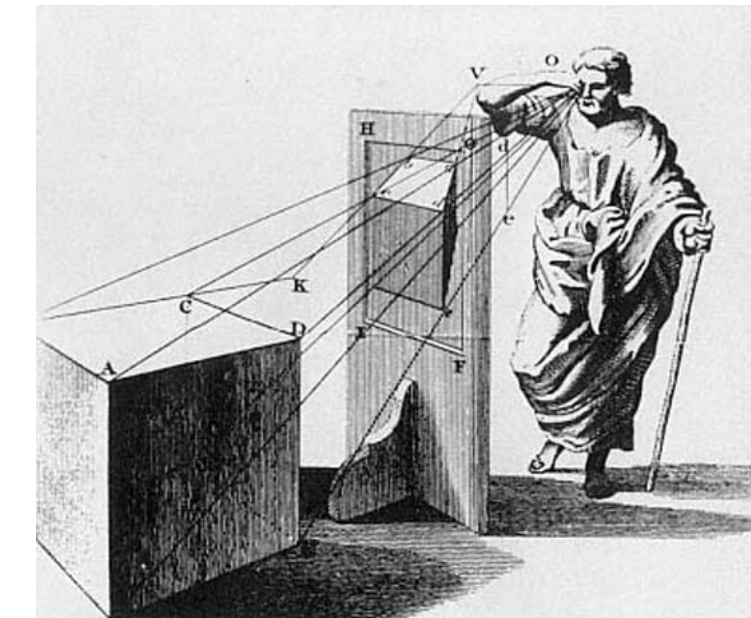
Brunelleschi himself is said to have even felt the contradiction between this system of perspective he created, and the evidence of his eyes.⁶³

In spite of any shortcomings, the system so deeply pervades our culture that we in fact do not even consider alternate methods of perspective, including those put forth by other noted artists of Brunelleschi’s time, such as Leonardo da Vinci. All of these systems were postulated, based on observations of visual phenomenon and were just as capable also of constructing visually realistic representations.

Areas such as science, engineering, architecture, and the industrial and digital technology of our everyday world have continued to rely upon this system of distilling our “vision” through a rational system of the “mind’s eye” rather than through our physical perceptions. Initially founded on a belief in its authority of accuracy in both depiction and prediction, it now is so well-established as to have become foundational to our system, forming its very core structure. Any further questioning at this point, is difficult to develop and sustain, without necessitating a complete re-thinking of the ordering system of nearly every aspect of our modern digital culture.

Manovich describes these developments in our modern technological history as a development from “mechanized vision” to “synthesized seeing”.⁶⁴ This is the process we will continue to describe and discuss in tracing the relationship between image and place, in the co-creation of virtual and physical spaces.

Through perspective, what started with a merging of art with math by artists/architects when their cultural role was more focused on depiction, took diverging trajectories once technology, in the advent of photography, enabled the artist to be freed to consider and express other ways we “experience” the larger space of our world. Meanwhile, technology, science, and resultantly industry, which plays a dominant role in western capitalistic society, continued to rely on perspective as a foundational system of representation. Perspective became in many ways the “assembly line” of productivity.



This system of representation has also continued to assert equally strong impact on our built spaces, while what we encounter in art, through our perceptual experiences have shifted our notions of space in another direction.

Today through the automated perspectival imaging with digital computers, this process has been even more streamlined and sped up, enabling what Manovich calls "Interactive Perspectivalism".⁶⁵ This is only the current incarnation in a long history of the automation of the functional, perhaps even effectively usurping the perceptible, act of "seeing", with instruments such as magnifying glasses, micro/telescopes enable, as well as in the mechanized generation of the result, the replication of the physical world as precise image. This "mechanized vision" has played a fundamental role in not only forming physical manifestations in the spaces we create, but also altered our ideas about space long before our new contemporary digital medias came into existence.

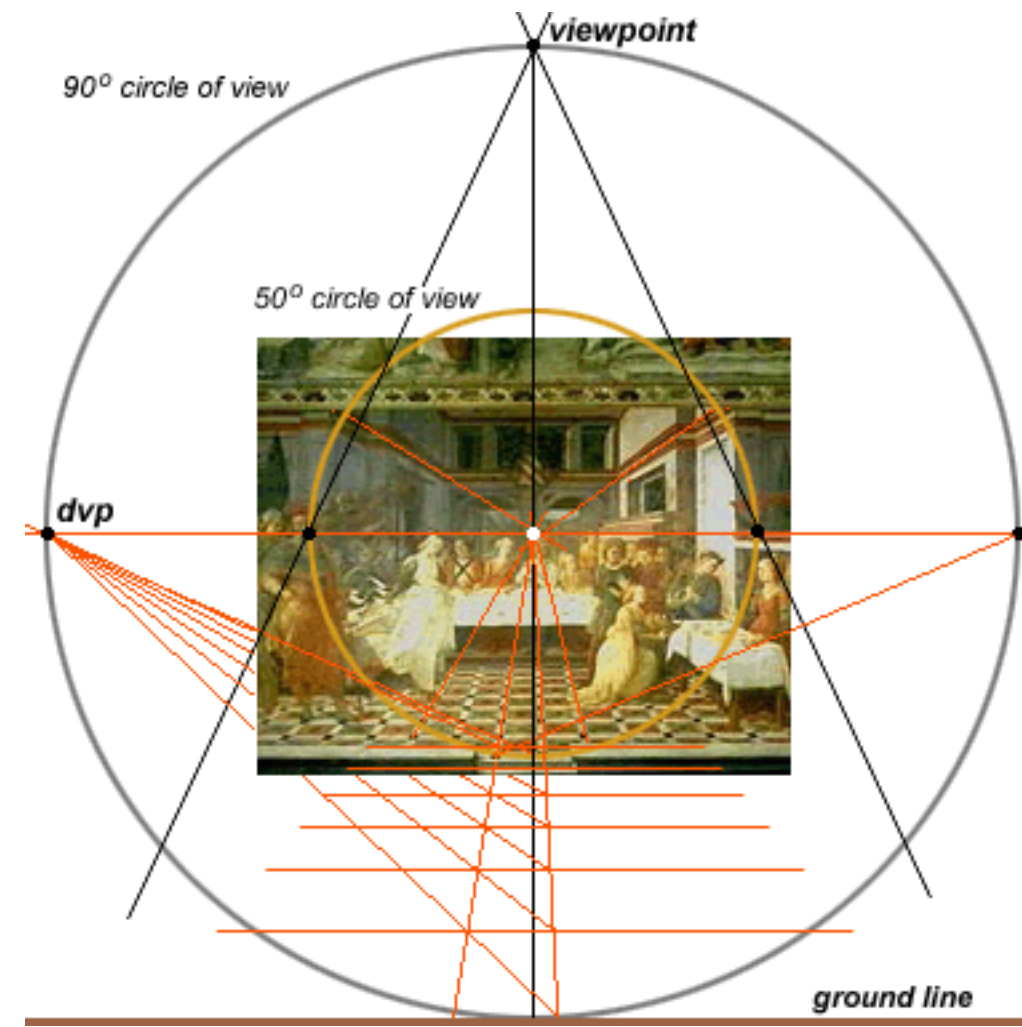
At its inception, the functional model of perspective was essentially, that of mapping an object through a series of points on its surface to a single focal point. This is a "synthesized sight" enacted by a fixed, disembodied "eye" which is engaged in the act of connecting to the object and its visually apparent characteristics. The single focal point generates connective lines to the object, a measurable geometric diagram of the act of "seeing" and these corresponding characteristics are then mapped out accordingly in 2-dimensions.

Going beyond sole a mode of depiction, the massive impacts of perspective, according to French philosopher Bruno Latour, are in

- its establishing of a free-flow and accelerated transit back and forth between reality and its representation
- through its possibility to combine real and imagined objects in the same single geometric model.

Today, both of these we absolutely assume as "given" conditions. Virtual objects and physical objects, through perspective, can reside in shared space, much the way the imaging device of the cinema enables the characters of Godard's movies to do. The simultaneous co-habitation of the digitally created virtual "replicate" and the physical "original", are part of our current fully accepted reality. Although this has been internalized in our modern times, still misalignments still remain.

The digital image circumvents our process of going from experiencing space bodily through our movements, to then forming to our mental images. Instead space is presented to our eyes alone through direct visual imaging. Therefore, in short-cutting our process which allows us to typically perceive space, we have taken another route in our processing of the space. The image thus presented, is limited to



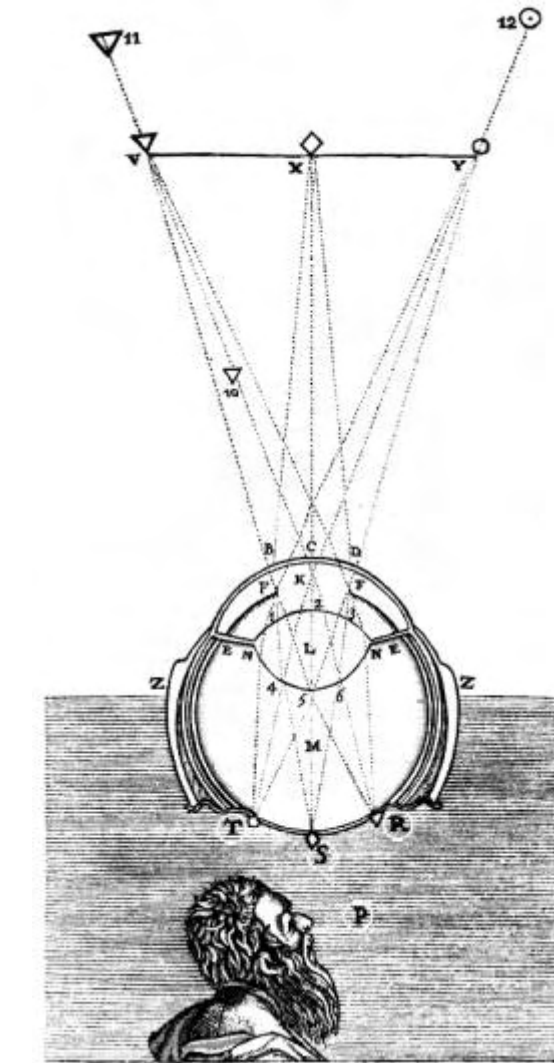
what can be "seen" and recorded of the visual space in reality, by the particular technology as a filter. Through the structural system of that process, the expression of what can be "seen" in reality by us, through our fully embodied experience moving in space, has been usurped by a system with its own sets of conditions and mode of ordering hierarchical structure. The image has already been framed, and as a result, infused with a set of meanings that are established and ordered in relationship to one another, and delivered to us without the initial experience of the source space this image refers to. We are essentially "reading" about the space through a set of symbols using a prescribed and learned structural system of meaning. We can only test this image for "accuracy" against our mental images we have already formed, perhaps through other spaces we have experienced with our movement and full body of perceptions. We are therefore in actuality, undergoing a mapping from "sign image" to "sign image", to test the "truth" of what we are experiencing, as a basis for our spatial "reality" that we are forming around these digitally synthesized spaces.

Although this model of vision has been at odds with experience since its inception it has survived, conquered, and continues its dominance in Western culture as evidenced by uncountable ubiquitous photographic images and unprecedented heavy reliance on digital imaging. Hillier describes this dominant view of space in western culture as 'Galilean-Cartesian'.⁶⁶

This is indeed the long established visual representational system which we have absolutely relied upon, have internalized, and has structured much of our western technological and scientific modeling on. By Descartes reasoning, "Space is merely the void left behind when no objects are present."⁶⁷ Contrary to this however, our movements, spatial pattern of activities, and bodily presence of our lived experiences, evidence otherwise. Indeed, for this modeling of space to have substance, it is necessary for the separation of the body and mind. With perspective, not only was the movement of the body in space made still, but that of the eye itself was unnaturally and artificially constrained to a fixed point as well.

This severing of body and mind in western thought has many cultural and social roots, furthermore asserted by the prevailing power structure, including both the authority of church and state. For if the body and mind are pulled apart, power can more easily be exerted on the less complex and therefore more easily influenced mode of understanding.

If we no longer process the situation around us with our purely perceptible natural engagement, and without the connection of body and mind through our perceptions, there is no means for our own assessment and comparisons, no means of forming our own



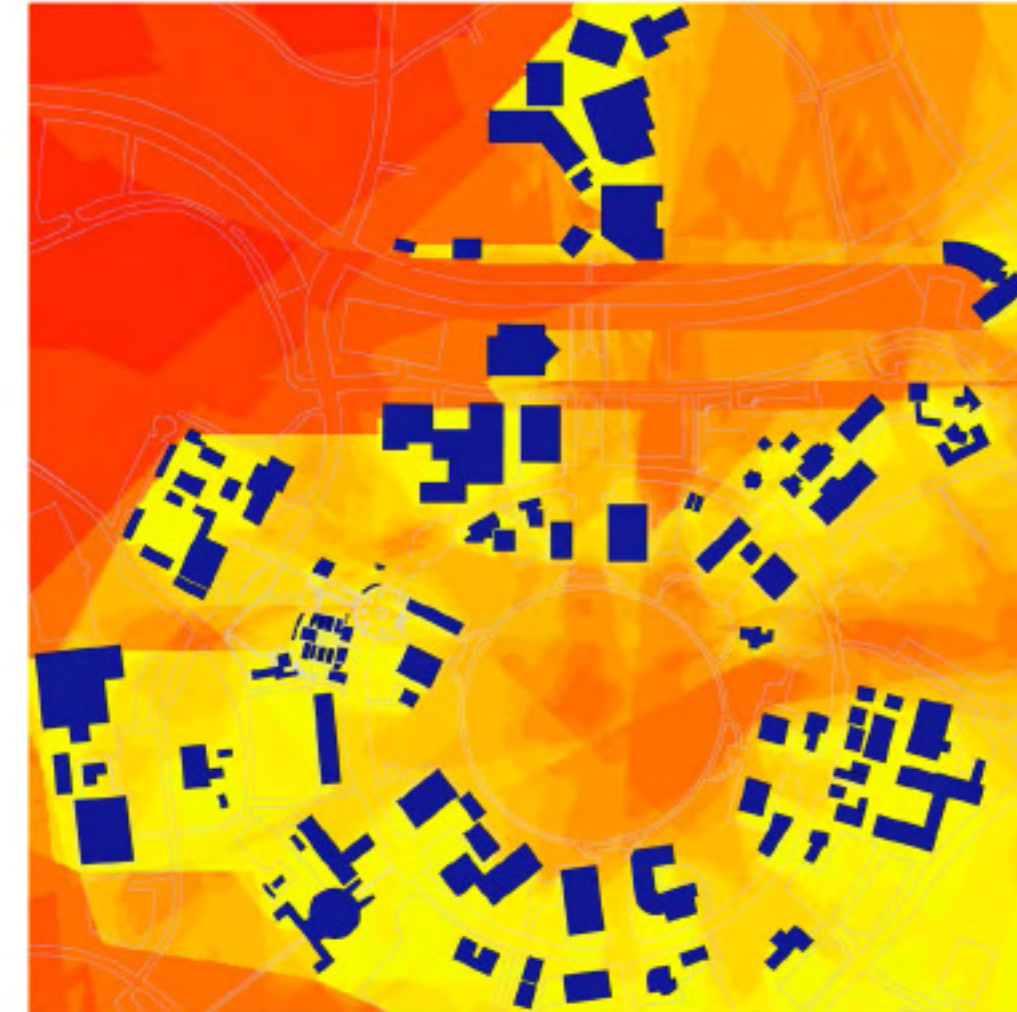
images we rely on through our own insights. There is nothing or potentially oppose the coded images with their assigned system of meaning. delivered to us directly by the societal structure. In this severing of the relationship between body and mind, it is much easier to assess and control one aspect of our full being, without the supporting evidence of other aspects. Control the body and you control movement, control movement and you control space, control space and you can orchestrate image and therefore meaning. Space is political, not just as physical territory, but as a generator of images and therefore meaning. In the restriction of movement through space, how people construct images is controlled. What better way to control physical movement than through geographical borders, just as one can control the forming of internally images, and therefore meanings, through fixing and controlling the position of the eye. After all, any decent magician owes the success of his craft to the trust we have in what we see. If the system forms our basis of "seeing" we take it as the truth. In the establishment of a system for "seeing", even internally generated images are controlled, and those fixed images can be more systematically ordered by a structure that percibes a clear hierarchy of importance to them. Such systems of "seeing" also orders space.

Indeed the layout and forming of cities and towns has historically been on the basis of current thinking around ideas of order and logic, structured in visual mathematic systems; from classical spaces centred on Greek Euclidean thought, to the perspective and geometry developed from the Renaissance onwards.

Specifically in terms of architecture, the discourse in the 19th century, "tended to imagine an observer contemplating the building across perspectival space. The observer doesn't move. Instead, he (and it always was a 'he') sees the building, from outside or inside, as if through a picture frame or the proscenium arch of a theatre."⁶⁸

Michel Foucault, gives us a distilled history of space starting with the Middle Ages where the system of space was "a hierarchic ensemble of places... It was this complete hierarchy...this intersection of places..." which constituted medieval space, in what he calls, "the space of emplacement".⁶⁹ Foucault then goes on to define the next major turning point in our spatial history as the seventeenth century, citing a shift in the hierarchical matrix of societal order of the Middle Ages, with the discoveries of Galileo.

[The] real scandal of Galileo's work lay not so much in his discovery, or rediscovery, that the earth revolved around the sun, but in his constitution of an infinite, and infinitely open space.⁷⁰

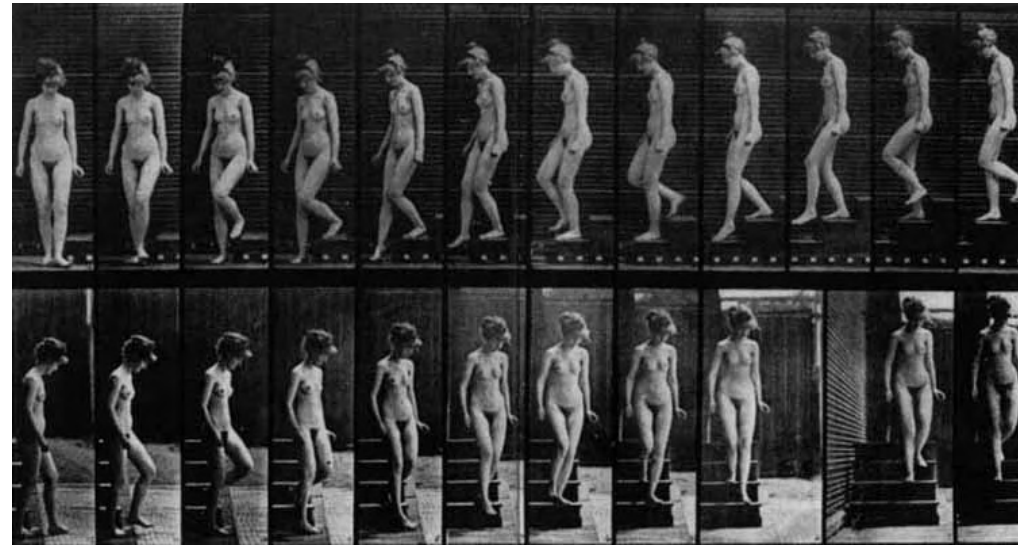


With the opening up of boundless space, fixity of place was dissolved "a thing's place was no longer anything but a point in its movement, just as the stability of a thing was only its movement indefinitely slowed down."⁷¹ Thus there was a dissolution of containment, of the solid, and the structure that had previously ordered space. With Galileo, "extension" of space "was substituted for localization."

In *Space, Time and Architecture* (1941),⁷² Art Historian Siegfried Giedion argues that the discovery of perspective in Renaissance epitomized a world-view that remained valid for four centuries, well established until the first decade of the 20th century, at which time a new concept of space developed with the modernist movement.

Notions of modern architectural space were radically different from that of previous classical space. As stated earlier, with classicism, architecture was considered a stage to be viewed as a magnificent proscenium, essentially a framing of space, and the "viewer" was an audience to large extent, not a participant. Like the vantage point of perspective, the viewer was fixed and the architecture radiated from their point of location to form the view like a picture. Other than serving functional needs, in spatial terms, people only became inhabitants of the space as moving spectators. Movement was considered only to the extent that it was necessary to shift locations to view the different architectural "scenes" rather than as a fully present and embodied spatial experience. Since the pretense and constraints of architecture required the building itself to be stationary, in order to fully embrace and appreciate its architectural merits as the architect intended, it was necessary for those experiencing the building to make shifts in their location with respect to the building. The "inhabitant" of the architecture was considered as little more than a disembodied eye, a vantage point located in the space.

The new spatial conception of the modern era however, did not construe space as a three-dimensional static void, but introduced the fourth dimension, which Giedion called "space-time."⁷³ Unlike the central and static interiors of Renaissance, modern architecture through a convergence of forces, began to reflect the dynamic nature and interdependence of space and time which pervaded current thought and culture. It has been repeatedly argued that architecture of the 20th century had to be different from those of the preceding epochs since a new "man" perceived, experienced and conceived space differently. Today, after decades of scrutiny, one claim of architectural modernism remains largely intact, if not completely unchallenged: the modernist style in architecture is thought to reflect a new "conception of space," one that is the product of a structural change in human vision.



A number of authors, above all Giedion, diagnosed the revolution in the conception of space around 1910, particularly in Cubist painting.⁷⁴

The powerful combination of image and movement, that began to emerge and permeate at the time, is described by Tim Dirks as an ongoing continuation and accredited for leading to this new incarnation of space. .

[While] "Optical toys, shadow shows, 'magic lanterns,' and visual tricks have existed for thousands of years. Many inventors, scientists, manufacturers and scientists have observed the visual phenomenon that a series of individual still pictures set into motion created the illusion of movement - a concept termed persistence of vision."⁷⁵

It is Dirks assertion that these innovations were necessary precursors to the cinematic motion pictures, with cinema then being one of the initiating factors which contributed to the shift in space of the modern era.

In 1894, brothers Louise and Auguste Lumiere, who manufactured photography equipment and supplies in Lyon, first put motion film onto a screen for an audience using their just patented technology, a combination camera and movie projector. This was followed in 1895 by a public screening in Paris, and with that the subsequent proliferation of cinema ensued.⁷⁶ Consequently, this technology contributed a great deal to influence a further shift in our concepts of space, movement, and time. As was previously discussed, instead of the fixed eye of perspective, the roaming eye of the camera now became synonymous with the viewer.

At the same time, Albert Einstein's Theory of Relativity, published in 1905, accelerated a related shift in scientific thought. Meanwhile in the art world, Futurist "research into movement" existed alongside the related Cubist overlay of multiple differing viewpoints, such a continual repositioning enabled. All of these combined, led to new ideas about space, movement, and time, further pervading modern thought.



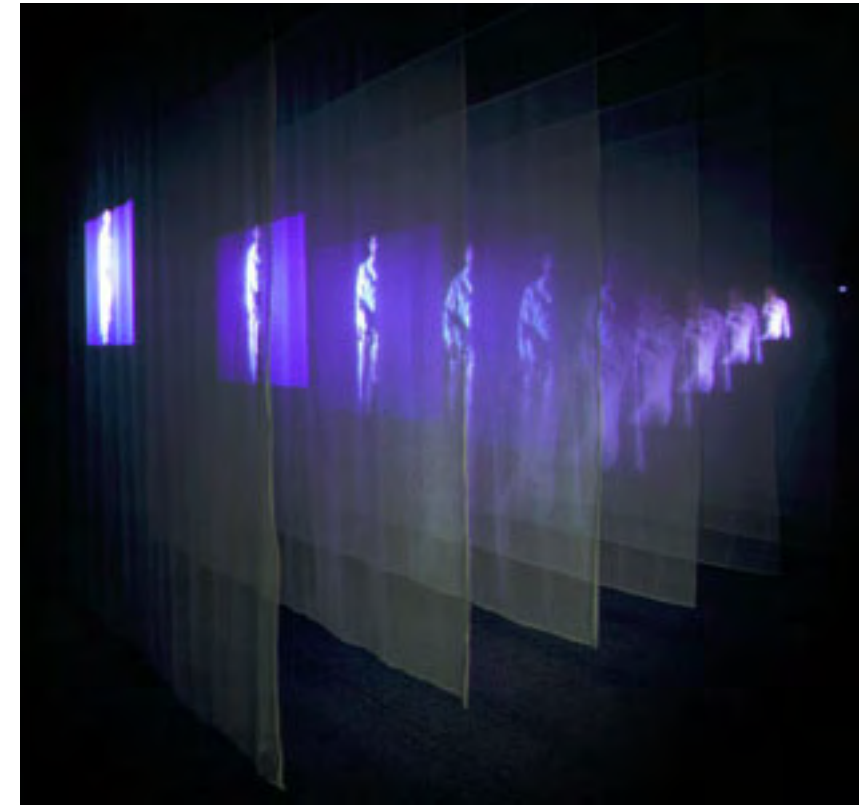
While the art of the time was freed by photography from the mapping of space and the documentation use of perspective, its power of influence in our spatial world overall was little reduced.

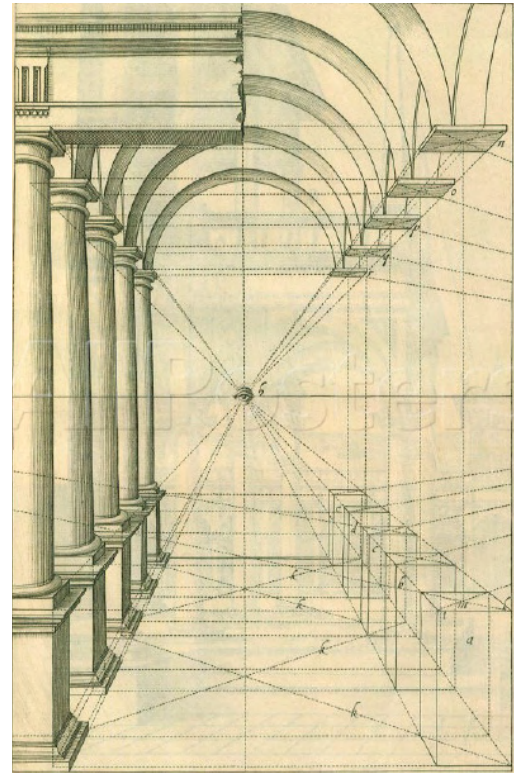
Giedion asserted that Albert Einstein's theory of relativity and the futurist "research into movement"⁷⁷, alongside Cubism, were the pioneers of the new age. He further declares that by breaking with Renaissance perspective, and by showing the object from several points of view simultaneously, Cubism inaugurated the modern conception of space.

Although Gideon credits Cubism directly for the spatially penetrating views of the curtain wall architecture of the Bauhaus, that free-flowing expansive fluid space of modernist architecture was made possible as a result of the use of steel. Indeed this was the technological innovation which enabled walls to be freed from structure. This aside, from a more theoretical vantage, this new expansive 3-dimensional architectural space was predominantly influenced by conceptual shifts around the fluidity of space, time and movement by Einstein and the visible manifestation of this through cinema, than to the 2-dimensional juxtaposition of varied fragmented viewpoints depicted on a fixed canvas. Furthermore we can see the spatial attributes of the moving image projection, previously discussed through Godard's work, and reflected in the architectural discourse of the late 19th - 20th century as previously described. Rather than a series of fixed scenes designed to be viewed to their advantage from a prescribed and precise series of vantage points as had been done previously with classical architecture,

[With modernism] a different picture emerges, perhaps encouraged by cinematography. It becomes acknowledged as significant that a building usually unfolds over time, like music. Through movement, as we circle the building's exterior and perambulate its interior, we gradually assemble fragmentary impressions into a whole mental image.⁷⁸

As our concepts about space are so innately linked to images and memory imaging systems, the continuum of our collective spatial history cannot be isolated from considering the technological development of spatial imaging methods, and the associated means of and increase in the proliferation of the image.





Spatial Images “Seeing Without Eyes” - Mechanized Vision

In considering how we technically envision space, we once again consider the mechanics of perspective. In William Ivins's 1939 essay *On the Rationalization of Sight*, he describes perspective in this role as "a practical means for securing a rigorous two-way, or reciprocal, metrical relationship between the shapes of objects as definitely located in space and their representations"⁷⁹ and in doing so, describes the important inter-relationship between objects and their images in a more technical stance.

More recently, Bruno Latour has expanded the power of perspective, in considering it as going beyond its ability to represent reality, to one which can also control it. Lev Manovich describes this in his essay *The Mapping of Space*, when he talks about the ability of mapped out perspective images to mobilize resources across space and time, and to manipulate these resources at a distance.

For instance, we can't measure sun in space directly, but we only need a small ruler to measure it on a photograph (perspectival image par excellence). And even if we could fly around the sun, we would still be better off studying the sun through its representations which we can bring back from the trip -- because now we have unlimited time to measure, analyse, and catalog them. We can also move objects from one place to another by simply moving their representations: "You can see a church in Rome, and carry it with you in London in such a way as to reconstruct it in London, or you can go back to Rome and amend the picture."⁸⁰

In this 2-way and far-reaching symbiotic relationship, perspective propelled advances in such areas as modern empirical science, for now forms of nature could be represented precisely, while also propelling the expansion of engineering and manufacturing by enabling the drawing of designs to exacting measure which could be reproduced and distributed. Thus, identical reproduction was made feasible in numerous, however distant, geographic locations, a process even further accelerated today with digital drawings and the internet.⁸¹ Once again the power of the replicate is evidenced.

Perspective not only served as a means of generating an artificially constructed copy; in the act of substitution through depiction of what otherwise could actually be seen directly, a further shift occurred. Perspective became not just a means of depicting the "seen", it soon became an actual "means" or mode of seeing, which at times is considered more revealing than the original subject.

In 1858, Albrecht Meydenbauer, published a proposal to use photographs for scale measurement, based on the existence of a geometrical relationship between photographic image and the object being photographed. He wrote, "some may find it hard to believe, but experience has proven than one can see, not everything, but many things, better in scale measurement than on the spot."⁸²

As Manovich asserts,

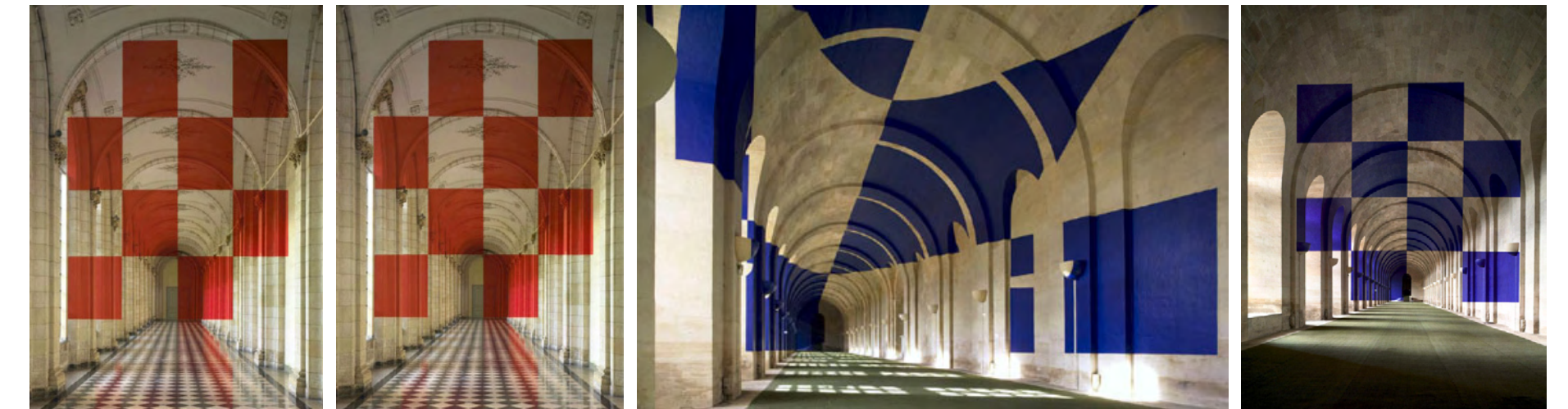
What this example clearly illustrates is how technologies of representation alter the way that people believe that they see. In this case, the representation interpreted by a mechanistic visual system is taken as 'more real' than the human interpretation of the same experience.⁸³

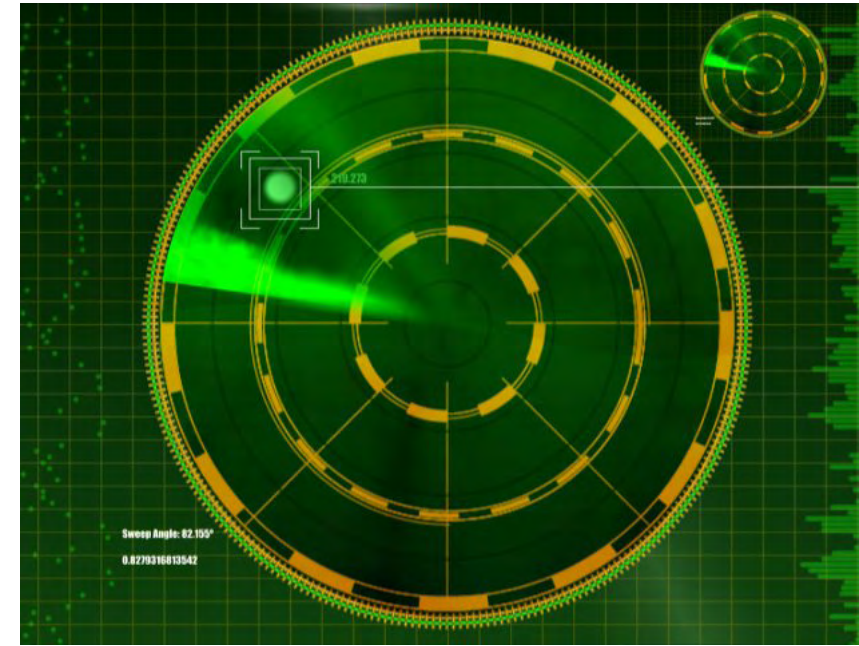
Consequently, the philosopher Marx Wartofsky concludes,

human vision is in itself an artefact, produced by other artefacts, namely pictures.⁸⁴

Wartofsky further contends, that all perception is the result of historical changes in representation.⁸⁵ Abstract visual representational systems are tacitly learned and internalized with repeated exposure.⁸⁶ Ivins refers to this as "seeing without eyes" in what he calls the "rationalization of sight", a tendency for which Manovich cites radar as the best example of the twentieth century.

In the case of radar, radio waves are transmitted in a desired direction, the signal, upon encountering an object, strikes it, then rebounds, and is reflected back, to be picked up and detected by the radar antenna. The time between the signal's transmission and the reception of the echo, indicates the distance to the object. The direction the antenna is oriented towards when the echo is received reveals the object's position in relation to the radar. Detected objects appear as bright spots on the display watched by radar operator, nothing more.⁸⁷





The only aspects the radar system detects or “sees”, and transmits or “delineates” are the positions of objects, 3-dimensional coordinates of points in space which correspond to the particular object location. Fine details such as colour and texture, and even the objects shape, are disregarded, as the object’s physical reality is transferred into a flash of light on an otherwise blank screen.⁸⁸ Thus both object, and space have now been reduced to a digital pulse, a signal transmitted being represented by yet another digital symbol. Read by the viewer, in its abbreviated form, the object’s reality is transmitted more quickly and is easily detected, interpreted, and responded to, without the need for any extensive lingering over details to assess it. The object and its location in space have been translated to symbol, thus enabling an even quicker read than can be done with image. As a symbol it has been reduced to its minimum and now we only need encounter the information deemed relevant. Additionally, without the use of actual “sight” to connect to the original object, the symbol becomes a substitution for the act of “seeing”, therefore becoming an alternate mode or system of image delivery. Input has been pre-scanned, and content abbreviated. With content simplified, an agreed upon meaning and reaction can be ascribed to it, which by design is meant to overcome potential ambiguities among all who share in the benefit of the signal’s use.

Symbols are strongly 2-dimensional, such as letters or international signs, and use only basic easily recognizable shapes we see frequently because these are good at communicating something simple that you can understand quickly at a glance. They convey basic and pared down essential info. more quickly because there is less to decipher and understand. There are fewer layers of meaning required for a symbol to function for its purpose as a means to quickly convey information which then signals a specific operation, response, or reaction. Images however, take longer for us to extract meaning, because there are more details. The overlaying of all that extra information means there is a greater potential for a variety of “readings” of the images, which affect its meanings and significance.⁸⁹

While on the one hand, perspective became the foundational technique of descriptive geometry which became a standard visual language of modern engineers and architects. On the other hand, photographic technologies began to automate the creation of perspective images.

What initially started with the advent of motion pictures, and later the integration of sound, has continued to evolve through the use of perspective and “mechanized seeing” to manifest the following outcomes:

1. The recording of objects’ positions in space is no longer limited by conditions of visibility, as unfolding of space through impressions implies inclusion of not just vision, but also encompasses multi-sensory inputs.
2. This recording (and transmission) now takes place in real time, for movement is the experience of space in time.⁹⁰



Spatial Images Point/Line Articulates Space

Like any replicate, drawings bring forth a dilemma in the viewing architecture. The performance of drawing naturally pre-empts the drawing itself as the outcome. The drawing being an artefact of that gesture, as remaining evidence and at the same time acting as a translation of an idea which will then proceed onward to be converted into the built work. As the initial idea goes from the realm of envisioning, transcribed through to the physical surrounds of the drawing itself, then in turn, conveyed through the construction process into built physical form, a transformative process unfolds.

While the physical architectural elements are clearly rendered, the imaginings of space, that is the internal experience of what that space is to become, remains hidden

Architectural drawings are widely considered a tool of direct communication, with a systematic precision of intended accuracy. Because they remain based on a technical, rational, mathematic system of measure, if all the design intent is conveyed according to their prescribed structure, they are accepted as “not open to translation”. From this point of view, little consideration is given to the mediation that the medium itself enacts, nor is there acknowledgement given to any of the shift that has occurred through this filter. As previously demonstrated, just the act of translating from one medium to another and the shifts in contexts that ensues, means a translation occurs.

Essentially, modeling and drawing systems employ symbols, and as such they are a language of signs. With language comes some degree of interpretation, furthermore multiple meanings are possible, as experience in both human communication and a view of a dictionary reveals.

Additionally, modeling and systems of measure have inherent flaws already, as Brunelleschi was painfully aware. Yet the idea that perspective was not considered perfectly credible has long been disregarded. In the process of becoming widely accepted, such artificial systems we invent, move away from effective critical scrutiny. Once systems and technologies become internalized through constant pervasive use, as a result, flaws are rendered invisible.

What connects thinking to imagination, imagination to drawing, drawing to building, and buildings to our eyes is projection in one guise or another, through enacted processes that we have chosen to model on that basis. All are zones of instability.⁹¹

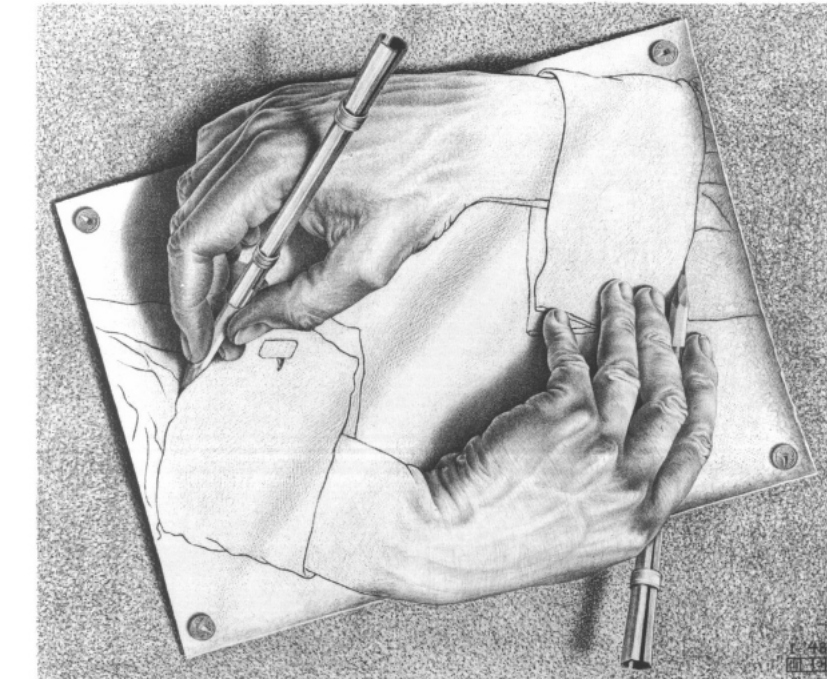
A further examination of the drawing as the key mediator in the process between the two, idea and built realization, will enable us to examine another aspect of how technologies have influenced our notions about space.

Like performance, if in fact we consider drawing as an “action” long before it is a “thing”. Shifts in the act of creation of the architectural drawing, since its inception as a tool, are critical to discover.

Looking back upon the days of building from hand-drawn drawings, the translation of ideas about space to paper, were done through the movement of the hand across the page. The body is influenced spatially through movement in inhabiting, understanding and therefore conceiving space, both in drawing (“virtual” space or image), and in building (“actual” or embodied physical space). There is a continuity of the medium, the body moving spatially in an expression of imagined space across a page, while bearing a direct relationship with how we experience actual embodied physical space and the experimental qualities of tangible built architecture.

With hand-drawing, the drawing which is produced is a direct outcome of the physical action of its creation, a direct manifestation of the process of movement. Furthermore, the resultant artefact from that embodied action will be used to implement the very physical labor of constructing the building. Even in accounting for the reproduction of drawing through the historically associated technology of the blueprinting process, as a critical aspect to describing space, movement was still involved. With the blueprint, the original drawing was placed in direct contact with a sheet of emulsified print paper and feed with a rotating roller through a machine which exposed it to light. The movement of light where lines were drawn or shading occur, the moving path of light, as it passed through the translucent drawing paper, was interrupted or filtered, thus leaving a shadow of emulsion. The line's presence was revealed once the paper was subsequently run through the developer liquid, thus resulting in the original drawing's reproduction.

Whereas with digital drawing, the system and mode of representation are quite different. In this process the initially conceived or imagined spatial ideas are translated through the numeric digitization of the computer to pixels, points on a screen which correspond to the structure of the cartesian grid system. Space has been assigned a numerical symbol representing the location of a single point. It is a locating and positioning according to a sign system. The relationship becomes between the placement of an individual pixel and it's associated assigned numeric notation of positioning, between position of placement and a “sign” of location. These are each fixed points, and in their accumulation we see a line, a geometric form, this is a result of a mathematical formula rather than a path



of movement, which will describe the shape of space. Much like the “motion” picture, which in reality is nothing more than a series of images shown in rapid succession, it is only a synthesization of movement and time by an accumulation of separate pieces or moments, each only represented by a single image-symbol. Distilled, then filtered, it is a type of dissection then reassembly, now held together by another structural system than that which made the original a whole. Physical space has become a manifestation of our digitally conceived architectures.

By comparison, with the hand-drawing as a communication, the layers of translation are far fewer. The “virtual” imagined space is given material vision through an act of motion which connects mind and body, which is much more related to our innate tendencies of physical space shaping. The digitized drawing process, is not the same experience of space. The initiating spatial idea has been transmediated, translated, re-contextualized, and reconstructed; for in the end,

No matter how large or rich the virtual 3-D world, a computer can depict that world only by putting pixels on the 2-D screen.⁹²

In this process, overall the objects and spaces that were initially envisioned, have been translated through the mathematical language of geometry to lines on a screen. Lines which are constructed pixel by pixel using the encoded digital language of a computer, are later referenced in the shaping of the physical space itself.

Foucault defines the space of today in these same terms, as one of “the site”, where “arrangement” is now the system of ordering space, much the way Bouriard speaks of our “Altermodern” contemporary condition as a dynamic form, the modes of its visibility being “the contours of the circuit it describes”,⁹³ one which necessitates a “continuous effort at coordination” and “constant elaboration of arrangements to enable disparate {continuously living, growing, and mutating] elements to function together”.⁹⁴

The site is defined by relations of proximity between points or elements...the identification of marked or coded elements inside a set that may be randomly distributed, or may be arranged according to single or to multiple classifications....Our epoch is one in which space takes for us the form of relations among sites.⁹⁵

Therefore Overall, according to Foucault, the history of space went from one of "Localization" to that of "Extension" (a trajectory of movement), to our present space of "Arrangement". This is a space of interconnected networked layering and interweaving. Each

point is linked to other related points, themselves situated in sets, according to different systems of classifications.⁹⁶

These digital technologies have mostly created architecture as a “sign” with no longer a reference back to the original reference, that of “real” physical embodied space. The building has become a signifier representing another “sign”, that of data entered into a computer which is used to generate mapped 2-dimensional forms. Digitized calculations of ink equivalents mechanically applied to a page, printed out as drawings, then again translated with systems of measurements which enable the building to be constructed through the use of yet another set of increasingly more sophisticated tools and technologies.

Here we begin to see what Penny terms as the “engineering worldview”, which is an amalgam of capitalism, Western science and engineering. He argues that core ideas unite the scientific method, the logic of industrial production, and capitalism. Reductionism, the first of these ideas, allows a system to be rationalized into its individual components and logically maximized in terms of output.⁹⁷

Again, in what constitutes “a nineteenth and early twentieth century scientized approach to the world: that mind is separable from body; that it is possible to understand a system by reducing it to its components and studying these components in isolation (that the whole is no more than the sum of its parts); that the behaviour of complex systems can be predicted.”⁹⁸

In this industrialized “ideology of efficient production,” the worker's body too became an automated machine, a cog in the larger assembly-line chain of production, divorced from the mind, while the rational overall system was operated by brain located elsewhere, engaged in engineering the overall control of the process and resultant outputs. Penny argues that these values find their purest expression in the digital computer, the central brain where we displace memory and knowledge, from ourselves, then access what we have displaced through layers of technological mediation.

As evidenced, the layers of transmediation are deep, and fraught with complexity that has far removed the resulting architecture from the initial spatial conception. The way we as humans experience it, through the interplay of movement, image, and space. Similarly through this processing of architectural ideas, our physical spaces have become virtual “mappings”, and as such have become increasingly unrelated to the presence of the body and its direct movements. This is what Henri Bergson refers to in *Matter and Memory* when he said, “image” is something not quite the “thing” nor only that representation of that “thing”. Objects do not exist in isolation but in relationship to one another, just as space does not

...if we highlight the fact that objects change over time....focus on constant transition, the world becomes understood as a more open and negotiable space.

- Olafur Eliasson⁹⁹

exist in isolation from movement. Yet we currently envision, then represent space as isolated points, charted in space as pixels. Pixels are points, they do not relate spatially to one another in the same way as the continuous path of movement a line makes as it traces through space.

Considering that body movements can be emulated in the brain through watching other movements, one might suppose that the movement of the screen and mouse, hand and touch-screen, or stylus on digitized drawing pad, may be no different from that of the hand directly across paper. However, when working through digitized modes of drawing implementation, the layers of translation between idea and built realization are far deeper. The hand, in tracing shapes of space on a page, enacts this through direct movements that simulate in many ways the body's path through 3-dimensional space, and the direct result of that movement is a visible line. In hand-drawing to the measured accuracy that construction documents for buildings require, one's movement is measured across the page against the landmarks of the ticks on a physical object, the scale (architect's ruler). Points and lines are laid/layed out in relation to one another and oriented directly through the fixed landmarks of the edges of the page and the locations on the scale. This is not unlike the relationship of objects or landmarks to one another which we encounter when moving through and navigating physical space, which form our natural 3-dimensional spatial perception.

Semiotics or semiology is the science of signs...All forms of social, cultural and intellectual life can be viewed as sign systems: as forms of communication, and therefore as verbal or nonverbal languages.¹⁰⁰

To the structuralists, "signs systems are grids we impose upon reality"¹⁰¹. Architectural conventions have historically used the notion of code to communicate through drawings with the belief that there exists within the practice, a structure of agreed meanings which correspond on a one-to one basis, much the way the structuralists define a "dictionary-like equivalences between expression and content, signifier and signified." In contrast, the world of today as outlined in Foucault's statement, has become vastly interconnected in multi-layered networks, the digital drawing used to represent 3-dimensional physical space is another such network composed of numerous layers of transmediation and multiple sign systems. Umberto Eco's semiotic theory accounts for this present condition, by considering such complex interrelationships of sign and meaning to be closer to the model of the encyclopedia. For Eco, this system of relationship between sign and meaning:



is much more complex and variable; it is like a net, a rhizome gatioa tangled clump of bulbs and tubers—or a labyrinth, a vast aggregation of units of meaning among which an infinite variety of connections can be made.¹⁰¹

With the notion of code, communication becomes simply a matter of recognizing the one-to-one equivalences. With that of encyclopedia, it becomes a matter of tracing out one of all the possible paths that can be taken through the network, rhizome, or labyrinth,between that sign and others.¹⁰²

All forms of communication, interpretation, and understanding are by their nature, for Eco, tentative and hazardous acts of inference.¹⁰³

While perhaps as described by Foucault, Ecco, Virilio, and Bouriard, our digital spaces are complex and variable networks of symbols and meanings, they still remain symbols or "signs" of space, not "embodied space". No matter how sophisticated and realistically rendered, animated, or even haptically digitized they may become.

While today's technology of speed and computing power may result in very quick mapping of every imaginable object detail, through this well-established process of digitizing, there is enacted a further breakdown from reality. A coded communication "about" space will never be the same as a physical manifestation of space, not just because it takes a different form, but also in its speed. Speed shifts the relationship of time to space.

Symbols are used to enable a fast scan, instant read, and a quick jump to the prescribed meaning. The digital world by its very nature, enacts a rapid delivery of these symbols and a freeing of movements from our physical limits makes possible a further acceleration of speed. Perhaps this is what Virilio speaks about.

Thus we see on one side real time superseding real space. A phenomenon that is making both distances and surfaces irrelevant in favour of the time-span, and an extremely short time-span at that.¹⁰⁴

The expansion of our world to encompass the spatial realm of "a digitally created virtual reality", has also served to collapse our "real" embodied or physical world to within our individual, easily accessible reach. Space and time has been compressed, through the easing and speeding of movement.

Proximity and distance are no longer relative, space is fluid, and



..the world as "text" or "image," as something that can be "read" or "seen" and reduced to an abstract symbol. ...it is a much more dynamic construct of conditions and situations, relationships and interactions, atmospheres and moods, concepts and ideas, produced and continually modified by people themselves, within which they can find their way around and sharpen their powers of perception." the way people relate to their environment, to one another, and define their presence in the environment and subjective individual identity.¹⁰⁵

all is on a trajectory. In a constant state of flux, this type of space is never situated, and thus can only be “placed” relative to that which it coexists with. As a result, space is defined as a set of arrangement or conditions that coexist, overlap, intermingle relative to one another at a shared moment in time.

In the fast delivery of the act translation, idea to drawing, ironically the relationship of image and movement in space (time) is changed. Time transpires unrelated to physical space itself. Speed collapses the space, it becomes shallow, unrelated to physically materialized embodied space that is absolutely infused with time. This all the more dizzying to comprehend since in this process such strikingly realistic images are produced.

...an accident is the event of speed. ..."I call these “integral accidents” because they trigger other accidents.....The faster you go, the more risks you take. ...Physical speed freezes you. And the faster you go, the farther you have to look, and you lose lateral vision. You are fascinated.... Why do animals have eyes on the side? There are very few that have eyes in the front like us. It's because real danger comes from the side or from behind. Speed flattens the vision, like a screen.¹⁰⁶

In the physical world our depth of field envisions things further away, or more distant, as out of focus, less sharp and less bright . But as Virilio asserts, speed flattens. Anything out of focus drops away, meanings are lost, and with that richness and depth.

In this “interference” there are opportunities, as new relationships are set up. Within the labyrinth of nodes, an infinite variety of connections can be made. Much like Ecco's idea of openwork, the structure is set up and the viewer/reader participates within the framework or structure. While perhaps this interplay is one of high energy, digital spaces with their prescribed boundaries, limit engagement.

It would seem that in the digital era architecture has become to large extent focused on radical digitally generated forms, homogeneous surface skins, building as a type of “iconographic” image making, or 3-dimensional graphical outputs which have resulted through digitalized number crunching of selected conditions as statistical data inputs. Like the technologies of remote sensing, such as radar, information is gathered, digested, transformed through a number of synthesized processes, then delivered back. The direct contact is lacking between the initiating object, in this case the architecture, and the “inhabitant” who is reduced to merely a recipient of the information which being conveyed largely in the form of visual stimulus. While many digitally derived architectures are unable to go beyond the eye that scans and navigates, or an objectified body on a trajectory path tracing a line through the building.

While the process of architectural drawing has very pragmatic function and will continue to serve in that role, the point here is to consider the shift that representation has made. Digital architectures have the power to be more than a representation, or spatial “surrogate”, they have indeed altered our notions of space as radically as was done in the renaissance through the technology of perspective. What happens if we go beyond the Cartesian based rational system of perspective digital derived spatial representations rely upon to distill space?

While many architect's have indeed discussed the impacts utilizing digitization of form can have in generating new manifestations of physical form, what we have been speaking here of is the structure of the technology as a type of re-framing, not just its technical capabilities. Technologies are constantly made obsolete by the next technical update, whereas space is an ever-present condition.

French, Marxist philosopher Henri Lefebvre, believes that any attempt to understand the contemporary world that ignores spatial considerations is both partial and incomplete. The meanings that we attribute to space are inextricably bound with our understandings of the world in which we live.¹⁰⁷

These spatial considerations are arrived at through navigating in full sensory cooperation, engaging the space through kinaesthetic and haptic perceptions. The whole body, in an exchange with the brain, constructs the space anew. We feel the dynamics of this spatial engagement through our muscles, we build up an internal, so-called 'haptic', representation of the world's spatiality. Human behavior does not just happen in space; it constitutes space.

Encountering, congregating, avoiding, interacting, dwelling, eating, conferring ...themselves ... constitute spatial patterns.¹⁰⁸

Just as the relationship between objects helps to inform us about physical space, the relationship between points inform us about virtual space. How are we to understand space when distilled through the Cartesian based system of digital technology one, which is based on the intellect of the mind, without the spatial perception of the body and its movements? If we do not accept this separation, what is the resultant space? Cartesian notions of space only account for how it can be abstractly described, lived experience matters little within this conceptual framework.

*Energy is built in the interaction between elements, the greater the number of interactions the more dynamic energy is at play.*¹⁰⁵

*In the same way, the body in architectural space, combined with memory, constructs its inner equivalent of the architecture which surrounds it.*¹⁰⁹

SPATIAL REDUCTION

The (immense) work of Bachelard and the descriptions of the phenomenologists have taught us that we do not live in a homogeneous and empty space, but in a space that is saturated with qualities, and that may even be pervaded by a spectral aura. The space of our primary perception, of our dreams and of our passions, holds within itself almost intrinsic qualities: it is light, ethereal, transparent, or dark, uneven, cluttered. Again, it is a space of height, of peaks, or on the contrary, of the depths of mud; space that flows, like spring water, or fixed space, like stone or crystal.

...it is about external space that I would like to speak now. The space in which we live, from which we are drawn out of ourselves, just where the erosion of our lives, our time, our history takes place, this space that wears us down and consumes us, is in itself heterogeneous. In other words, we do not live in a sort of a vacuum, within which individuals and things can be located, or that may take on so many different fleeting colors, but in a set of relationships that define positions which cannot be equated or in any way superimposed.

- Michel Foucault ¹¹⁰



Interesting then to consider the vaguest of possible pieces of architecture when considering this question, a “building” which materializes as a hovering cloud above a lake.

The interdisciplinary group E.A.T. (Experiments in Art and Technology), who were devoted to exploring the relationship between art and science, in 1970, as part of their collaboration, physicist Thomas Mee and meteorologist Yasushi Mitsuta, along with artist Fujiko Nakaya created what can be termed as the world’s first “fog building”. Blur Building, by American artist-architects Diller & Scofidio and Team Extasia, as a re-manifestation of this much earlier work, was presented as a media pavilion for the Swiss National Expo in 2002, situated on Lake Neuchatel in Yverdon-les-Bains, Switzerland.

Similar to the original, Diller & Scofidio’s Blur building was also realized in collaboration with artist Fujiko Nakaya (part of the original E.A.T group), and again is based on a Buckminster Fuller inspired tensile structure, however with a further integration of a contemporary digital context.

Online magazine Designboom described the Blur Building as follows:

a suspended platform shrouded in a perpetual cloud of man - made fog..... the building consists of a 60 x 100 x 20 - meter metal construction that sprays innumerable tiny drops of lake water from 31400 jets.... the high pressure spraying is carried out by [top]-grade steel jets with tiny apertures only 120 microns in diameter, through which the water is forced at high pressure ... onto fine needlepoints directly above the apertures and atomised into innumerable tiny droplets.... so small that most of them remain suspended in the air.they saturate the air with moisture and create the effect of mist or, in this case, the effect known as the blur.”, [which is visible from afar, appearing as a hovering cloud of mist on the lake, connected to from the shore by a long, suspended narrow ramp.]¹¹¹

As visitors arrived at the pavilion, they were asked to fill in personal details and preferences on a questionnaire. They were then fitted with a type of digitally enhanced raincoat consisting of wireless technologies, or ‘brain coat’ as it was called, before going down the ramp to the pavilion.

The subsequent experience has been described as follows:

...walking down the long ramp, visitors arrive on a large open - air platform at the center of the fog mass where the only sound to be heard is the white noise of pulsing water nozzles. computers are adjusting the strength of the spray according to the different climactic conditions of temperature, humidity, wind speed and direction. the fog mass changes from minute to minute. the blur building expands and produces long fog trails in high winds, rolls outward at cooler temperatures, and moves up or down depending on air temperatures....” while moving about the space, upon encountering other people the visitors’ brain coats “react to each other” on the basis of the personal information they had provided earlier , thus “indicating either positive or negative affinity between visitors”, through color changes and sound.¹¹²

Re-enacting this spatial experience further, as you walk around you disappear into this atmospheric space, you cannot see your own feet, others cannot see you. Loosing the sense of your own body, this space transforms you. Artist Antony Gormley in reference to one of his own artworks, describes the state of transformation such a space creates:

..you are now a consciousness without an object, freed from the dimensional, measured that life leads us into the obligatory..¹¹³

Through our visual perception, objects in the visual plane other than the one our eyes are focused on are seen less distinctly or “blurred”. Objects moving are less distinct or clear than those at rest. The amount of blurring increases with speed. Blur Building as an environmental condition, is a physical embodiment of this trait of our visual perception. Ironically, by effectively diminishing our vision, we become disassociated from the physical sensory system we rely upon most heavily today, our vision. You are not however, just drifting around through space in a state of virtual disembodiment.. The space is also filled with other people. While at a distance, these others are present as disembodied voices, merged with your overall surrounding atmospheric environment.¹¹⁴ When people come very close in a near collision of impaired visions, suddenly you are made aware of your bodily envelope, but from the outside in. In a way



external to yourself you understand the exertion of your boundary of your limits, your edge now redefining yourself. Meanwhile, the other people appear as visual representations only, as they slowly materialize before you, their "skin" appearing as digitized statistical apparitions of themselves. Additionally, in blurring, this imposed condition of speed changes time to distance relationship and this collapses the space.

While we may experience this as separated from our physical vision, through this removal of our normal physical visual capabilities, an erasure of our physical bounds is affected. "Blur Building" is in part a reflection on many ways we experience both spatial distance and social distance or "proximetrics".

We not only read distance visually, but also experience it acoustically, olfactory, and haptically. Indeed our contemporary conditions as described by Galileo, Foucault, Virilio, et. al. and through Bourriard's explanation of Altermodernism, have us in a state of constant motion. As discussed, we are no longer placed in relationship to fixed "landmarks" or static positioning/positions, but instead being placed relative to others in a networked linkage (Altermodern). Considering this to be the case, how we perceive and navigate the interpersonal distance between us, is increasingly critical to the understanding of our current notions about space.

What Diller + Scofidio have effected in 3-dimensional physical space with the blur building is what modern art progressively developed to achieve, namely the merge of figure and ground. Just as modern painters dispensed with pictorial representation and the use of classical perspective, in the Blur Building we no longer have a framing structure on which to make decisions such as what is up vs. down, left vs. right. There are no directional "signs".

Depth has been flattened, edges are not delineated, forms are not articulated, they are only shifting gradations. As we shift, that level of blending or gradation shifts with us, it is a space created by the projection of the visual field of our own vision. We cannot rely on our belief in perspective, it's conventions and rules of distance and depth in this space. Nor can we rely upon relating our movement in relationship to spatial boundaries and objects to form a relationship of time to space.

Diller + Scofidio have essentially removed the frame and thus there is not a structure from which to establish a hierarchy of importance between "things", nothing is more important or more "in focus" than another. Without the varied conditions between different degrees of focus we are unable to understand distance to map space, we cannot project our vision forward. Unable to map or navigate/way-find in this murky, blurred environment, we must consider space in

another way, look at some of its other aspects and traits. Without a "frame" or the structure of our learned systems for relating to "place" is not present. Our physical vision is compromised to the extent that it is no longer operating as we expect it to. As a result cannot be relied upon on our usual way to "see" and "read" the space as we would typically do, with the same fixed associated meanings. Therefore freeing us from the use of these systems of vision, we are able to rely more heavily on what we are left with, our natural perceptile capabilities and our instincts. As we wander freely, although our sight is unable to focus or even fully function, we are "seeing" the space in a completely embodied, immersive way.

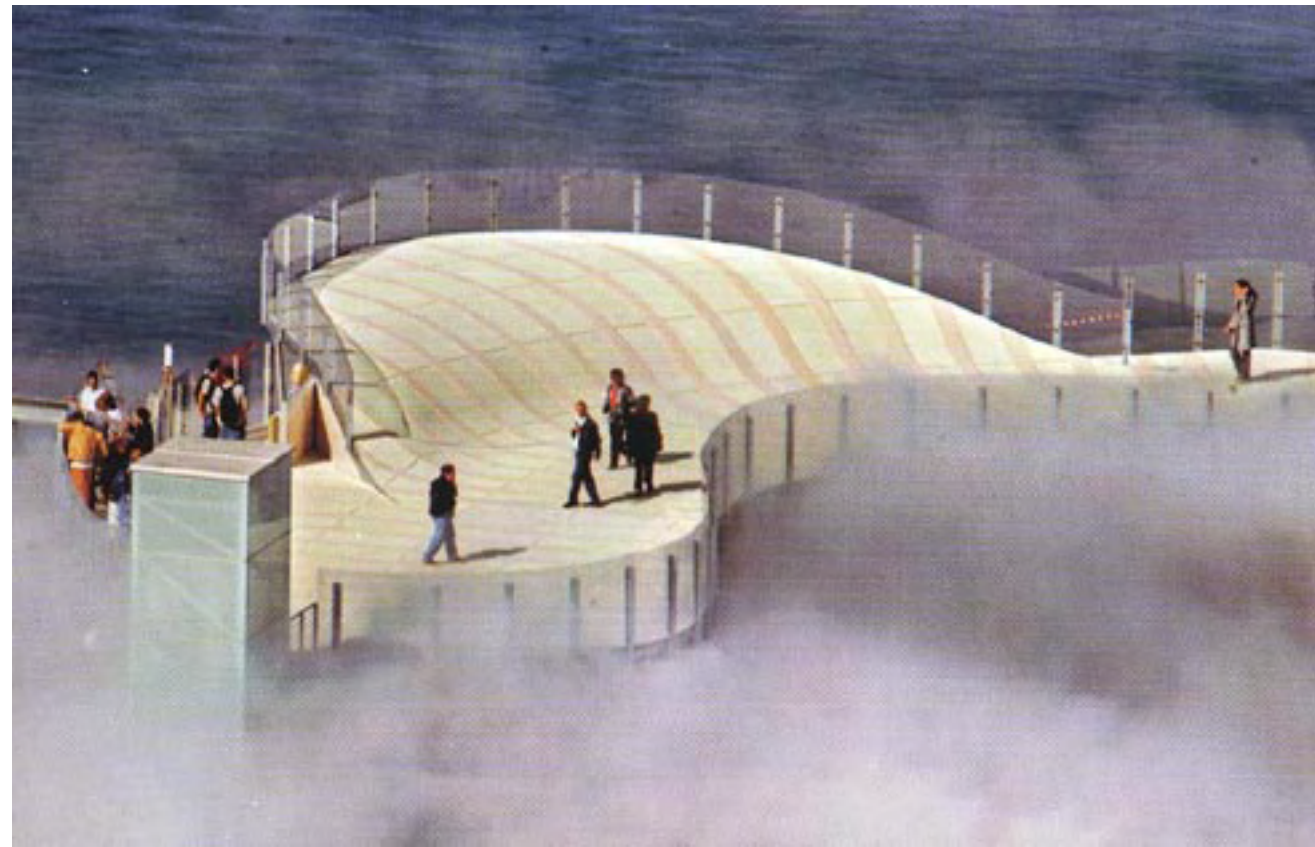
The importance becomes in the relationship between our perceptions and the environment, we only have our own haptic sensory system and kinaesthetic position by which to situate ourselves in this space. Rather than a coding of signs, which carry with them an intended conveyance of meaning, we must rely upon our own bodily perceptions. Meaning must be derived from that experience of our body sensing its placement in this space. This building, conceived through use of the latest digital technologies, which are widely considered to extend our capabilities of "seeing", instead has created an atmosphere which informs our perceptions in far more traditional way. We are left unaided by technology, and in the altering of our physical senses, we are left to operate in a very primal human and sensory way. Through this phenomenon of relating most directly and with immediacy between ourselves and the environment around us, it is for us each to find the significance.

Diller + Scofidio are speaking of the space that is no longer located "anywhere", as fog is no a "place" but rather a condition of a particular set of atmospheric circumstances which in interacting with physical environment at a particular moment in time that can be experienced as a force with "form". Space as energy becomes tangible here. Space is circumstances, space is energy, the interplay of forces, and in order to perceive it we much move through it, circulate and inhabit it.

In Blur Building, we are reliant on our internal feeling of that movement, we cannot rely upon our conditioned imaging system, we must instead use the perceptile image-making that is instinctual and linked directly to movement to form image-meaning relationships. To construct the space, we must form the structure of this environment, and in that process we encounter a space saturated with the energy of our current digital reality. In the relationship between ourselves and our experience of our own movement, our shifting creates the structure, and so it is constantly changing and fluctuating, just as the fog itself is.



Proximetrics is the study of the variety of social distances that people maintain between one another, depending on situation and culture, which was initiated in the 1960's by E.T. Hall.¹¹⁵



Under these conditions, we become reliant upon ourselves to connect with the world, the environment space of our surroundings. While this pavilion also speaks to us not only about built edifice of architectures and its characteristic systems we complacently depend upon, it also serves to make us aware of the spatial aspects of our social and technological structures. But here Diller + Scofidio are telling us that information is not just about the visual, image-laden form that our digital world typically presents to us, it is equally the physical embodied world perceived through our fully embodied presence. A more expansive realm, we must participate in with more than just our eyes to be fully engaged.

In this reversal, the digital encases us physically, it has become integral to our body, while the "virtual" world of our unseen images which we form to relate to the surrounding environment seem to expand directly into the space like a physically manifested mirage.

In the use of the "brain coats", we see a materialization of the idea. Philosopher Edmond Husserl, in the early part of 19th century, spoke of how we are encased in the structural world we put together.¹¹⁵

More and more we are encased deeper and deeper in our data, in what we know. We have become immersed in the age of information where everything is measurable, all is examined then quantified, placed in terms of the tangible. This system is one of hierarchy where those things that can be processed as data, can be coded with these "signs" are considered significant, and the rest drops away as being unimportant, as articulated previously in quoting Virilio.

Here Diller + Scofidio, through obscuring the architectural structure of this space, are exposing the structure of our own current positioning in other ways. We have become literally encased in data, and additionally that data forms a structural world of social conditions, interpersonal connections and human relations.

It would seem that wherever physical and media space fuse new spaces evolve. They are spaces that are sometimes present, sometimes absent, but are generally mobile and roam across the continents at diverse speeds until they burst like soap bubbles – at the end of a phone call on the motorway.¹¹⁶

Diller + Scofidio present to us the social relationships between people, in a contemporary context where we are no longer tied to our "origins", your place of birth "where you enter the world". No longer tied to your native soil, we are without fixed "location" as our base, "a person is now his trajectory... Subject to non-stop surveillance via waves, coded systems, etc., our space as placement is called into question, "favouring mobility instead - only a mobility, that's under constant supervision."¹¹⁷

Our "identity" has become reduced down to informational statistics, and "public", as well as "private" space has shifted. While we can create our own personal "private" space we carry with us and insulates us out in the public world, we are also subject to the surveillance of our actions and movements through personal identity. Surveillance cameras whether directly located nearby or as an orbiting satellite, are prevalent in our environments. Even x-ray machines at security checks reveal the most inner spaces of our personal body. Scanners track us through small chips we carry on our identity cards. Again, Stephan Doesinger speaks about these conditions:

Public space is largely a media construct involving an economy measured in purchasing power, production runs and viewing figures. Where there are cameras, where the assembled contents are edited, is the actual meaning of what we term public space....

Unlike self-controlled bastard spaces such as telephones or iPods, whose space-generating power you manage yourself, the supervision of "public" space lies outside our own field of influence. It is media operators who have power over contents and broadcasting items. They are the architects of public space.

In public space, people become consumers, focus groups and "eyeballs". Individuals can now set about putting themselves across publicly via MySpace, YouTube, Second Life and soon My World as well – so as thereby to regain justification for their existence a political individuals. It is clear that this privately changes the meaning of the term for good, because anyone who puts himself into the media is exposed to to observation and monitoring.¹¹⁸



...and one might add, anyone moving is exposed to observation and monitoring.

We have become a symbol, a summary of ourselves through what are considered the reducible 'vital statistics' that matter to others in social engagement (internet dating, Facebook, or electronic forms for identity cards/passports), through our physical movements and actions (surveillance cameras, satellite navigation systems, and google maps). This personal data contributes to the pools that form the larger structure of our interpersonal relations in broad social contexts.

Once again, returning to Semiotics, the science of signs, in concerning ourselves with Ecco's general theory, we see that:

All forms of social, cultural, and intellectual life can be viewed as sign systems: as forms of communication, and therefore as verbal or nonverbal languages..¹¹⁹

By relaying information onto ourselves that get conveyed to and read by others, we have become walking billboards, external advertisements of our interior spaces.

This kind of computing – marked by the deployment of multitudes of relatively inexpensive, mobile, wireless, and relatively intelligent machines – is flexible, complex, and massive enough to warrant speaking of a technicity whose sensors and actants not only pervade the human life world, but become almost indistinguishable from the environment or the world as such

Diller + Scofidio not only seem to be speaking of technology as undistinguishable from environment, they also seem to refer to the human capacity to process input and make use of it, yet these powerful perceptual capabilities are much like a computer, unseen forces of vision. Seemingly, natural human perception seems to be given a much higher hierarchy in this comingled inter-relationship between the technological and the natural. The technology once it has created the background experience of the space, seems to be relegated to a game hollow introductions. The apparent technology takes the form of an electronic billboard wrapping the body, used for the inept distilling of one's whole being into cliché identity traits similar to those of an online posting or newspaper personal section ad.

There is also an interplay between distance and intimacy, yet both remain ambiguous. Haven chosen what to reveal of ourselves through the questionnaire, our surface "skin" has been turned inside-out. Compared with our own perceptions, this data is shallow and seemingly very superficial. In this context, who we are is a complex merging of our experience navigating the space without the ability to project our vision further, map, rationalize, and "make sense of". This is a world of nature, where its atmospheric conditions and variables encase us, merged with the digital world of a broadcasted atmosphere of unseen signals. In boht cases, the orientation of objects, people, and the structure or frame becomes blurred. This merged and indistinguishable context of both the natural and the synthesized, serves to remind us of the surrounding context we find ourselves in today.

In removing "signs" or signals from the environment, Diller + Scofidio are breaking down the meaning structure of the space. As the orientation of objects, people, and the structural building frame become blurred, the space becomes shallow and superficial, both in meaning content and in physical form of conveyance. Without our depth of field and clear vision of landmarks, we are now left to other devices of our own perception, the near collisions and the chance encounters we may have with the surrounding physical elements and other people. We are all points arranged in space, 3-dimensional physical models of the pixels in the virtual spaces of digital architectures. The occupants of Blur Building, are both embodied points in space and "coded elements", both defining the space with our physical presence, and delineating it further through our movements and interactions between each other.

The more complex and abstract language becomes, the greater the importance of visual and atmospheric articulation capable of embracing and affecting all the senses, connecting things with one another, and enabling us to establish our own position with a constantly changing environment.

Studio Olafur Eliasson¹²⁰

Like our movements, and those of others through the Blur Building, all is on trajectory, in a constant state of flux, and so can only be “placed” relative to that which it co-exists with.

According to Foucault, the history of space went from on of "Localization" to that of "Extension" (a trajectory of movement), to that of what Foucault calls "Arrangement" wherein elements are situated in an interdependent weaving or network where each point is linked to other related points, themselves situated in sets, according to different systems of classifications. It is a space of interconnected networked layering and interweaving.

Space is defined as a site of arrangement or conditions that mutually occupy, overlap, and converge at a specific location in space and/or time.

A multiplicity has neither subject nor object, only determinations, magnitudes, and dimensions.¹¹⁷

Our own era, on the other hand, seems to be that of space. We are in the age of the simultaneous, of juxtaposition, the near and the far, the side by side and the scattered. A period in which, in my view, the world is putting itself to the test, not so much as a great way of life destined to grow in time but as a net that links points together and creates its own muddle. It might be said that certain ideological conflicts which underlie the controversies of our day take place between pious descendants of time and tenacious inhabitants of space.¹²¹

Interestingly enough, Foucault's model of space does not seem to be displacing Galileo's, but rather encompassing it. Somehow this new notion of space is an accumulation of the historic past for, like Medieval space there is a relatedness, although no longer anchored in a specific and rooted locale, and like Galileo's it is moving and relative, but now it is no longer moving to a particular fixed reference point but rather to other moving and transitory points in undulation of constantly updating relationships.

Foucault situates our circumstance today in much the same way Bachelard and Phenomenology places us, in space not “homogeneous and empty” but instead in what he describes as “a space that is saturated with qualities, and that may even be pervaded by a spectral aura. The space of our primary perception, of our dreams and of our passions, holds within itself almost intrinsic qualities: it is light, ethereal, transparent, or dark, uneven, cluttered. Again, it is a space of height, of peaks, or on the contrary, of the depths of mud; space that flows, like spring water, or fixed space, like stone or crystal.” This is what Foucault refers to as our “inner space”, which is directly related to the space he describes

*The space of the infosphere is a homogeneous space of aimless, instantaneous delivery of everything in all directions simultaneously.*¹²²

In the blurring of figure and ground, object and atmosphere, container and contained, aspects of spatial experience (which typically go unnoticed in the background of our attention (field or ground) is brought forward, merged with the figure or object, and equally deserving of our attention. Ironically, in blurring our vision, we “see” more clearly, as can be exemplified by a lifeguard scanning a beach, responsible for the safety of a multitude of people all engaged in a moving field of activity. The human eye is able to scan and if it remains unfocused, can grab onto disturbances in its field of view that would draw its attention.

What is at question here is the materiality and immateriality of space, as well as the merging of the two; both the personal individual space we exist in as beings, and the environment around us, which encompasses the spatial, natural and artificial, our technological and social spaces. This environment speaks about an artificial manifestation of natural conditions become a tangible space, physically inhabitable. While not distinct visually, through this artificially controlled, technologically and scientifically enabled material manifestation of a typically ethereal and illusive atmospheric conditions, our physical senses become more aware. In this way another emergence is brought to our attention, that of the naturally and “artificially” created, for if one consider man as part of nature, his intervention in and combination of natural elements may indeed be considered also an act of nature.

This blurring of the boundaries that we experience as “beings”, the disconnect and alignment of the outer world of environment that surrounds our physical body, and our personal internal world has long been a concern of philosophers, scientists, and artists.

The artist Antony Gormley concerns himself largely with “the intimate, subjective space that each of us lives in”, and the exterior space of the “elemental world” we feel around us. As a sculptor he sees this in terms of space. The outside form of the human body being an envelope that separates our interior space of energy, thoughts, experience, from the space on the other side of the body, our surrounding environment which has physical matter, objects, and a distinct energy of its own. The body serving as both border, or separation, and bridge, or interface.

What I care about most is making space...within us and without us, the space behind your closed eyes...that place of darkness subjective collective space of the darkness of the body conceptually a place of imagination & potential its qualities:
it is objectless, there are no things in it
it is dimensionless limitless endless¹²³

The inner space being what Gormley describes as “the space behind your closed eyes...subjective collective space of the darkness of the body”, conceptually a place of imagination & potential.” Considering the qualities of this space, it is objectless, there are no things in it, and it is dimensionless, limitless, endless.

If we identify with body and architecture, Blur as an expansion of ourselves, is not as a larger “body” or enclosure, but as a greater “Perceptual” field or range, an energy. Because perception is both inner and outer worlds together and does not have boundaries, once we see the human as a “being”, and not a disconnected body and mind, we start to consider our perceptions as the mediator between the two. As such, this space is one of expansive dimensions, not just the enclosure of “building” and the demarcations of the body, and hence the overall realm of these both as making up physical environment, are called into question.

As such, Blur building situates our contemporary experience of our physical environment in much the same way Bachelard and Phenomenology places us. It is a space not “homogeneous and empty” but instead is what Foucault describes as

a space that is saturated with qualities, and that may even be pervaded by a spectral aura. The space of our primary perception, of our dreams and of our passions, holds within itself almost intrinsic qualities: it is light, ethereal, transparent, or dark, uneven, cluttered. Again, it is a space of height, of peaks, or on the contrary, of the depths of mud; space that flows, like spring water, or fixed space, like stone or crystal.¹²⁴

Much like Gormley, this is what Foucault refers to as our “inner space”. Our intimate personal space which directly relates to the space he describes as “external space”, that which could be considered the physical space of our existence. He asserts that within that physical space “we do not live in a sort of a vacuum, but rather it is a space within which individuals and things can be located, or that may take on so many different fleeting colors, but in a set of relationships that define positions which cannot be equated or in any way superimposed.”¹²⁵

Additionally this world of perception, consists not only in our perceptual reception of natural unseen forces at play, but also through our interchange and processing of those transmitted by our technological world. This is our reality today, one in which we must embrace both forms of the virtual to understand our current space. The same qualities which Gormley and Foucault speak about in our existence as “beings” in the world are what Mussimi describes as the “infosphere”.¹²⁶

This blurring of the boundaries that we experience as “beings” beyond the outer world of environment that surrounds our physical body and our internal world, between our internal world and our exterior world has long been a relationship to be examined and questioned. Our perceptions, in being unable to be absolutely distinguished, have long been considered a “chaotic” state, one which is in a state of disorder or disarray according to our rational based western system of thought, in need of being divided and placed.

The philosopher, the scientist and the artist make journeys into the land of the dead, each of them returning bearing concepts, functions and sensations. Each of these three realms acts as a means of protecting us from pure chaos: the philosopher tries to think chaos, the scientist to minimize it, the artist to make use of it.¹²⁷

Whereas an artist such as Gormley largely concerns himself with the body envelope in terms of form, and that relationship with both external and internal space, Artist Robert Irwin refers to this relationship as that of between material and immaterial, the physical exterior and the virtual interior, in terms of energy and experience. Through his work he describes and makes inquiry into the dynamic and seamless exchange we make as human beings between our individual immersive interior private spaces and our exterior surrounding space that we all share. He marvels at and celebrates the coexistence between the physical body with its sensorial, tactile connection to the external world, and the ethereal internal human world, with its impressions, imaginings, and intellectual thoughts. Absolutely interdependent, yet “unaware of one another”, being “both mutually inclusive and mutually exclusive simultaneously” they are what in reality a whole, together making us complete.

I wake up in the morning and the world appears already formed in all its complexity...billions of bits of information that compile this. I form the world, it is not given. I form it at every moment, all this information composing a complete picture, which I do instantaneously...If that information were not completely assimilated and acted on through an intellectual process I would not be able to function. The sensual and intellectual, coexist and are essentially unaware of each other when we do it.

While Irwin acknowledges “there is a degree where we have to make commitments to code the world,” he is seeking to shed light on the hierarchy of our western system as a construct, one we have so assimilated as to no longer examine it but accept it as absolute “reality”. In spite of our experience, our conditioning overlooks that rational thought is not the complete accurate modeling of our world.

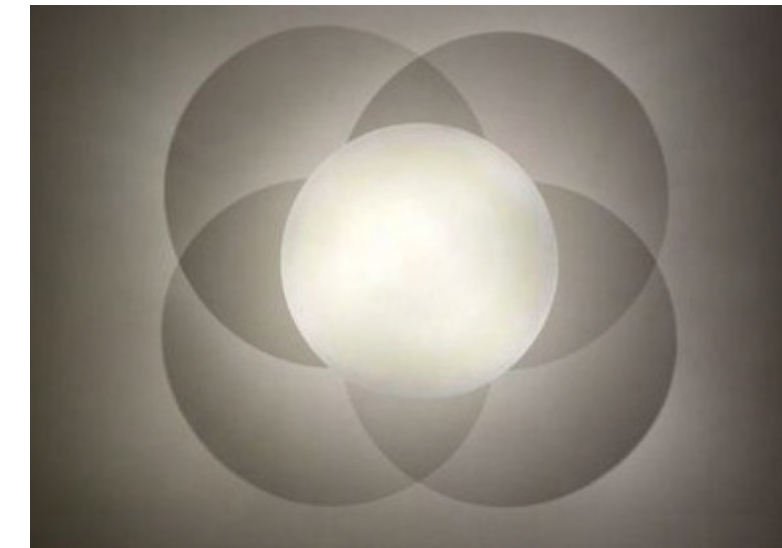
We have come not only absolutely trusting and reliant to the extent that we no longer trust our first instincts to deliver everything we required, but his assertion is that in our moment of awareness, we already have everything we need to “form that moment”.¹²⁸

Throughout our visual cultural history we have been constructing frames within which a hierarchy of order can be established, much based upon “systems” for representing the “real” physical world through image or “replicate”. Modern art broke with the system of perspective and began to alter the representation of the world, looking at our experience of it in other terms beyond exact visual duplication of forms, and beginning to address our internal impressions of that external physical world. With the impressionists, they considered the effects of light as subject above the object itself. With cubism multiplied simultaneous vantage points replaced the single viewpoint of the perspective model which had made a hierarchy of objects and people through directing visual focus. There became a slow merging of figure and ground through the use of gradations that transition or blend, rather than lines that mark and separate, and with this a flattening of space. The abstract expressionists sought to express energy of movement, gesture, performance artists sought to consider event, the in...

However this evolution, through continuing to dissolve image, still there was a reliance on a “reading” a type of framing and hierarchical structure, whether abstract or not, a sign system of structure continues to persist. For anytime an object or line occupies space, there is a sorting that occurs. As Irwin described it in discussing his process of investigating his artistic concerns, sophisticated compositions can “lead” the eye around to create a “reading” of the painting, a system of hierarchy of relationships, whether within the pictorial frame or to the surrounding space beyond.

I first questioned the mark as meaning and then even as focus; I then questioned the frame as containment, the edge as the beginning and end of what I see... consider the possibility that nothing ever really transcends its immediate environment... I tried to respond directly to the quality of each situation I was in, not to change it wholesale into a new or ideal environment, but to attend directly to the nature of how it already was. How is it that a space could ever come to be considered empty when it is filled with real and tactile events?¹²⁹

Irwin cites an example of this. When viewing even a minimalist painting with a line down the centre such as a Barnett Newman painting, a line in relationship to space of both the planar canvas and the physical world, we employ a learned system of values. The line has a greater meaning or value to us in a scale of our learned visual value system, than the line of the wire that hangs the painting



When I look at the world it just is there, it exists.
- Robert Irwin¹³⁰

or a crack on the adjacent wall, and therefore we give emphasis to it in our focus. We are seeing the line as an object or figure, and the surroundings as ground or background, and its a deductive system of focus. This figure and ground type of system of focus, is a way of viewing the world, allowing that which we deem meaningless to fall out of view, thus shaping how we see the world. It's a way of viewing the world, thus allowing what we deem meaningless to fall out of view. If we start to question this system, the space around the line becomes part of our concern as well, it becomes of equal importance, being without a system to give it a hierarchy of significance. This is what Irwin began to concern himself with, re-examining the relationship between what we "see" and what we "know", what we perceive and our experience of that. He began to concern himself through his work with the implication and meaning in how those experiences are formed. Essentially, Irwin was examining the "physically real" environment in relationship to the "virtual" experience, and he did so in both 2-dimensional and 3-dimensional spatial terms.¹³¹

I was no longer just looking at objects or gestures occupying space but rather, in a sense, at matter and energy having varying degrees of density - varying degrees of actual substance occupying space which has varying degrees of energy. We're talking about running all the way from totally empty to totally occupied, like from air to lead, with all the things in between. The interaction between so-called figure and ground between so-called object and space, revealed itself as being simply a scale of different degrees of corporeality such that they slide right past each other, so that the object maybe starts out being totally corporeal, totally dense, and by degrees becomes more and more energy, from solid object to just vaporous air, with space meanwhile going all the way from being so-called emptiness to having actual physical properties to the point of having actual density.the main issue became this continuum, having nothing to do with content but rather purely with its own physicalness and how that physicalness was experienced perceptually.¹³²

In doing so, Irwin distilled his work down increasingly, with the aim to create works where the perceptual reading remained the only possibility and the pictorial presence is no longer there. In this way the work could not be read in any pictorial way or with any sort of associations of meaning beyond the experience of the piece. In the process of progressing closer to achieving this, he had the realization that:



Every ground and line had its own presence about it....
Everything I saw was important, no such thing as figure
and ground, the ground being secondary, everything was
a figure in a sense, part of how I processed the world.¹³⁴

By “suspending any aesthetic value system”, withdrawing from “the concepts of the world”, all became equally meaningful. Instead of relying on his learned hierarchy of importance, he began to gauge the work on what he himself experienced, that first impression we all have as perceptible beings, before intellect gets involved in describing meaning or interpretation. Like the affects upon users of the Blur building's spatial conditions, without object, he was free of dimensionality, without symbol he was freed from associative meanings. Meaning could now be derived by the experience of the work, and not by the work itself.

What each of these examples support is the Phenomenological notion that “Our perceptions are formed by an interplay between the cognitive self, and the phenomenological world. The formed world is as perceived by the cognitive self, wherein it is structured by our understanding of it, the encased structured world that we put together, a set of symbols, signs, hierarchies and their related meanings. The phenomenological world is formed through the continual shaping of our world through the phenomenon that we experience moment by moment. A state of oscillation, a beautiful conundrum between “what we know” and “what we experience” somehow forming our “reality”, the world as accordingly. Since we are completely encased by what we know, the best way to see or experience the essence of the space around us and its phenomenon, is to examine those layers of meaning, beliefs, concepts, and structures, identify and strip them away step-by-step. The possibilities of inhabiting a world of continual unfolding, one in a constant state of flux, exists when we take away everything we know. But once we replace this world with the next moment of perception, it quickly becomes another “known” world unless we continue this process of experiencing the new replacing the known.

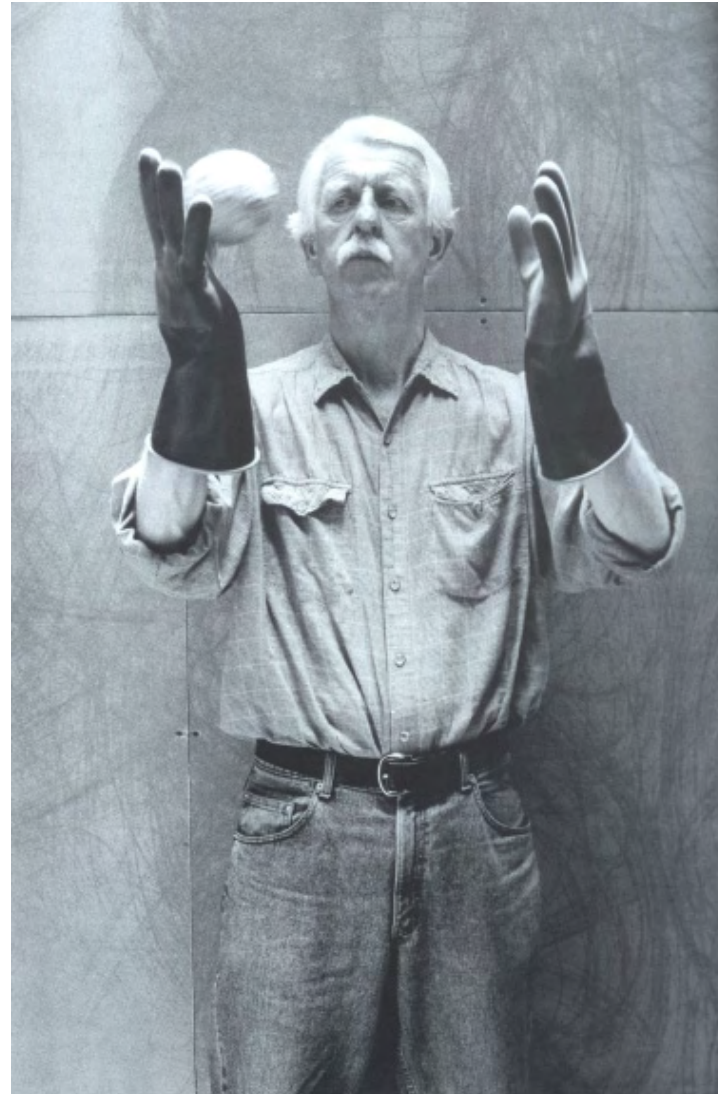
We know the sky's blueness even before we know it as “blue”, let alone as “sky.”
- Robert Irwin¹³³

In this process of concerning ourselves with how and in what way we form the world, we see what is revealed behind meaning and interpretation as pure energy, a completely dynamic world of possibility.

You build energy by the interaction between the things, that one and one don't make two, but maybe five or eight or ten, depending on the number of interactions you can get going on.¹³⁵

With the idea of the interplay between that which we perceive and that which we know, between the virtual and physical, we see the dynamic and unending infinite interplay described by Benjamin's metaphor of two mirrors facing and our allegorical “Magic Box” as embodied by such technologically embodied spaces as the iPhone.





The dumbbells are a frozen relic of process that continue to change with their context and the perceptions and meanings the viewer brings to it. Can perception be really devoid of meaning ultimately? Perhaps there is the ability to avoid representing societal or prescribed language or symbol and have the simple personal meaning one feels and associates when experiencing, similar to that when encountering nature, but there is a personal meaning.¹³¹

"Through the concentrated attention required to render a circle... the perfection of the world is grasped."¹³² Zen practice of drawing a circle

"...the meaning of the piece ultimately depends on what the viewer brings to it. What is important is the encounter – the experience of the experience. It is through this that one creates meaning and comes to understand the world and he self." art critic Kenneth Baker referring to the work of artist David Ireland.¹³⁶



In one sense alienation is both necessary and desirable, in that we can say that we are alienated to something other than ourselves, and therefore lose full possession of ourselves, whenever we become involved in it. Losing possession of ourselves is not something to be lamented; it is simply part of the back-and-forth movement between self and the world that is the condition of a truly human existence. What we must do is accept our involvement in things other than ourselves, and at the same time assert our selfhood in the face of the world by actively seeking to understand it and transform it. Art, Eco argues, can contribute significantly to this process of understanding and transforming the world...¹³⁷

...Instead of trying to solve the new problems with old forms, we should develop the new forms from the very nature of the new problems.

- Mies Van de Rohe¹⁹⁸

CONCLUSION

Rather than continuing to focus on the structures of the past, building upon what we know, this era has indeed begun to move so fast that we are unable to examine it thoroughly, and in doing so has in fact maintained an even stronger focus on the future. All that potential, all those future possibilities invigorated by the possibilities of technology. Yet since the future is never really here, this condition can serve to reorient ourselves in a space of responsiveness, a state not just of continual movement, with the flattening affects of speed, but one wherein we are continually updating, remaining relevant, vital, and meaningful to the present. This is a position where we are authentically engaged, a type of “presence” wherein we embrace both the “virtual” and the “physical”. This requires no race to outpace the rapid advancement of ongoing new technologies.

Technology can now serve the purpose of alerting us to the possibilities of that expansive space, the power, and energized potential that inhabiting a place in-between, merged and amorphous, holds in terms of space.

Overall, the power of technology on space is to reveal, through its dynamic interplay, and fluidity between virtual and physical space, the power of the uncertainty and open-endedness which results as a re-energizing of space. To regard space with its full inseparability from time, is to realize all its full potential as integral with human perceptile experience. Before there was dynamic walls, “smart” buildings, there was space, filled with light, shadow, movement, time and energy. The full potential of what our relationship with space can be is accessible through these expanded spatial perceptions of our contemporary context.

Technology most powerful effect on space is to reveal a discourse, through the dynamic interplay, that the virtual (image or imagined, visual or vision) and the physical (object, embodied or built space) in their interaction reveal the potential to re-energization both our existing built physical environments and those yet to be created.

If Architecture can realign itself with the implications of technology, not from what it enables, or even the theories behind it, but the view of the world that has resulted from this shift in or concepts of space, it will be full of relevancy to our conditions.

In really looking, in a continual process, at the world and the conditions from a pure perceptile stance, will enable the resultant architecture to be activated by a manifestation of those discoveries and embody their potent implications. In this way, the architecture will continue to be relevant. It is a vision-drive approach, one that far outstretches the lifespan of technologies, the changes in user needs, and the impacts the cycles of next breakthrough and their inevitable obsolescence. Continuing to be informed by our perceptile processes are key, since by their very nature they are in a constant mode of continual update, this will continue a non-stop creatively generative infinite loop input-output.

The present epoch will perhaps be above all the epoch of space. We are in the epoch of simultaneity: we are in the epoch of juxtaposition, the epoch of the near and far, of the side-by-side, of the dispersed. We are at a moment, I believe, when our experience of the world is less that of a long life developing through time than that of a network that connects points and intersects with its own skein.

– Michael Foucoult¹³⁹

Where to? What Now?



...we are not moving toward some kind of goal, we are at the goal and it is changing with us. If art has any purpose, it is to open our eyes to that fact.

- John cage¹⁴⁰

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