CONSTRUCTING ATMOSPHERE

in search of atmospheric architecture

To the one who holds this page,
who gives this writing a particular time.

Danique van Hulst

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TABLE OF CONTENT

PROLOGUE

'The sensitivity to atmospheres',
says Peter Zumthor, pointing at the corner
of the room where a translucent curtain
touches shiny wooden panels, '
is in a way the classic task of the architect.'

‘How come our built environment seems to have become this source of alienation and sense of unreality, detached from man and world?’

Edward Hopper, Office in a Small City, 1953, Oil on canvas, 71.1 x 101.6 cm, Metropolitan Musum of Art, New York.

an undefined search Throughout most of my architectural education I have been taught that good architecture should be based on intellectual aspirations, formal inventions and hermetic concepts. But even though the 'perfect architecture' arising from these values could be intellectually motivated without hesitation or ambiguity, these architectural plans could never satisfy the desire for a quality I quietly have been searching for.

I found myself looking for a quality I increasingly became sensitive to, but I could not yet define. I gradually stopped intellectually appreciating the architectural plans, urban environments and artistic work that I encountered and started to emotively and intuitively appreciate the qualities arising from these spatial constructs. I gained interest in notions like the imperfections of reality, the fragility of matter and the capricious nature of architectural environments. But as I saw the value in these topics, I also realised that the central issue of the architectural quality I was looking for was intrinsically linked with the human experience of space. At the same time I began to realise that our built environment and the architectural plans I encountered were increasingly lacking exactly this experiential quality.

As architectural plans tend to increasingly be constructed around formal inventions rather than human experiential reality, our built environment has become a source of alienation and placelesness. Edward Relph even speaks of an 'existential outsideness' in reference to the growing loss of the sense of belonging, interiority, and domicile. 'Existential outsideness involves a self-conscious and reflective uninvolvement, an alienation from people and places, a homelessness, a sense of the unreality of the world, and of not belonging.'[1] With the alienation of context, man loses the criteria of both the world and the self. So how come our built environment seems to have become this source of alienation and sense of unreality detached from man and world?

Societies obsession with newness, the new wave of technological progress, globalisation and the accumulation of wealth creates a condition in which architecture tends to become a vehicle for economic and political interest and an aestheticised object that is totally detached from historicity and existential grounds. Our consumer culture with its subsequent hegemony of the retinal image dictates architecture to compete for commercial visibility

Havik, K., & Tielens, G. (2013). Concentrated Confidence. OASE, 91(Building Atmosphere), 59-84. p. 59

1. Relph, E. (1986). Place and Placelessness. London, Pion Limited. p.51

The competition for aesthetic uniqueness in favour of commercial visibility and a striking architectural image - especially in high rise buildings - ironically results in a new kind of uniformity.

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left ro right: SOM, Jiangxi Nanchang Greenland Central Plaza, Nanchang, China - Gensler Architects, Capital Gate, Abu Dhabi - Renzo Piano Building Workshop, The Shard, London - Kohn Pedersen Fox Architects, Shanghai World Financial Tower, Shanghai Shi, China - Gensler Architects, Shanghai Tower, Shanghai, China - SOM, Burj Khalifa, Dubai, United Arab Emirates

by producing a shallow but striking architectural image[2]. And this surreal culture of materialism and consumption erodes the value and meaning that define the authenticity of human experience.

Even though we cannot speak of contemporary architecture as a singular phenomenon, the aim for aesthetic uniqueness of this image-architecture paradoxically starts to generate a global uniformity[3]. The tendency of architectural images of today to impress, only generates superficial aesthetic values that oddly enough dull the senses by homogeneous overstimulation. These architectural images appear to be systematically unable to have more value then meets the eye. Our obsessively materialist culture and individualistic narcism has turned everything into objects and images of consumption and aestheticization. Subsequently the role and responsibility of the architect has also been diluted to a cult of personality in which architecture is an expression of the creative individual rather then a concretisation of cultural and societal meaning. This architecture of formal inventions and retinal aesthetic supremacy only aspires to impress and can never meet true architectural values. True architectural meaning cannot be invented, but arises from cultural historicity, experiential reality and human existence.

In our mode of culture with its unprecedented speed and change, architecture has the ability to provide a counterbalance in concretising cultural continuity. Does architecture not have the responsibility to concretise cultural and societal order and to express and materialise the specificity of place and culture? This is not meant as a nostalgic notion in which I suggest we should neglect technological progress and trade the global uniformity for a return to historical building tradition. But specificity of context and the regeneration of local identities does have the potential to generate sustainable culture and architecture. Because when sustainability arises from the meaning of life as an ethical and mental issue opposed to a mere technical and aesthetic issue, architecture may be embedded in experiential reality and man may be rooted in the context that shapes him.

We are a part of countless contexts and identities that should not be approached as backgrounds, but that are constituent parts of our very personality. The sense of self is an exchange with the sense of one's physical, cultural and

2. Pallasmaa, J. (2005). Landscapes - in conversation with Peter MacKeith. Encounters I. P. MacKeith, Rakennustieto Publishing.
3. Pallasmaa, J. (2012). Meaning in Architecture. Encounters II. P. MacKeith, Rakennustieto Publishing. p.103

Kengo Kuma, *Oribe Tea House*, Tajimi, 2005.

societal context. As is every architectural plan an intrinsic part of and an exchange with its context. I think it is the task of the architect to improve the context of the architectural plan and even give commonplace settings an enhanced significance through harmonious integration, ultimately creating a sense of inclusiveness. Consequently, when an architectural environment is rooted in landscape, culture and societal reality as well as human experiential reality, it continues a cultural and collective narrative but also concretises personal identity. An architectural environment that is rooted in historical, societal and cultural context, has the ability to concretise cultural identity and individual rootedness which are irreplaceable grounds of humanity[4].

In response to my personal observation of an increasingly alienating architecture with a lost sense of reality, it became clear to me that we should shift our focus to create an architecture of inclusiveness that is embedded in human experiential reality. Nonetheless I continued my search for the incomprehensible and undefinable quality that seemed to accumulate these and all other qualities that I consider to be of value in architecture. Evolving my search from contextual embedment, cultural and societal continuity and a sense of rootedness, I began to explore environmental and architectural phenomenology. Hereon after I encountered an architectural dimension that may very well be the mediator of all the qualities, responsibilities and tasks of architecture that I have been searching for. Here began my search for atmosphere.

4. Ibid. p.103

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‘What do we mean when we speak of architectural quality? It is a question that I have little difficulty in answering.

Quality in architecture . . . is to me when a building manages to move me.

What on earth is it that moves me? How can I get it into my own work? . . .

How do people design things with such a beautiful, natural presence, things that move me every single time.

One word for it is Atmosphere.’

- Peter Zumthor

INTRODUCTION

Hans Baumgartner, *Student Café*, Zürich, 1936.

in praise of vagueness We all refer to it in our daily lives; we talk about a concert as having a good vibe, we talk about a social situation as being 'gezellig', we talk about the impression of a part of town as being gloomy and we even talk about the mood of a day as having a sense of anticipation. *Atmosphere* is a familiar conversational subject, but at the same time it is remarkably undefinable. We return to the use of the term constantly despite its ambiguous quality, or maybe even because of it. And this atmospheric description that seems to be applicable to every situation always concern a spatial sense of ambience[1].

Remarkably, the notion of atmosphere remains largely unaddressed in architectural education and practice. The appreciation for the art of building is still largely dependent upon the supremacy of it's functional, aesthetic and conceptual value. The essential task of architecture to support human life by engaging with human experiential reality has been frequently overshadowed by these formal inclinations. Atmosphere could be defined as the very initial and immediate experience of space, and thus can be understood as a notion that addresses architectural quality[2]. Fortunately, there has been a development in which architectural practices are showing a renewed interest in atmospheric quality in the built environment. Leading advocates of the value of the atmospheric dimension in architectural design include architect Peter Zumthor, architectural theorist Juhani Pallasmaa, philosopher Gernot Böhme and environmental sociologist Jean-Paul Thibaud.

Despite the fast-growing research field, the discussion on architectural atmosphere does entail a certain ambiguity. After all, the atmospheric experience is something personal, ephemeral and vague, but above all it is hard to conceptualise. We seem to be able to immediately sense the atmosphere of a place, but it seems to be very difficult to capture in text or design. We are able to intuitively recognise atmosphere, like when we recognise the essence of the weather in a glance, but we are not able to define, analyse or understand its phenomenological origin. The Argentina poet Jorge Luis Borges captures this difference between intuitive and analytical identification as follows:

'We might say that we know something only when we are unable to define it…This is what we know what poetry is. We know it so well that we cannot define it.'[3].

Zumthor, P. (2006). Atmosphere - Architectural environments - Surrounding objects. Basel - Boston - Berlin - Birkhäuser. p. 11

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1. Böhme, G. (2014). Urban Atmosphere: Charting New Directions for Architectrue and Urban Planning. Architectural Atmospheres: On the Experience and Politics of Architecture. C. Borch. Basel, Birkhäuser: 43-59. p.43
2. 'What do we mean when we speak of architectural quality? It is a question that I have little difficulty in answering. Quality in architecture . . . is to me when a building manages to move me. What on earth is it that moves me? How can I get it into my own work? . . . How do people design things with such a beautiful, natural presence, things that move me every single time. One word for it is Atmosphere.' - Peter Zumthor in: Zumthor, P. (2006). Atmosphere - Architectural environments - Surrounding objects. Basel - Boston - Berlin - Birkhäuser. p.11
3. Borges, J. L. (2000). This Craft of Verse. , from the Charles Eliot Norton Lectures 1967-1968. Cambridge, MA, Harvard University Press. As quoted in, Havik, K., H. Teerds and G. Tielens (2013). "Building Atmosphere." OASE 91(Building Atmosphere): 3-11. p.3

'[A]tmospheres could be the most comprehensible and integrated of architectural qualities, but connected so deeply and complexly with our awareness, sense of self, and bio-cultural instinctual reactions that they can hardly be conceptualised and verbalised.'

- Juhani Pallasmaa

Despite the elusive character of atmospheres, it is suggested by the intuitive recognition and appreciation of the atmospheric dimension that we are able to share this intuitive sense with a larger community. The atmospheric experience seems to have a collective quality about it. Therewith the atmospheric experience has the inherent quality to be as much the realm of the layman and daily use, as it is the realm of the expert and professional discourse. I believe that non-architects primarily sense the atmosphere of a place or building, opposed to appreciating distinct visible and formal concepts[4]. Therewith non-architects have the advantage of approaching places and atmosphere more intuitively, whereas architects to often assume an intellectual and theoretical approach. Layman may not have the vocabulary to verbalise their sensitivities for the atmospheric dimension that is acquired through an architectural or artistic education, but the notion that the sensitivity for the atmospheric dimension is largely intuitive indicates that the actual sensitivity does not necessarily differ between layman and expert. And this exceptional transcending quality is why atmosphere may be the ultimate intermediary between architectural quality as perceived by the architects who design the architectural plan and architectural quality as perceived by the inhabitants of the architectural environment.

I believe that architectural atmospheres are more effective than the architectural discourse has been willing to rationally admit. I would even argue that the atmospheric dimension of a constructed environment is the key to architectural quality. Therefore in this research I would like to explore how the atmospheric dimension may attain its proper place in architectural design. The main question of the research considers:

How can an architect integrate atmospheric quality in the design of architecture and the built environment?

Dissecting this question into four parts, we will consecutively explore the phenomenon, the perception, the process and the plan. The research thesis will start with an introductory chapter in which we will look into what the perception of atmosphere entails. In chapter one we will look into the conditions under which atmosphere may be perceived. Subsequently we will look into the atmospheric dimension in relation to the design process, and finally we will explore its relation to the architectural realm.

Pallasmaa, J. (2013). 'Orchestrating Architecture: Atmosphere in Frank Lloyd Wright's Buildings.' OASE 91(Building Atmisphere): 53-59. p.55

4. Pallasmaa, J. (2016). Place and Atmosphere. The Intelligence of Place: Topographies and Poetics. J. Malpass. London, Bloomsbury: 129-155. As quoted in: Seamon, D. (2017). Architecture, Place, and Phenomenology: Buildings as Lifeworlds, Atmosphere, and Environmental Wholes. Manhattan, KS USA, Kansas State University.

'Atmosphere is my style.'
William Turner once confessed in a letter to John Ruskin in 1844.

William Turner, *Norham Castle*, Sunrise, c.1845

Atmosphere by definition, seems to lack definition. This inherent paradox will echo throughout this research on *how to construct atmosphere*. The very act of analysing and defining the atmospheric phenomenon may result in the dissolution of its very quality. Therefore the research approach is built around the duality between an analytic and an intuitive approach. Even though the main body of this research considers a theoretical exploration of the atmospheric dimension in architectural design, I have sincerely attempted to protect the ambiguous quality and integrity of the atmospheric phenomenon. However in order to counteract this theoretical and analytical approach and to appreciate the personal, ephemeral and ambiguous qualities of an atmospheric experience I simultaneously kept a so-called atmospheric journal. This highly personal document, called *Encountering Atmosphere - a personal account of the atmospheric dimension,* contains memories, observations and encounters of atmospheric experiences. A multiplicity of sketches, images and words illustrate the way matter, light, rhythm, age, imperfection, fragility and life move me to evoke a rich emotive response to space and matter that seems to be the essence of atmosphere.

Furthermore, I aim to integrate the acquired knowledge on the integration of atmospheric quality in the design of the built environment in the subsequent design project of my graduation. I aim to have absorbed the acquired theoretical knowledge on this topic in a way that makes it part of the subconscious dimension of the design process, ultimately allowing me to intuitively integrate atmospheric quality in my own architectural design. My search for the integration of atmospheric quality in the design of architecture and the built environment will not end at the closing of this document, but will continue as I explore its application during my own design process. I aspire both the research project and the design project to accumulate the knowledge and experience to provide me, and hopefully others, to find the essence of the atmospheric dimension in architectural design.

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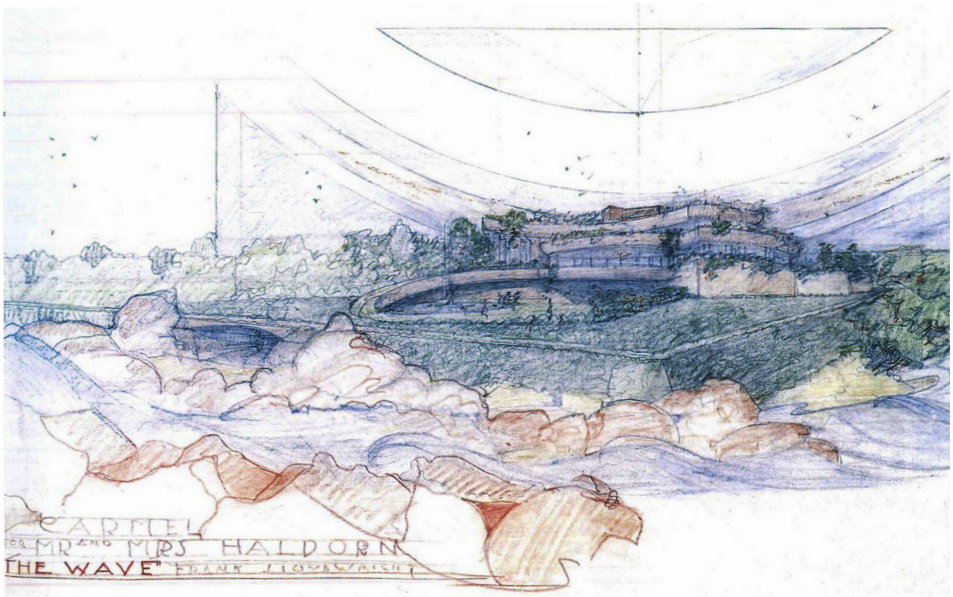
0. AMBIGUITY

'The total overwhelming impression comes first,
perhaps in a seizure by a sudden glory of the landscape,
or by the effect upon us of entrance into a cathedral
when dim light, incense, stained glass and majestic proportions fuse
in one indistinguishable whole. We say with truth that a painting strikes us.
There is an impact that precedes all definite recognition of what it is about.'

- John Dewey



In several of Wright's drawings the sky or atmosphere is bent by the building that is illustrated.

F.L. Wright, *'The Wave' House for Stuart Haldorn,* Carmel, California, 1945, perspective.

‘Quality in architecture is for me when a building manages to move me.’[1] opens Peter Zumthor in his book that could only be read as an attempt to share his personal celebration of atmosphere and architecture. Touching upon the emotional sensibility evoked by the sensorial qualities that a space emits, he continues: ‘I enter a building, see a room, and - in a fraction of a second - have this feeling about it’[2]. Atmosphere is an immediate form of physical perception which is recognised through emotional sensibility. But even though these kind of emotive encounters with space feel immensely real, present, and relevant in the design of the built environment, there only recently has been a renewed interest in atmospheres in the architectural discourse. It seems that an aura of vagueness has come to surround the notion of atmosphere. But how could an atmospheric experience of a density of feeling, a sense of well-being, a natural presence, a harmonious wholeness and poetic beauty emitting from space, be a quality that is not worth exploring and should remain in the untouched realm of vagueness? I would argue that the ambiguity of the atmospheric phenomenon is part of its essence. Therefore the ambiguity should not be dismissed in an attempt to analyse and understand architectural atmospheres, but the ambiguity should be embraced and appreciated for its essential role in the atmospheric dimension of architectural quality.

the mystification The linguistic origin of atmosphere belongs to the meteorological field. The word ‘atmosphere’ was first used to describe the gas surrounding celestial bodies. It was thought originally to come out of the planet, as being a part of it. Likewise, environmental atmospheres seem to be produced by the physical form. The notion of atmosphere therewith often is associated with a sensuous emission proceeding from the physical object, like a gas, fluid or mist. The understanding of atmosphere as being an external, yet non-physical entity has led to the unfortunate appropriation of the terminology to describe superficial aesthetic qualities.

The aesthetic and political discourse has adopted the use of the word ‘atmosphere’ to describe supposedly vague and difficult to express qualities. Herewith it is suggested that atmosphere as an aesthetic concept is able to describe the rationally unexplainable essence of the aesthetically relevant[3]. However, I would argue that these kind of descriptions merely conceal the speaker’s

Dewey, J. (1934). Art as experience. (1987). As quoted in Pallasmaa, J. (2014). “Space, Place and Atmosphere - Emotion and peripheral perception in architectural experience.” Lebenswelt 4(1).

1. Zumthor, P. (2006). Atmosphere - Architectural environments - Surrounding objects. Basel - Boston - Berlin - Birkhäuser. p.13
2. Ibid. p.13
3. Böhme, G. (1993). “Atmosphere as the Fundamental Concept of a New Aesthetics.” Thesis Eleven 36: 113-126. p.113

Pathology of the eye: a still from *The Andalucian Dog* (Le Chien Andalou) by Luis Bunuel and Salvador Dali, 1928.

lack of explicit knowledge or act as a device to conceal a lack of meaning. For instance, when negotiations are described as to have taken place in 'a good atmosphere', the fact that the meeting did not bring anything fruitful is concealed. Or when an art catalogue speaks of 'the powerful atmosphere of a work', one should not expect an exceptional poetic quality. It may be clear that this kind of use of the term 'atmosphere' deteriorates its value and creates a wrongful associative field around it. The frequent, and I would say highly inappropriate and vague use of the expression of atmosphere in aesthetic discourse points out that it is aesthetically relevant, it however lacks real characterisation. Even though these kind of atmospheric descriptions are derived from its use in daily life, the latter is in many ways more exact. Describing an afternoon as being cheerful, a social gathering as being tense, and a person as to have a radiating power are all indeterminate and diffuse descriptions. Yet the description of these atmospheric phenomena are not indeterminate in their relation to its character[4]. We have an endless vocabulary to characterise atmosphere, the difficulty however lies in its indeterminate position. We do not exactly know whether to ascribe it to the subject that is perceiving the atmosphere or to the object from which it proceeds. And it is exactly this intermediary position of atmosphere that largely ascribes for its mystification and ultimately for the largely unaddressed state of the notion in architectural discourse.

the supremacy of the retinal image The increasing aestheticization of reality is concurrent with the supremacy of the retinal image. The historical development of representational techniques is closely related to the development of ideas in architecture[5]. The rise of the perspectival understanding of space has been the outset for 'an architecture of the image'. Additionally, the more recent technological progress and the subsequent focus on the digital screen have escalated in a narcissistic kind of self-expression that also finds its resonance in the architectural realm. Economic and political motivations for architectural design have conditioned architecture to become a vehicle for commercial visibility that merely produces seductive and memorable formal configurations. This reduction of architecture to a marketable image has made the architectural photograph more important than built reality. Consequently this final retinal image has become a primal motivation in the design process at the cost of addressing the integration of real architectural

4. Ibid. p.113

5. Pallasmaa, J. (2000). Hapticity and Time - Notes on Fragile Architecture. later published in Encounters II. P. MacKeith, Rakennustieto Publishing.

'Indeed the judgement of the character of a space calls for our entire embodied and existential sense, our sense of being, and it is perceived in a diffuse and peripheral manner rather than through precise, focused and conscious observation.'

- Juhani Pallasmaa

René Magritte, *The Lovers II*, 1928. Oil on canvas (54 x 73.4 cm). National Portrait Gallery, Canberra, Australia.

meaning. The image has preceded the reality it is supposed to represent. Richard Kearney even argues that the consequence of this 'architecture of the image' is that reality has become a pale reflection of the image[6]. The reality-bending properties of these images make our sense of reality more undefinable and ambiguous as ever. And the sheer speed and frequency with which one gets bombarded with these visual images on a daily basis contributes to this sense of unreality. We are exposed as Italo Calvino describes, to an 'unending rainfall of images'[7]. And these endless visual stimuli paradoxically create an overstimulation that dulls the senses rather then engaging them.

The hegemony of vision also prevails in the architectural experience. The experience of space and place is not merely a visual perception, as is usually assumed. The experience of space, as the experience of atmosphere is an emotive response as a result of multi-sensory stimuli imbued upon the perceiver by environmental qualities. Juhani Pallasmaa describes the complex assessment of spatial experience and the atmospheric dimension as follows: 'The judgement of environmental character is a complex multi-sensory fusion of countless factors which are immediately and synthetically grasped as an overall atmosphere, ambience, feeling or mood.' The experience of atmosphere is multi-sensory in its very essence. And the perception of our surroundings and the character of space are a fused and simultaneous kind of perception[8]. One could even argue that atmospheric perception involves stimuli that go beyond the Aristotelian senses. Think of sensations like movement, stability, continuity, illumination and scale. These sensations are a product of the embodied sense, or even 'the sense of self' to use one of the Steinerian senses[9]. Maurice Merleau-Ponty notes: 'My perception is not a sum of visual, tactile and audible givens: I perceive in a total way with my whole being: I grasp a unique structure of the thing, a unique way of being, which speaks to all my senses at once.'[10]. The role of the visual sense in the experience of the built environment dominates the other realms of the senses, and therewith obstructs the condition under which an atmospheric experience can take place, namely a condition of multi-sensory engagement.

The issue that largely accounts for the supremacy of vision over the other senses in relation to the atmospheric experience lies in the difference between perspectival and

Pallasmaa, J. (2016). Place and Atmosphere. The Intelligence of Place: Topographies and Poetics. J. Malpass. London, Bloomsbury: 129-155. p.132

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6. Kearney, R. (1994). The Wake of Imagination. London, Routledge. p.383, as quoted in Pallasmaa, J. (2011). The Embodied Image - Imagination and Imagery in Architecture, Wiley.
7. Calvino, I. (1988). Six Memos for the Next Millenium. New York, Vintage Books. p.57
8. Hiss, T. (1991). The experience of place. New York, Random House.
9. Rudolf Steiner distinguished twelve senses, arranged in three categories. 1. The body: the senses of touch, of life, of movement, of balance. 2. The external: smell, taste, sight, temperature. 3. The immaterial: hearing, speech, thought, ego.
10. Merleau-Ponty, M. (1962). The Phenomenology of Perception. London, Rouledge and Kegan Paul. p.48

The irregular articulation of the elements of the staircase provide a strong peripheral stimulation.

Alvar Aalto, *Villa Mairea,* Noormarkku, Finland, 1939.

The irregular compositon of architectural elements and vegetation provide a strong peripheral stimulation.

The garden of *Katsura Imperial Villa*, Kyoto, Japan, 16th century.

peripheral vision. Both kinds of vision are equally important in the experience of the world around us. However, the hectic and focused eye as associated with the camera captures a momentary fragment of the environment and therewith disregards the sensorial reality of an architectural experience. Similarly, a focused visual experience of an environment creates a distance between the observer and the environment. When we see things in focus we are outsiders to it, whereas the experience of space has an innate immersive quality that is generated by peripheral and unfocused perception. Atmospheres are perceived peripherally through diffuse vision, interacting with other sense modalities. It may very well be the lack of peripheral stimulation in contemporary architecture that partially accounts for the lack of experiential quality of these environments[11].

the subliminal intermediary Modernity at large has been more concerned with geometry than space, with retinal image than enveloping space, with surface than materiality, with form than feeling, with aesthetics than atmosphere. The architect has always been overly focused on the architectural object, rather then the space it creates. Many have attempted to outline the fundamental aberration of the spatial experience arising from this tendency to focus on geometry. As did August Endell:

Whosoever thinks of architecture initially always thinks of the elements of the building, the façades, the columns, the ornaments, and yet all of that is of second rank. What is to most effect is not the shape, but its inversion, the space, the emptiness that spreads out rhythmically between the walls, is delimited by them, and that vibrancy is more important than the walls.[12]

But even the notion of space has become conceptualised to keep architecture in the realm of geometry. Also space has become a medium of representation: 'Space as medium of representation has nothing to do with me as a human being, but it is an abstract schema according to which a multiplicity of different things is represented.'[13] This understanding of space and place as an external context for human existence neglects to acknowledge the involvement of the perceiving entity. Martin Heidegger described this separation as follows, 'When we speak of man and space, it sounds as though man stood on one side, space on the other. Yet space is not something that

11. Pallasmaa, J. (2012). Space, Place, Memory and Imagination. Encounters II. P. Mackeith. Helsinki, Rakennustieto Publishing.

12. Endell, A. (1995). Die Schönheit der grossen Stadt. Basel, Birkhauser.p.99 ff, as quoted in, Böhme, G. (2013). "Atmosphere as Mindful Physical Presence in Space." OASE 91(Building Atmosphere): 21-32. p.23

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'We do not live in environments and architectural spaces that are outside ourselves; the spaces that we inhabit also occupy our minds.'

- Juhani Pallasmaa

Caspar David Friedrich, *Wanderer above the Sea of Fog*, 1818. Oil on canvas (95 cm x 75 cm). Kunsthalle Hamburg, Germany.

faces man. It is neither an external object nor an inner experience. It is not that there are men, and over and above them space.'[14] Man and space are actually fused and inseparable, because the notions of space and place only exist through the experience of man. The atmospheric phenomenon is not as much an external physical entity, but a human experiential creation.

This is illustrated by the immersive quality that the experience of a painting can have. Exceptional atmospheric paintings have the ability to pull the spectator into the painted scene in a manner that evokes a fully embodied sensation. This visual space is essentially transformed into embodied space as a product of the exchange between the external world and the mental world of the perceiver. The experiential reality of a work of art is a recreation of the perceiver, essentially being an imaginative reality. This touches upon an essential part of human experiential reality that rarely gets addressed. Lived reality is alway a fusion of observation, memory and imagination. Every experience consists of a medley of images from the world we observe and the world we have mentally constructed to finally fuse into the presence, permanence and continuity of our experiential world[15]. Our lived experience or experiential reality actually is a continuous plastic construct that is layered, differentiated and ambiguous in its very nature. As Pallasmaa puts it: 'This is the innate structural vagueness of human consciousness'[16].

An architecture that evokes a multi-sensory and fully embodied experience has the ability to imbue an immersive atmospheric experience that may evoke a sense of interiority and belonging. Opposed to the architecture of distant visuality that evokes a sense of unreality and alienation. Both the supremacy of focused vision over unfocused vision and the understanding of space as an external entity demonstrates that the architectural discourse fails to acknowledge the diffuse, unfocused, peripheral and unconscious essence of human perception. 'Atmosphere is similarly an exchange between the material and immaterial properties of the place or situation, on the one hand, and the imaginative realm of human perception and mind on the other.'[17] The reality of the perception of atmosphere is as much an intermediary between the object and the subject, as it is the intermediary between the external physical world and the inner mental world. Our lived experience is a fusion of the outside world and the inner mental world

Pallasmaa, J. (2012). Meaning in Architecture. Encounters II. P. MacKeith, Rakennustieto Publishing. p.103

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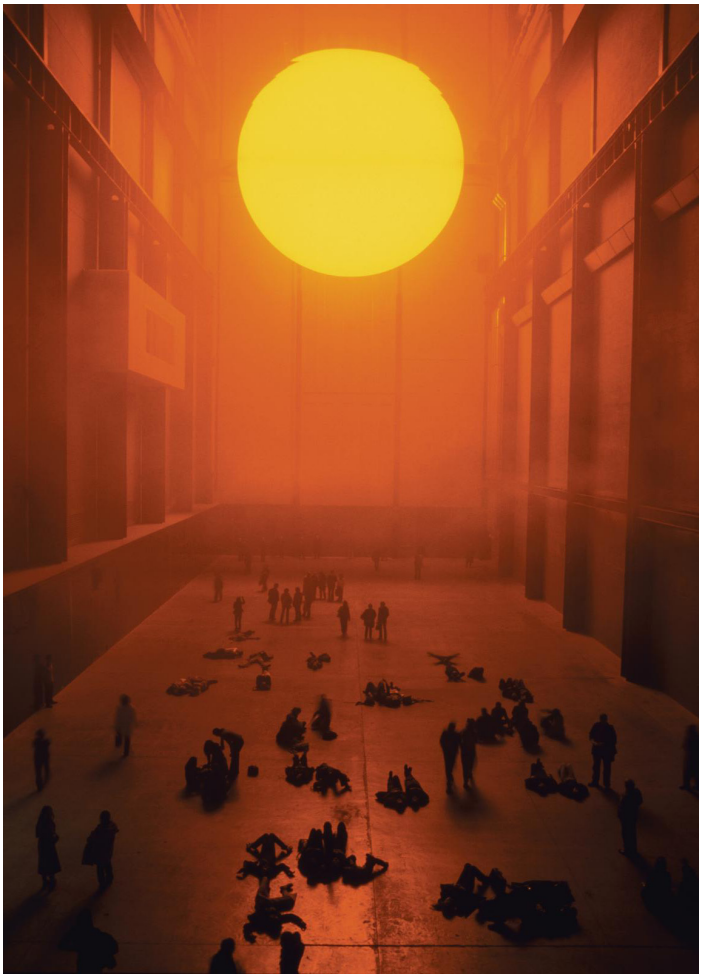
14. Heidegger, M. (1997). Building, Dwelling, Thinking. Basic Writings. New York, Harper & Row. p.334
15. Pallasmaa, J. (2010). In Praise of Vagueness - diffuse perception and uncertain thought, University of Texas, Austin.p.3
16. Ibid.p.7
17. Pallasmaa, J. (2016). Place and Atmosphere. The Intelligence of Place: Topographies and Poetics. J. Malpass. London, Bloomsbury: 129-155. p.134



Olafur Eliasson, *The Weather Project,* 2003, Tate Modern, London.

to eventually fuse into an interior experience of the world, as is beautifully captured in Rainer Maria Rilke's evocation of the *Weltinnenraum*[18]. The experience of atmospheres is more than a heightened sensorial experience, it rather addresses our full embodied and existential sense. Atmosphere enfolds us like a veil, addressing our sense of being and permeating the self.

mindful physical presence Considering 'space as the sphere of human presence'[19], Gernot Böhme formulates another condition for the perception of the atmospheric dimension that further explains the immersive quality of an atmospheric experience. Böhme describes the space of atmospheric effect as the space of mindful physical presence. This notion is derived from the idea that architecture is the creation of spaces of corporal presence[20]. The phenomenon of mindful physical presence evolves around sensitivity, which is defined as the interplay between the body and the mindful body. Atmosphere is primarily described by architects and theorists like Zumthor and Pallasmaa as the emotional effect that an architectural environment evokes. But an atmospheric experience is not merely the emotional sensations evoked by what kind of space I find myself in. It is in fact one's own state of well being that tells what is acting between the corporeal state and the qualities of the space I am in. Corporeal feeling allows me not only to feel something, but also to feel my own sensitive state[21]. This is to say that how I feel is defined by my sensing where I am, but also by my own mood. This illustrates that the space of mindful physical presence projects a basic mood as it where. 'The sensitivity associated with feeling where I am at a particular point sets a kind of underlying tone, that colours all other moods that arise in me or dog me.'[22] This understanding of the atmospheric effect of spaces makes clear that its importance exceeds its mere relevance for special amplified situations of atmosphere like the atmosphere of a church or of a festive event. It becomes clear that it is the atmospheric effect of the spaces we occupy in our daily lives that is exceptionally important, because they constantly and unconsciously colour our state of well-being.

If atmosphere is the space of corporeal presence and the corporeality of the atmospheric experience becomes the reference point, atmospheric architecture could be interpreted as a new humanism reminiscent of Vitruvius[23].

18. Rilke, R. M. (1990 [1910]). The notebooks of Malte Laurids Brigge, Vintage International.
19. Böhme, G. (2013). "Atmosphere as Mindful Physical Presence in Space." OASE 91(Building Atmosphere): 21-32. p.25
20. Böhme, G. (2013). "Encountering Atmosphere." OASE 91(Building Atmosphere): 93-100. p.99
21. Ibid. p.97
22. Böhme, G. (2013). "Atmosphere as Mindful Physical Presence in Space." OASE 91(Building Atmosphere): 21-32. p.27
23. Böhme, G. (2013). "Encountering Atmosphere." OASE 91(Building Atmosphere): 93-100. p.98

'The space of moods is physical expanse, in so far as it involves me affectively. The space of moods is atmospheric space, that is, a certain mental or emotive tone permeating a particular environment, and it is also the atmosphere spreading spatially around me, in which I participate through my mood.'

- Gernot Böhme

Opposed to adopting the body of man as the geometrical measure of architecture, the feeling body becomes the sensorial measure of architecture. Man's corporeality is to become the sounding board for architectural quality. And the atmosphere is acting as an intermediary between the corporeal state and the qualities of the space the body is in. Therewith the experience of atmosphere could best be defined as a quasi-objective phenomenon. It is not ascribed to the object and it is not ascribed to the subject. Nevertheless, the atmospheric experience is always bound to the perceiving individual, meaning that '[a]tmospheres are in fact characteristic manifestations of the co-presence of the subject and object.'[24] This conclusion is fundamental to the hypothesis that atmosphere can be (partly) produced through the design of architectural environments.

'Atmosphere is the common reality of the perceiver and the perceived. It is the reality of the perceived as the sphere of its presence and the reality of the perceiver, insofar as in sensing the atmosphere s/he is bodily present in a certain way.' - Gernot Böhme [25]

the generators of atmosphere Atmospheric space is the space of mindful physical presence in which one finds oneself, owing to the type of experience involved. The experience of atmosphere and of mindful physical space is the articulation of mindful physical sensation. And these sensations are generated by objectively approachable factors. Böhme calls these *the generators of atmosphere*[26]. But the human sensitivities that are mindfully present in space are not only generated by things and bodies. A sensation of movement, confinement or oppression can be suggested by the articulation of an architectural body, but these sensations can also be evoked by non-physical entities like light and sound. In the elaboration on the *generators of atmosphere* we will discuss both the physical and non-physical generators, but we will also expand the range of atmospheric characteristics of sensitivity from the spatial to the non-spatial category. If the architect wants to identify the type of characteristics of sensation that generate specific atmospheric properties in an architectural environment, spatially construed types of sensitivities like a sense of openness, confinement or elevation are easier identified than types of sensitivities that are not directly related to the spatial configuration like a sense melancholy, depression

Böhme, G. (2003). The Space of Bodily Presence and Space as a Medium of Representation. Transforming Spaces. The Topological Turn in Technology Studies. M. Hard, A. Lösch and D. Verdichio. Darmstadt.

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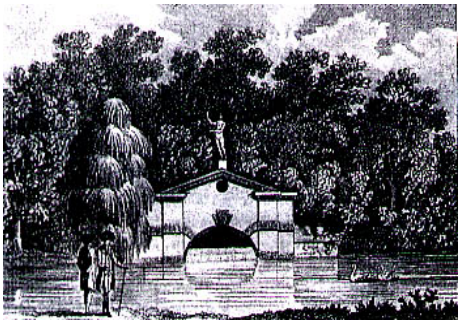
24. Böhme, G., C. Borch, O. Eliasson and J. Pallasmaa (2014). Architectural Atmospheres: On the Experience and Politics of Architecture. Basel, Birkhäuser. p.13

25. Böhme, G. (1993). "Atmosphere as the Fundamental Concept of a New Aesthetics." Thesis Eleven 36: 113-126. p.122

26. Böhme, G. (2013). "Atmosphere as Mindful Physical Presence in Space." OASE 91(Building Atmosphere): 21-32.p.27



Cristian Cay Lorenz
Hirschfeld, *Theorie der Gartenkunst*, 1779.

or joyfulness. Nevertheless both types of sensitivities are part of the atmospheric experience. An example in which this becomes very concrete is Hirschfeld's description of the sensations that were to be evoked through the design of landscape architecture. Hirschfeld's books on how to construct specific scenes of feeling in the art of the English landscape garden elaborates on how to produce atmospheres that are serene, melancholic or even serious. In elaborate and detailed descriptions of the use of colour, material, sound, light and other elements Hirschfeld very convincingly describes how one could produce an atmospheric scene.

'The gently melancholy locality is formed by blocking off all vistas; through depths and depressions; through thick bushes and thickets, often already through mere groups of (closely planted) thickly leaved trees, whose tops are swayed by a hollow sound; through still or dully murmuring waters, whose view is hidden; through foliage of a dark or blackish green; through low hanging leaves and widespread shadow; through the absence of everything which could announce life and activity. In such a locality light only penetrates in order to protect the influence of darkness from a mournful or frightful aspect. Stillness and isolation have their home here. A bird which flutters around in cheerless fashion, a wood pigeon which coos in the hollow top of a leafless oak, and a lost nightingale which laments its solitary sorrows - are sufficient to complete the scene.'[27]

This fragment of an atmospheric guide as it were, also indicates the broad spectrum of words that we use to describe both our sensitivities, but that they also describe the characteristics of atmosphere. This seems to make the identification of the generators of atmosphere more difficult, but an elaboration on the three groups of the characteristics that Böhme suggests may offer more insight[28].

The first group of characteristics is that of the intimations of movement in a broader sense. The geometrical structures and physical constellations of the architectural composition are the point of focus in this category. The sensations of movement are generated by the suggestion of movement imbued by the structure. This considers the sensation of a dynamic like confinement or expanse, but also the sensations evoked by loads or massiveness. An overhead stone mass can for instance create a sense of confinement

27. Hirschfeld, C. C. L. (1779-1785)). Theorie der Gartenkunst. Leipzig, Weidmanns Erben und Reich. p.211 As quoted in, Böhme, G. (1993). "Atmosphere as the Fundamental Concept of a New Aesthetics." Thesis Eleven 36: 113-126.

28. Böhme, G. (2013). "Atmosphere as Mindful Physical Presence in Space." OASE 91(Building Atmosphere): 21-32. p.29

Adolf Loos, *Kartner Bar,*
Wien, Austria, 1909.

by both the weight and the enclosure.

The second group of generators considers the synesthetic properties. As experiences are never unambivalent in their sensorial engagement, atmospheric experiences spread across different sensory fields. These synesthetic properties therefore are seen as trans-sensorial qualities. For instance, when a space feels cool this may be generated by the blue colour, the tiled surfaces or the actual temperature of the space. This is particularly interesting for an architect as these indicate that not so much the architectural properties of the object produce the specific atmosphere, but instead it depends more upon the mindful physical sensations and sensitivities that arise from the quality of the environment.

The third category considers the social characteristics of atmosphere. This may very well be the most complex group of characteristics because these qualities include both former categories of intimated movement and synesthetic properties, but above all these social characteristics are generated by conventional qualities that are associated with meaning. The social character of atmosphere in an atmospheric characterisation like 'gezellig' does not refer to the atmosphere emanating from people as it does from things, but it refers to the kind of characterisation that is specific to a particular social structure. The interpretation of an atmospheric characterisation like 'gezellig' or cozy will vary from culture to culture. Böhme clarifies his categorisation of the social characteristics of atmosphere by describing the atmosphere of the 1920s, of a lobby, of a petit-bourgeois interior or the atmosphere of power[29]. These kind of characterisations are generated by meaning given to them by social dynamics as well as cultural constructs.

I would identify the atmosphere of holiness or dominance as such socially generated atmospheres. The architectural qualities that imbue the sensitivities that evoke these atmospheric experiences are founded in a culturally specific tradition that has given meaning to these qualities. Atmosphere of holiness may be generated by the intimations of movement like massiveness and elevation, but also by objects with symbolic meaning. An atmosphere of dominance similarly may be generated by synesthetic properties emanating from the specific materiality. For instance the material application of granite has been associated with power since the nineteenth century and therewith it is also felt to exude dominance in a culturally

29. Böhme, G. (2006). Architektur und Atmosphäre. München.

In order to study the subjectivity of an atmospheric experience, I conducted several interviews according to people's experience of the Pastoor van Arskerk in The Hague.

Aldo van Eyck, *Pastoor van Arskerk*, The Hague, The Netherlands, 1969

specific context. This shows us that some elements among the generators of atmosphere are of a symbolic nature, exuding from materials, objects and insignia[30].

a subjective study All these atmosphere-generating qualities can to a great extent be objectively handled. But I also have been considering the largely similar emotive response we seem to have on atmospheric environments. Learning about the social and cultural specific generators of atmosphere, I wanted to explore the similarities and differences in the atmospheric experience for myself. So I decided to set-up a modest study on the subjectivity of the atmospheric experience in which I would create the conditions in which several subjects could experience an architectural environment with an explicit atmospheric quality. I choose to select a project that was loaded with social and cultural associations, but that was also explicitly designed by an architect to have a specific atmospheric quality. The *Pastoor van Arskerk* (1964-1969) is a church in the small village of Loosduinen near The Hague. This church is designed by dutch architect Aldo van Eyck during the Catholic reformation in the seventies. The interior space of this church has a really specific atmosphere in which the homogeneous use of material, the highly diffuse quality of the light and the vertical intimations of movement are explicit atmospheric elements.

I invited several people with different backgrounds and perspectives to visit the building and I conducted interviews with them to discuss their atmospheric experience. The first interviewee I call *the humanitarian*. She is not trained in architecture, but I believe she has a certain sensitivity towards spatial qualities. I expected the lack of expertise to create a less preconceived experience compared to the other interviewees. The challenge would lie in the communication about sensitivities and architectural qualities. The second interviewee I call *the photographer.* This person is clearly driven by the visual sense, and therewith the challenge would lie in the atmospheric experiential condition of multi-sensory engagement. I considered the sensitivity for aesthetic qualities to be a possible advantage. The last interviewee has the role of *the architect.* This fellow student may be the most prejudged, but the knowledge of architectural characteristics and themes was expected to be very valuable in the discussion of the issues at hand. I visited the building with every person separately, and conducted an interview evolving around

30. Böhme, G. (2013). "Atmosphere as Mindful Physical Presence in Space." OASE 91(Building Atmosphere): 21-32. p.30

Wright's motivation for the fireplaces that are the centre of his house designs is the creation of 'a place of fire - for the warmth, the light and human feelings that radiated from it'.

Frank Lloyd Wright, *Brown House*. Kalamazoo, Michigan, 1949.

the question: How do you experience the atmosphere?

After this study I concluded that the atmospheric experience of the Pastoor van Arskerk among the different perceivers was indeed very similar. The atmospheric dimension of the space was consistently identified as suppressive, uninviting and even alienating. Even though I realised that the subjects all had similar social and cultural backgrounds I still wondered if there was not more to it than the objective dimension ascribed to the social characteristics of the generators of atmosphere.

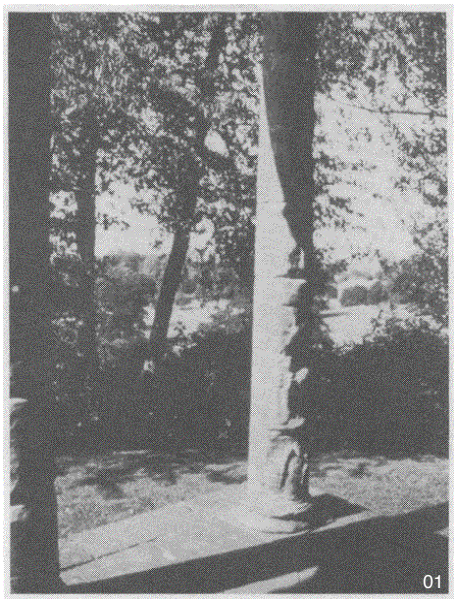
biological generators We intuitively grasp the essence of the atmospheric dimension upon entering a space, even before we are able to intellectually understand its details. We may be unable to identify, analyse or even recall this initial response, but we have the intuitive and emotive capacity to sense the quality of the whole immediately. Peter Zumthor suggests: 'We perceive atmospheres through our emotional sensibility - a form of perception that works incredibly quickly, and which we humans evidently need to help us survive'[31] Indeed there is an evolutionary advantage to be able to diffusely and comprehensively grasp the character of a spatial entity. We are not only culturally, but also genetically conditioned to recognise and avoid certain atmosphere and gravitate towards others[32]. This indicates that there are evolutionary causalities to human instinctual behaviour and cognition that resonate in the perception of atmosphere.

The primordial meaning of architecture to provide shelter against the elements and other external threats has always been connected to the duality between 'prospect' and 'refuge'. When these two experiential qualities are provided by architecture the subsequent atmospheric effect significantly enhances the state of well-being of its inhabitants. The architecture of Frank Lloyd Wright illustrates this primordial and dialectic human meaning of architecture very well. The mental polarity between 'refuge' and 'prospect' are integrated in FLW's architectural projects through the presence of both centre and vista. These structures both have a protective centre generating a sense of comforting enclosure and intimacy, and an open peripheral vista generating a sense of anticipation and control[33]. Wright instinctively understands this essence of human behaviour and its connection to the atmospheric dimension of architecture. He argues: 'Whether people

31. Zumthor, P. (2006). Atmosphere - Architectural environments - Surrounding objects. Basel - Boston - Berlin - Birkhäuser.p.13

32. Pallasmaa, J. (2012). Space, Place, Memory and Imagination. Encounters II. P. Mackeith. Helsinki, Rakennustieto Publishing.p.236

33. Pallasmaa, J. (2013). "Orchestrating Architecture: Atmosphere in Frank Lloyd Wright's Buildings." OASE 91(Building Atmosphere): 53-59.

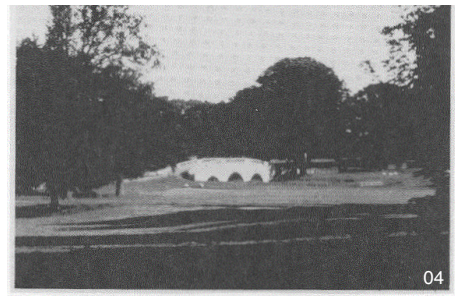

01


02

In Appleton's theory of a natural symbolism of habitat, he suggests that there is a basic symbolism present in our landscape environment (including garden landscape, buildings, street scenes, countryside, etc.) that survives from man's earliest beginning. Perceptions of this symbolism in visual representations are hypothesized by him to elicit specific feelings descendent from our drive for survival: prospect, which signals opportunity to see or explore; refuge which implies protection; and hazard which stirs feelings of wanting to escape.

Appleton argues that a key symbol of Opportunity derived from our landscape environment is a view to the horizon. Illustrated by image 01, which suggests Protection or Escape but lacks a sense of Opportunity.
Images 02 and 03 illustrate a sense of Refuge, which are generated by obvious elements of framing or enclosure as a windowframe, courtyard or archway. These elements reflect what Appleton describes as our "strong emotional attraction towards the symbolism of the cave".
An example of an image that does not reflect Refuge while at least somewhat associated with Protection and Hazard is image 04. Appleton also concludes that bridges are powerful symbols of Opportunity. The bridge provides a means to explore, which also makes it an important "breach in impediment hazard".


03


04

Appleton, J. (1990). *The Symbolism of Habita*t. Seattle and London: University of Washington Press.

are fully conscious of this or not, they actually derive *countenance* and *sustenance* (Italics by FLW) from the "atmosphere" of things they live in and with.'[34]

Ecological psychologist Jay Appleton suggests that as a consequence of the process of natural selection man has developed instinctual and unconscious environmental reactions that are bio-historically required[35]. I would argue that these environmental reactions are the essence of the largely shared response to the atmospheric dimension of environments. Therefore I would like to propose an expansion of Böhme's three categories of generators[36] with this biologically derived intuitive judgement of atmospheric entities as *the biological generators of atmosphere.*

After discussing atmospheric characterisations generated by a shared social, cultural and biological specificity, it becomes clear that the atmospheric experience is not as subjective as expected. Even the space of bodily presence which is ascribed to the subject, is common to all subjects[37.] An atmospheric experience is subjective in the sense that it is bound to the perceiving individual, however we all seem to have a 'collective unconscious and existential consciousness'[38] that accounts for a shared subjectivity in the perception of atmosphere.

atmosphere as continuum Atmospheric architecture is not held together by an overall conceptual idea, but by a unifying atmospheric quality. This does not mean that the atmospheric experience is identical at every place in an architectural project. It merely means that there is an atmospheric tone that resonates throughout the architectural environment which has a uniting quality. The identification of the atmosphere of a city is a good example of how atmosphere can unify experiential fragments. The actual atmospheric dimension will alter from place to place within the city, but there will be an atmospheric tone that colours all the atmospheric experiences throughout the city that unites them into the experience of an overall environmental character. Despite its varying richness and quality, atmosphere is present everywhere. Atmosphere is not a hermetic entity, but should rather be understood as a continuum.

As such, to enter a building is like passing from one atmosphere to another. The atmospheric experience is like a gradient that sometimes changes tone slowly and

34. Original quote from Frank Lloyd Wright, as quoted in Ibid.p.53

35. as quoted in Ibid. p.53

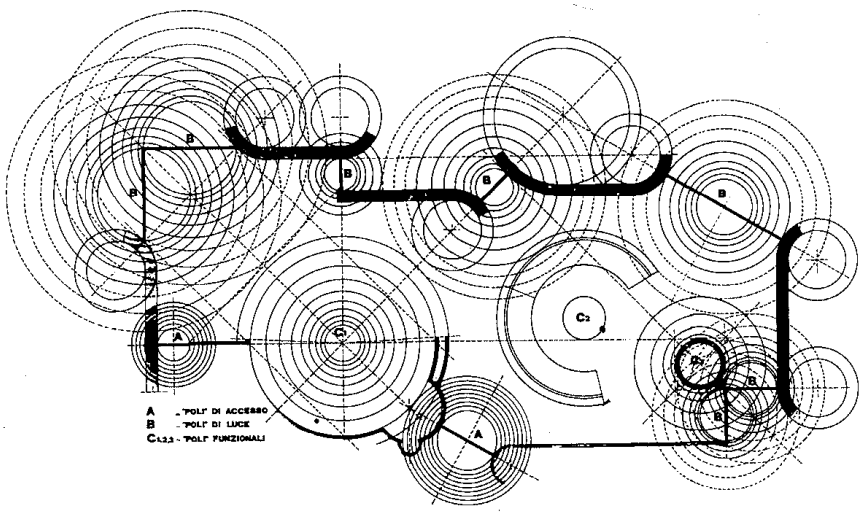
36. Böhme, G. Ibid."Atmosphere as Mindful Physical Presence in Space." 21-32. p.29

37. Böhme, G. (2003). The Space of Bodily Presence and Space as a Medium of Representation. Transforming Spaces. The Topological Turn in Technology Studies. M. Hard, A. Lösch and D. Verdichio. Darmstadt.p.4

38. Pallasmaa, J. (2011). The Embodied Image - Imagination and Imagery in Architecture, Wiley. p.12

'Forms are not bounded by their physical limits.
Forms emanate and model space.'

- Siegfried Giedion



The effect of the building extending beyond the building: Paolo Portogeshi and V. Gigliotti, Casa Papanice, Rome 1969.

sometimes has a more sudden transition. A step in a space may be a slight change in the colour of mood, a step over a threshold may be a large change in the colour of mood. As Mark Wigley describes the continuing quality of architectural atmospheres: 'Architecture is to be found in the relationship between atmospheres, the play between microclimates.'[39] This subsequently means that every context an architect will work with, will have its own existing atmosphere. Therewith the act of building is as to produce an atmosphere into another. To produce architectural atmospheres is to transform an existing atmospheric dimension that is part of the infinite continuation of atmosphere.

an undifferentiated totality This undifferentiated and continuous condition of atmosphere also resonates in the perceptual quality of the atmospheric dimension. Our perception of atmosphere seems to be an immediate experience of the whole. First we sense the atmosphere as entity, and only later we can distinguish the details that are part of it. This natural process of human perception occurs in an unfocused, but also partly unconscious manner. These conditions are so strongly embedded in atmospheric perception that if one focuses on or becomes conscious of the parts or details that create the atmosphere, they tend to loose their atmospheric strength[40]. This indicates that the perception and understanding of atmosphere also involves a constant interaction between entity and detail. This unconscious and unfocused perceptual reciprocity however has an exclusive quality. One can only perceive the dynamic atmospheric totality when precision and detail are suppressed.

Moreover, atmosphere is not a unified whole but an experiential totality. The experience of an atmospheric entity is not simply made up out of atmospheric ingredients that can be summed up. This means that the perception of atmosphere, subsequent to its unfocused and unconscious condition, is an undifferentiated experiential totality. Despite its varying parts the whole is held together by the constancy of the atmosphere. As Dewey puts it: 'The quality of the whole permeates, affects, and controls every detail.'[42]. As such the perception of atmosphere is to be approached not as a unified, but as a unifying quality.

I would like to illustrate the inadequacy of *the unified whole*[43] in this context through an artwork by Swiss artist

Giedion, S(1941). Space, Time and Architecture. Harvard University Press

39. Wigley, M. (1998). "Architecture of Atmosphere, in:Constructing Atmosphere." Daidalos 68. p.124

40. Pallasmaa, J. (2013). "Atmosphere, Compassion and Embodied Experience." OASE 91(Building Atmosphere): 33-53. p. 37

41. Dewey, J. (1934). Art as experience. (1987). As quoted in Pallasmaa, J. (2014). "Space, Place and Atmosphere - Emotion and peripheral perception in architectural experience." Lebenswelt 4(1).

42. The notion of *the unified whole* is derived from the psychological term *Gestalt*, that evolves the human tendency to visually organise everything into unified wholes which was discovered in the 1920s.

Ursus Wehrli, *Kadinsky - Red Spot II. In: Kunst Aufraumen, 2014*

Wassily Kadinsky, *Red Spot II.* Munich, The Städtische Galerie im Lenbachhaus, 1921

Ursus Wehrli called *Kunst Aufraumen*. The illustrated piece shows two images constituting of exactly the same parts. The second image is an illustration of 'Red Spot II', a famous artwork by Kadinsky. And the first image is an illustration of how Wehrli deconstructed the work of Kadinsky and organised it by the quality of its parts. Although both the images constitute of the same parts, the character of the whole is completely different. Similarly, atmosphere is a total experiential quality that is not a mere accumulation of constituent aspects, and should not be subjected to an elementarist approach[44].

It may be starting to become clear that the perception and judgement of atmosphere is a complex phenomenon and is not simply a combination of ingredients. And this inadequacy of the accumulation of constituent parts to create an atmospheric experiential totality, additional to the other ambiguous conditions of atmospheric perception that we encountered, brings us back to the duality between the accuracy of the research and the inherent ambiguity of the atmospheric phenomenon.

Both the deeply integrated conditions of the atmospheric phenomenon and its perception like its unfocused, unconscious and undifferentiated perceptual conditions, and the ambiguous nature of atmosphere as the subliminal intermediary between the subject and the object, makes *atmosphere* hard to identify, analyse and theorise. But above all it makes it incredibly hard to formally integrate into the design of architecture and the built environment. But as long as both the researcher and designer abstains from a deconstructive approach in which atmospheric architecture is considered to be conceived as an additive entity of pre-conceived and definable elements, and approaches the atmospheric phenomenon in a manner that acknowledges the inherent vagueness, indefiniteness and ambiguity of the atmospheric phenomenon, then its real value in the design of architecture and the built environment may be fully appreciated.

'It is, in short, the reinstatement of the vague to its proper place in mental life which I am so anxious to press on the attention.'

James, W. (1890). Principles of Psychology. Cambridge, Massachusetts 1983.

43. Pallasmaa, J. (2012). Space, Place, Memory and Imagination. Encounters II. P. Mackeith. Helsinki, Rakennustieto Publishing.p.236

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I. SENSITIVITY

‘The main thing is knowing how to see,
To know how to see without thinking,
To know how to see when you see,
And not think when you see
Or see when you think.

But this
(poor us carrying a clothed soul!),
This takes deep study,
A learning to unlearn’

- Fernando Pessoa

Juliaan Lampens,
Van Hove House, Eke,
Belgium, 1960.

the creative search Creative judgement and thought are complex and ambiguous processes, as is the perception and conception of atmospheric quality. As we explore how to *construct atmosphere* or how to integrate atmospheric quality in architectural design, we would have to define what *quality* entails. Considering atmosphere is present in any situation that includes a perceiver and a perceived entity, it is hard to define what kind of atmosphere is worth conceiving. For instance, the atmospheric experience of a church can be overwhelming or even oppressive. These sensitivities seem to have negative connotations, but considering this kind of atmosphere as a way to evoke a sense of presence of a superior divine entity and a sense of humility could be considered positive qualitative sensations. This example illustrates how atmospheric quality could be defined as negative by some, and positive by others. Therefore I would like to define what I personally consider to be atmospheric quality.

I consider architectural environments that evoke sensations that are in strong contrast with each other to have a strong atmospheric dimension, but it could be questioned if this is a qualitative atmospheric dimension. A qualitative atmospheric experience has the ability to enhance the perceiver's state of well-being and even evoke a sense of belonging. I would argue that atmospheric quality is an atmospheric experience that is in a state of harmony[1]. Harmonious architectural settings have an inherent balance. This reverberates into a balance in architectural articulation, a balance in sensorial and emotional stimuli, and a balanced relationship between the subject and the environment. Atmosphere is the intermediary between the perceiver's sensing body and the sensorial qualities of the architectural body, and therewith atmosphere has the potential to mediate a harmonious relation between the perceiver and the perceived.

This inherent state of harmony of the work could also be defined as its integrity[2], a state of wholeness or perfect condition. The integrity of an architectural work, the experience of a unified condition and inherent balance of an environment, could be called the ultimate atmospheric wholeness[3]. I would argue that both harmony and integrity are inherent qualities of atmospheric quality, and therewith should be pursued by the architect in the design of an architectural environment. In the process of conceiving atmospheric quality in the design of architecture and the

Fernando Pessoa / Alberto Caeiro, The Collected Poems of Alberto Caeiro , poem "The Keeper of Flocks XXIV" English translation Chris Daniels. (Exeter: Shearsman Books, 2007)

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1. harmony late 14c., from O.Fr. armonie, from L. harmonia, from Gk. harmonia "agreement, concord of sounds," lit. "means of joining," related to harmos "joint, shoulder," from PIE *ar-ti-, from *ar- "to fit together." Musical sense is oldest in Eng.; that of "agreement of feeling, concord" is from 1580s. (Retrieved from thesaurus.com)

2. integrity c.1450, "wholeness, perfect condition," from O.Fr. integrité, from L. integritatem (nom. integritas) "soundness, wholeness," from integer "whole" (see integer). Sense of "uncorrupted virtue" is from 1548. (Retrieved from thesaurus.com)

3. Seamon, D. (2017). Architecture, Place, and Phenomenology: Buildings as Lifeworlds, Atmosphere, and Environmental Wholes. Phenomenology and Place. J. Donohoe. Manhattan, KS USA, Kansas State University. p.12

Sigurd Lewerentz at the building site of St. Mark's Church in Bjorkhagen, Sweden, 1959.

built environment, the architect's sensitivity for this complex and ambiguous quality is essential.

On a more personal note, if I try to recollect the emotional sensibilities evoked by built environments that I associate with atmospheric quality, another experiential quality arises. These highly atmospheric environments are places defined by architectural structures that posses a sense of natural presence. It is as if the environment in an emotive sense is a logical fusion of landscape, built environment and architectural structure. With this notion I do not mean to say that these environments or experiences are homogeneous or unlayered. In fact it is the opposite of the imposing and objectifying consistency of contemporary expressions of an 'architecture of spectacle'. Rather these environments have a sensitivity, humility and fragility that allows for an existential relationship with men. And at the same time these environments have a strength and sense of embedment that also creates a supportive backdrop for human life. Therewith I also tend to have a linguistic preference for the notion of built environment opposed to architecture, because it suggests the kind of embracing and inclusive quality that is inherent to the atmospheric dimension of these places. But the atmospheric experience of an environment is as much a fusion of the environment and the self. As Maurice Merleau-Ponty describes: 'My body is made of the same flesh as the world.. and moreover.. this flesh of my body is shared with the world'[4]. Not only is the architectural structure an inherent and natural part of the context, the architecture is also a natural part of me, and I am a natural part of the built environment. The ultimate wholeness in atmospheric experience will dissolve the self and the world to become part of the same fabric[5].

Adam Caruso once remarked that good architecture, a quality he describes as very similar to this atmospheric wholeness, tends to be the work of old men[6]. And indeed if I think of architects that designed these kind of self-evident and atmospheric architectural environments, I cannot deny that indeed they are all old men. Considering our search for the key to constructing atmosphere, I start to wonder if this elusive atmospheric dimension is not the single product of the architect's sensitivity for life; a sensitivity that is only acquired through life experience.

intuitive sensitivity Both in art and architecture, the most essential qualities seem to be a product of the

4. Merleau-Ponty, M. (1962). The Phenomenology of Perception. London, Rouledge and Kegan Paul. p.248
5. Ibid. p.248
6. Caruso, A. (1997). "Sigurd Lewerentz and a Material Basis for Form." OASE 45/46(Essential Architecture): 88-95.

'Great poetry is possible only if there are great readers.'

- Walt Whitman

Aalto and the form-affinity to nature: Alvar Aalto, Untitled oil painting, 1963.

sensitivity and intuitive strength of the designer, rather then being a product of formal or intellectual aspirations. The cognitive process that directs creative sensitivity is assigned to the right hemisphere. The right hemisphere concerns peripheral and subconscious experiences and is specialised in complex pattern recognition[7]. The recognition of atmospheric entities[8] is an example of such a cognitive process. This kind of cognitive process requires both peripheral perception and emotional judgement (the right hemisphere), rather then a detailed experience and conceptual observation (left hemisphere). So the cognitive ability to recognise and judge the atmospheric quality of an architectural setting depends upon the perceiver's cognitive capacity to peripherally, subconsciously and emotionally recognise complex and ambiguous patterns. In turn this complex pattern recognition depends upon the sensitivity for the configurational aspects of the atmosphere as a whole.

Because this cognitive capacity is a subconscious process and an inherent ability of the perceiving observer, I would argue that the perception and judgement of the atmospheric quality of an architectural setting is dependent upon the perceiver's *intuitive sensitivity*. The creative conception of atmospheric quality in architectural design requires the continuous recognition and judgement of the atmospheric quality of the work in order or to be developed. And therewith the architect's intuitive sensitivity will determine the depth of atmospheric quality the architectural work will attain. The intuitive sensitivity for atmospheric quality is imperative in the perception of the atmospheric dimension of an architectural environment, but is essential to the process of conceiving atmospheric quality.

atmospheric intelligence The creative search is a combination of conscious intentionality's and unconscious processes, the latter being dominant in the intuitive sensitivity for atmospheric quality[9]. Conscious processes of the sensitivity for atmospheric quality entail the direct application of intellectually required knowledge on the concept of atmosphere in the design process. The unconscious processes of the sensitivity for atmospheric quality entail intuitive reactions and an emotional response to the perceived atmosphere. The conscious processes of design are formally required abilities, possible to expand by absorbing new knowledge and experiences. In contrast, the unconscious processes of creative thought seem to

As quoted in Pallasmaa, J. (2012). Meaning in Architecture. Encounters II. P. MacKeith, Rakennustieto Publishing.

7. McGilchrist, I. (2009). The master and his emissary: the divided brain and the making of the Western world. New Haven - London, Yale University Press. p. 184

8. An atmospheric entity is the atmospheric dimension of an architectural setting, experienced as a unified and balanced whole.

9. Pallasmaa, J. (2014). "Space, place and atmosphere. Emotion and peripheral perception in architectural experience." Lebenswelt 4(1). p.238-239

Zion Breen Richardson
Associates, *Paley Park,*
New York, 1967.

consider cognitive abilities that are not to be expanded, but are an inherent potential of the human brain. However, I would argue that the quality of unconscious processes of creative thought and conception is not a mere personal predisposition, but rather an inherent human capacity that has the potential to be expanded.

Since the *intuitive sensitivity* for atmospheric entities considers unconscious cognitive processes that originate in a personal predisposed cognitive capacity, but has the potential to be expanded, this human ability could also be defined as *atmospheric intelligence*[10]. Atmospheric intelligence is crucial for the architect to sense the atmospheric quality of the architectural work. In this chapter we will elaborate on atmospheric intelligence, other abilities that are required for the *construction of atmosphere*, and methods to nurture and increase these sensitive abilities.

The sensitivity for atmospheric entities, or atmospheric intelligence, originates in a personal predisposition which can be described as an innate cognitive capacity. This capacity is comparable to a personal talent. Talent is an ability that should be nurtured in order for it to stay viable and be applied to the field of interest. Similarly, an architect's ability to sense atmospheric entities should be nurtured and preferably developed for the architect to be able to construct atmosphere.

We identified atmospheric intelligence as a combination of conscious intentionality's and unconscious cognitive processes. This means that atmospheric intelligence is not just simply required or expanded by consciously absorbing knowledge on the matter of atmosphere. Moreover atmospheric perception is such a complex, multi-sensory and ambiguous phenomenon, that it can hardly be represented in words or even images. Atmospheric intelligence can only be required or expanded by absorbing knowledge in an unconscious manner. This is possible by creating an embodied experience, an atmospheric encounter in which the experience is not consciously absorbed but is internalised to become part of unconscious cognition[11].

As many inherent talents and nurtured capabilities, people who have been exposed to the issue for a longer period will have a more advanced level of ability. This advanced

10. Ibid. p.233

11. Böhme, G. (2003). The Space of Bodily Presence and Space as a Medium of Representation. Transforming Spaces. The Topological Turn in Technology Studies. M. Hard, A. Lösch and D. Verdichio.

‘We can internalise external physical situations and experiences through embodied simulation.’

- Juhani Pallasmaa

Álvaro Siza ascribes a great importance to the role of intuition in the design process and the way the body is able to surface the architect’s intuitive sense.

ability comes with time, but it may be preferable to actively accelerate the process of requiring knowledge and experience on the matter. An architect may increase his or her atmospheric intelligence by increasing the amount of exposure to different kinds of atmospheric entities under specific conditions. I would argue that the architect should assume an attitude of receptivity, awareness and curiosity when exposed to this multiplicity of atmospheric encounters in order to increase the architect's sensitivity for the atmospheric dimension in architectural settings.

embodied knowledge Even though atmospheric encounters take place in a state of consciousness, an increase of the intuitive sensitivity for atmospheric entities can only take place when it becomes part of unconscious cognition. This means that the knowledge and experience comprised in these atmospheric encounters should be internalised and become part of embodied knowledge, rather then to be rationally and intellectually absorbed. The notion of embodied knowledge is derived from the phenomenological theory of Maurice Merleau-Ponty(1908-1961). He exemplifies the phenomenon with the act of touch typing.

'To know how to touch type is not, then, to know the place of each letter among the keys, nor even to have acquired a conditioned reflex for each one, which is set in motion by the letter as it comes before our eye. If habit is neither a form of knowledge nor an involuntary action, what then is it? It is knowledge in the hands, which is forthcoming only when bodily effort is made, and cannot be formulated in detachment from that effort.' - Maurice Merleau-Ponty[12]

This piece illustrates how embodied knowledge is not explicit or conscious, but is well known by and through the body. This concept is derived from Merleau-Ponty's dismissal of a distinction between body and mind. Therewith the knowing subject is both a minded-body and an embodied-mind. Accordingly, embodied knowledge is required through bodily engagement or an embodied experience. The degree of embodiment of the knowledge embedded in a bodily encounter depends upon the attitude of the perceiver. A state of mindful physical presence[13]as Böhme suggests, involves the sensitivity of one's own physical bodily presence, and is a primary condition in the perception of atmosphere. Therewith the expansion of the intuitive sensitivity for the atmospheric dimension of the

Pallasmaa, J. (2014). "Space, Place and Atmosphere - Emotion and peripheral perception in architectural experience." Lebenswelt 4(1).

12. Merleau-Ponty, M. (1962). The Phenomenology of Perception. London, Rouledge and Kegan Paul. p.144

13. Böhme, G. (2013). "Atmosphere as Mindful Physical Presence in Space." OASE 91(Building Atmosphere): 21-32.

‘But architecture is not a science. It is still the same great synthetic process of combining thousands of definite human functions, and remains architecture. Its purpose is still to bring the material world into harmony with human life. To make architecture more human means better architecture, and it means a functionalism much larger than the merely technical one. This goal can be accomplished only by architectural methods – by the creation and combination of different technical things in such a way that they will provide for the human being the most harmonious life.’

- Alvar Aalto

unconscious aspects of atmospheric intelligence, involves the absorption of knowledge embedded in atmospheric encounters as embodied knowledge.

Consequently, the architect should assume a receptive attitude towards all the emotive and sensorial stimuli of the atmospheric encounter, in order to allow a full embodied experience of the atmosphere. The knowledge and experience embedded in the atmospheric encounters will be internalised and become imprinted in the knowing-body. The required embodied knowledge will be unconsciously employed in the process of constructing atmosphere.

conscious intentionality's Additionally, an awareness of the actual architectural characteristics of the environment from which the atmosphere arises, provides the architect with knowledge about the atmospheric qualities arising from specific spatial, material and architectural compositions. This type of knowledge does not involve the unconscious processes and embodied knowledge, but enables the architect to work with conscious intentionality's in the judgment and conception of atmosphere. Examples of architectural characteristics that the architect has at hand in the construction of atmosphere are spatial composition, material compatibility and the composition of light. Naturally, the atmospheric quality of an architectural work arises from the sensitivity of the implementation and specific orchestration of these architectural characteristics and the sensations they evoke[14].

Literature provides us with lists of atmospheric themes[15]the architect should be aware of in the process of construction of atmosphere. It may be obvious that this is an essential part in the process of constructing atmosphere. However, I consider these architectural themes an inherent part of architectural design and the most pronounced focus of the architectural practice. Therefore I choose to spend relatively little attention to these themes and focus more on the processes and notions that relate to atmospheric perception that are mostly disregarded. It may be clear that in the differentiation of conscious intentionality's and unconscious processes in the design of architectural atmospheric quality, the former will primarily entail these architectural characteristics and atmospheric themes. Even though I will not elaborate on the conscious implementation of these characteristics and themes, the architect's knowledge and mastery of these architectural and

Aalto, A. (1991). 'The Humanizing of Architecture' [1940]. Alvar Aalto in His Own Words (1991). G. Schildt. Helsinki, Otava. p.102-103

14. I will elaborate on the orchestration of architectural characteristics and atmospheric themes to create a specific atmospheric quality in chapter III. Fragility.

15. For instance Peter Zumthor provides us with the following list of atmospherical themes:
x. the body of architecture
x. material compatibility
x. the sound of space
x. the temperature of space
x. surrounding objects
x. between composure and seduction
x. tension between interior and exterior
x. levels of intimacy
x. the light on things

'The imagination is one of the highest prerogatives of man. By this faculty he unites former images and ideas, independently of the will, and thus creates brilliant and novel results… The dream is an unvoluntary [kind] of poetry.'

- Charles Darwin

Mark Pimlott, *A Passage,*
London, 1999.

atmospheric qualities is greatly important in the process of constructing atmosphere. Because as Bachelard argues, '..neither the one nor the other side should be given absolute priority. For truth lies in the interplay between them.'[16]

the artistic realm Finally, it would be a great advantage if the architect has a (natural) curiosity, not just for atmospheric qualities in architecture, but for poetic qualities[17]all creative fields. As Bachelard found through his life's work of the philosophy of science, the essence of lived human reality is not to be found in scientific methodology but in a poetic approach[18]. All significant poetic work is derived from its engagement with our lived reality, weather it is experiential reality or imagined reality. Even though the artistic realm may produce retinal images, material objects or isolated performances, profound poetic artistic work is multi-sensory and addresses the perceiver in an embodied and emotive manner[19].

Artists seem to be more aware of the generative quality of atmosphere then architects, who tend to be more occupied with geometry, form and space. Artists from all realms tend to use atmosphere as both a subject matter and expressive means. These artistic works derive their great poetic dimension from the artist's awareness of the strength of associative thought and the imaginative ability of the perceiver. The lived reality is constructed of a medley of images derived from experience, memory and imagination. When we experience an artistic work we are able to generate a genuine physical encounter through the engagement of memory and imagination.

In my opinion, the linguistic art of poetry is the ultimate atmospheric realm when it comes to its ability to engage the imagination of the reader. The poet is able to create a whole experiential reality, solely derived from the memory and imagination of the reader. In the words we unconsciously recognise patterns and characteristics from memory that we project upon the presently 'observed' sketch of an imagined environment. Herewith memory and imagination construct an experiential reality that is as real as an actual lived experience and atmospheric encounter. As Rainer Maria Rilke notes; 'For poems are not, as people think, simply emotions - they are experiences.'[20]

This illustrates that the exposure to atmospheric encounters as a method to increase atmospheric intelligence, is not

As quoted in Pallasmaa, J. (2011). The Embodied Image - Imagination and Imagery in Architecture, Wiley. p.36

16. Ibid. p. 31
17. I will elaborate on the close interrelation between the notion of poetic qualities and the notion of atmospheric qualities in chapter II. Uncertainty
18. Bachelard, G. (1969). The Poetics of Space - the classic look at how we experience intimate places. Boston, Beacon Press.
19. Pallasmaa, J. (2011). The Embodied Image: Imagination and Imagery in Architecture, Wiley.
20. Rilke, R. M. (1990 [1910]). The notebooks of Malte Laurids Brigge, Vintage International.

'Architectural atmosphere is thus bound to be a reflection of the designer's synthetic existential sense, or sensitive feeling for being, which fuses all the sense stimuli into a singular embodied experience.'

- Juhani Pallasmaa

limited to the exposure to architectural environments but in fact should include the exposure to the atmospheric encounters found in other artistic fields. When the architect widens the scope of interest and exposes oneself to poetic quality in other artistic work, the knowledge and experience embedded in these encounters have the same potential of becoming part of the embodied knowledge and atmospheric intelligence as in architectural atmospheric encounters. An interest in other poetic artistic fields has the potential to greatly contribute to the expansion of the architect's atmospheric intelligence.

Moreover, the ideated physical encounters in the experience of artistic work points out that the fullness in experience of an artistic work depends upon the observer's ideated sensations[21]. The same applies to the atmospheric experience of an architectural work, and therewith the architect's ability to mentally generate ideated sensations or the architect's imaginative ability, is part of the sensitivity that is required to be able to construct atmosphere. Because naturally, the sensation is the being of the sensitive. The imaginative ability of the architect will become vital in the design process, primarily in the first stages of the architectural design as a condition to generate a first idea about atmosphere[22]. Additionally, I would argue that this imaginative ability is closely related to the empathetic ability of the architect, which in turn is vital to the process of embedding the created architecture plan and atmospheric dimension in human reality.

empathetic ability Architecture does not exist in a vacuum, as a sterile environment detached from life. The architectural environments that we construct are a subject of life. Therewith the architect should not only have the ability to imagine the atmospheric experience of the developing architectural plan, but should have the ability to imagine human life, human emotion and human situations. Compassionate and empathic skills allow the developing architectural plan to be subject of its future inhabitation. Throughout the design process, human experiential reality should be projected onto the developing architectural plan, being inhabited as it were, by the users existing in the architect's mental world. An emphatic attitude requires a shift in perspective from the architect's view of a meticulous one-dimensional structure to the users view of a layered and ambiguous human environment.

Pallasmaa, J. (2013). "Orchestrating Architecture: Atmosphere in Frank Lloyd Wright's Buildings." OASE 91(Building Atmosphere): 53-59.

21. Pallasmaa, J. (2000). Hapticity and Time. Notes on Fragile Architecture. Encounters, Rakennustieto Publishing.

22. I will elaborate on the role of the architect's imaginative ability in different phases of the design process in chapter II. Uncertainty.

Luisa Lambri, *Untitled (Barragan House, #23)*, 2005, laserchrome print, 86 x 96 cm.

The architect's empathetic ability[23] upon the imaginative ability and a compassionate attitude. The former, similarly to intuitive sensitivity is a personal predisposition that is to be nurtured and trained. The latter however, is an attitude to be embraced by the architect. Besides assuming a sensitive and receptive attitude towards the requirements and needs of the (anonymous) future users, the architect should be aware of the reality of perception. As Aalto argues, 'Realism usually provides the strongest impulses [also] for my imagination'[24].

As we encountered in the atmospheric perception of artistic work, the perception of an architectural environment and atmosphere occurs as a fusion between experience, memory and imagination. The unconscious engagement of the personal associative field and the projection of these charged associations upon the atmospheric experience, are a vital element to consider in the empathetic attitude towards the developing plan. We have seen that the associative field of the perceivers are part of a common unconscious knowledge generated by social, cultural or biological context , which largely eliminates the subjectivity of the associative field. This indicates that the architect most likely projects the same associations upon the experience as the future users. Accordingly, if the architect has an extended associative field, sharing associations with a broad range of perceivers, the empathetic ability may be extended. The exposure to a multiplicity of atmospheric encounters, as a way to internalise embodied knowledge, once more provides a method to extend the architect's intuitive sensitivity for atmospheric dimension.

Finally, I would like to argue that the importance of the architect's empathetic ability in the design of the built environment, exceeds the compassion for the experience of the future user and should be adopted in the broadest sense; empathy for the users, a reflection on the physical, societal, cultural and historical context, and the perceptiveness of all these entities to change. The architect's empathetic imagination enables a formal and experiential projection of the architectural environment and atmospheric dimension as a whole, ultimately allowing to approach the lived experience.

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23. I will elaborate on the architect's empathetic ability and the reality of perception in relation to the construction of atmosphere in chapter III. Fragility.

24. Aalto, A. (1991). 'The Trout and The Stream' [1948]. Alvar Aalto in His Own Words. G. Schildt. Helsinki, Otava.

'When I speak of poetry, I am not thinking of it as a genre. Poetry is an awareness of the world, a particular way of relating to reality.

- Andrea Trakovsky

Dimitris Pikionis, *Landscaping of the Acropolis Surrounding Area.*
Athens, Greece, 1957

The architect's sensitivity for atmosphere defines the potential of the atmospheric dimension of the architectural work to develop into a harmonious and cohesive atmospheric quality. The inherent abilities and skills of the architect that constitute this sensitivity for atmospheric quality are constantly depended upon during the design process. An intuitive sensitivity and interpretative skills are necessary to recognise and judge the atmospheric quality of the developing plan, an imaginative ability and a critical attitude allow the architect to alter and progress the developing atmospheric quality, and an imaginative and empathetic ability allow the architect to project the atmosphere upon human experiential reality.

Trakovksy, A, Sculpting in Time - Reflections on the Cinema, 1986

Some of these skills depend solely upon the approach and intentions of the architect, but other abilities are part of unconscious cognition and are personally predisposed. Nonetheless, both types of skills can be required or nurtured by exposing oneself to a multiplicity of atmospheric encounters. However, the knowledge embedded in these encounters can only be absorbed to become part of the architect's unconscious cognition, when these experiences are internalised to become embodied knowledge and therewith become part of the architect's intuitive sensitivity. But ultimately, whether these skills and sensitivities are conscious intentionality's or part of unconscious cognition, an attitude of receptivity, awareness and curiosity towards atmospheric encounters allows the architect to nurture and develop the sensitivity for the atmospheric dimension, to ultimately be able to construct atmosphere.

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II. UNCERTAINTY

'When I read, I don't really read;
I pop a beautiful sentence in my
mouth and suck it like a fruit drop,
or I sip it like liquor until the thought
dissolves in me like alcohol, infusing
my brain and heart and coursing on
through the veins to the root of
each blood vessel.'

- Bohumil Hrabal

In The Fountainhead (1943) the protagonist is portrayed as an uncompromising and individualistic young architect.

the architect as hero In our culture the architect is portrayed as a hero, a person of confidence and certainty. This imposed static and imperious attitude is paradoxical with the designer's intuitive sensitivity, which we defined as essential to the creative search for atmospheric quality. The primary role of unconscious processes in atmospheric perception and creative thought suggests that the architect should not just focus on rational aspirations but rather try to nurture the unconscious and diffuse condition in which intuitive sensitivity may direct creative thought and conception. The vital role that the intuitive sensitivity of the architect therewith has required in the creative conception of atmospheric architecture, requires a state of mind in which the architect is highly receptive to the developing atmospheric quality of the architectural plan. I would argue that a receptive state of mind is induced by the appropriation of an attitude of uncertainty throughout the creative process, ultimately enabling the architect to conceive of an architectural work with an exceptional atmospheric quality.

After exploring the qualities and conditions the architect will have to posses or attain, we will elaborate on the role of these qualities in the design process. In this chapter we will elaborate on approaches, methods and tools that enable the architect to integrate atmospheric quality in the creative process of developing an architectural plan. We will explore how an attitude of uncertainty may enable the architect to *construct atmosphere,* and we will explore the manifestation of this attitude related to all the different phases within the design process, from the absorption of the assignment to the birth of the idea and the nurture of the atmospheric quality.

a poetic approach of making The parallel qualities between the notion of poetic architecture and the notion of atmospheric architecture are overwhelming. Both kinds of architecture posses inherent qualities, like ambiguity, harmony, sensitivity and humility. With the extensive alignment of sensitive qualities and consequently architectural articulation, both in the design process and the realised built environment, poetic qualities become interchangeable with atmospheric qualities.

Commonly we associate the term 'poetic' with the literary concept and linguistic art of poetry. But the etymology of the word reveals the primordial relation between creative

Hrabal, B. (1976). Too Loud a Solitude (M. H. Heim, Trans.). San Diego: Harcourt Brace Jovanovich.

Scholar: But thinking, understood in the traditional way, as re-presenting is a kind of willing; Kant, too, understands thinking this way when he characterizes it as spontaneity. To think is to will, and to will is to think

Scientist: Then the statement that the nature of thinking is something other than thinking means that thinking is something other than willing.

Teacher: And that is why, in answer to your question as to what I really wanted from our meditation on the nature of thinking, I replied: I want non-willing.

conception, the (technical) act of building and the qualities that we ascribe to the notion of poetic architecture. The ancient Greek word *poiesis* may be used as making, as distinguished from acting. This use of *poiesis* was adopted by Aristotle in his definition of the relation between *poiesis* and *techne.* 'Making (*poiesis*) and acting (*praxis)* being different, art (*techne*) must be a matter of making, not of acting.'[1]. As the distinction between technology and art dissolves(*techne* meaning both 'art' and 'craft'), the Greek term *techne* becomes to mean all making. As *poiesis* and *techne* both have come to evolve around 'the art of making' and 'the making of art', it becomes apparent that the process of making becomes the primary subject of our search of the key to the creative conception of poetic and atmospheric quality in architectural design.

With his lifelong concern of the nature of producing and modern technology, Heidegger also applied himself to the relationship between poetics and technology. He describes the proper relationship to technology as *Gelassenheit* [2]. In this poetic approach of technology, one paradoxically affirms the unavoidable use of and denies the domination of technological devices.

'We let technical devices enter our daily life, and at the same time leave them outside, that is, let them alone, as things which are nothing absolute but remain dependent upon something higher. I would call this comportment toward technology which express 'yes' and at the same time 'no,' by an old world *die Gelassenheit zu den Dingen.* Having this comportment we no longer view things only in a technical way'[3].

The notion of *letting-be*, as is suggested through the notion of *poiesis* and *techne*, entails an approach of making that allows the things to come into being of their own accord. Herewith man should not use force to fuse things together, but rather assume the role of a catalyst enabling things to appear naturally. According to Heidegger 'letting things be' requires 'meditative thinking', a receptive and listening attitude towards nature in which rational aspirations are released. However, the creative process to some extent also requires 'calculative thinking', a rational approach rooted in the will to dominate. A combination of these kinds of thinking, enables man to work in balance with nature, while at the same time take into account the technological

Martin Heidegger (1966). Conversation On A Country Path About Thinking. In: Martin Heidegger, Discourse on Thinking. Trans. John M. Anderson and E. Hans Freund. New York: Harper and Row. p. 58-59

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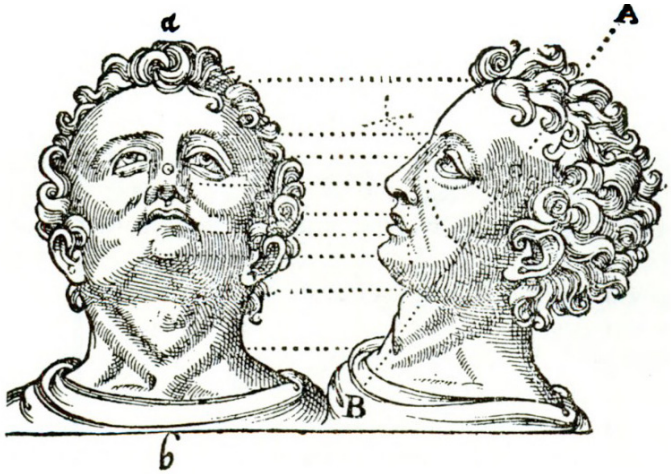
1. Aristotle 'Nicomachean Ethics'. The Works of Aristotle. London, Oxford University Press 1963. IX. p.16-17
2. Heidegger's notion of *Gelassenheit* translates to the old English word *releasement*, however the translation of *letting-be* has been broadly adopted and has become the dominant translation in the phenomenological and architectural discourse.
3. Heidegger, M. (1990). 'Memorial Adress'. Discourse on Thinking. M. Heidegger. New York, Harper and Row. p.54



'Turning from full face to profile causes every single feature of the face to change beyond recogniton in terms of abstract form. But in the total likeness no change occurs. The recognition of real objects is not dependent on memorizing their many formal aspects. Understanding of reality comes before the appreciation of abstract form.'

and practical requirements. But the seminal thinker also recognised that the balance between technology and nature can only be achieved by overcoming technology and rational thinking[4].

This consideration of the nature of working and producing, aligns with my personal understanding of the creative conception of atmospheric quality. The maker of atmosphere should abandon the imposed static and imperious attitude of the over-confident architect and suppress the dominating urge of rational aspirations that prevent the architect to be receptive to the surfacing atmospheric quality. The engineer of the poetic should assume a receptive, humble and patient attitude towards the architectural work, throughout the diffuse, indeterminate and reciprocal process of constructing atmosphere. The architect should embrace, absorb and nurture the uncertainty of creative thought and conception.

a diffuse mode of attention In both academic education and architectural practice there is an insistent demand to be precise and certain. As these qualities are preventing ambiguous, poetic and atmospheric qualities to emerge, the prevailing condition for architectural creation has to be reconsidered. As we explore the mental foundations of artistic phenomena, like the conditions for creating atmosphere in the design of an architectural plan, the superiority of inarticulate, diffuse and unconscious processes in creative conception becomes inevitable.

The work of Anton Ehrenzweig is considered among the leading works on the dynamic nature of creative conception and the historicity of creative thought. His work evolves around the organising role of unconscious process in creative conception, the layered nature of unconscious perception and the dynamic mental processes that an artist undergoes during creative conception.

Exploring his convincing theories one's attitude towards the diffuse, ambiguous and uncertain qualities involving artistic phenomena will shift from incomprehension and aversion of vagueness into an embrace and crystallisation of the uncertain. Considering both of Ehrenzweig's books[5]of the classics of art psychology in which the overwhelming role of the unconscious realm becomes clear, one would expect the theory on diffuse perception and uncertain thought in the creative process to be embraced by artistic

Ehrenzweig, A. (1970). The Hidden Order of Art. Frogmore, St Albans: Paladin.

4. Passinmäki, P. (2012). The Trout, the Stream, and the Letting-Be. Alvar Aalto's Contribution to the Poetic Tradition of Architecture. Jyväskylä, Finland, Alvar Aalto Museum. p.3

5. Ehrenzweig, A. (1970). The Hidden Order of Art. Frogmore, St Albans, Paladin, Ehrenzweig, A. (1975). The Psychoanalyses of Artistic Vision and Hearing: An Introduction to a Theory of Unconscious Perception. London, Sheldon Press.

‘Any act of creativeness in the human mind involves the temporary paralysis of the [mental] surface functions and a longer or short reactivation of more archaic and less differentiated functions.’

- Anton Ehrenzweig

Paul Klee, *View from the Twilight, 1921. Oil painting, 23 x 33.5 cm.*

fields like architecture. Introducing the role of unconscious processes he argues, 'Art's substructure is shaped by deeply unconscious processes and may display a complex organisation that is superior to the logical structure of conscious thought.'[6]

The distinction between surface vision and unconscious vision[7] illustrates the efficiency of unconscious processes when perceiving a complex entity in a total field. 'While surface vision is disjunctive, low level [unconscious primary level] vision is conjunctive and serial.' The human capacity to immediately grasp consciously invisible images, is shrewdly and widely applied as a method of subconscious advertising. Moreover this illustrates that the perception of artistic entities, like atmosphere, proceeds the complex pattern recognition of the Gestalt theory. Gestalt-perception involves the human tendency of selecting and organising images and their elements in accordance with their formal properties. However this theory neglects the 'inarticulate form', that Ehrenzweig describes as an artistic expression that the work requires when it is released from control and conscious intentions, arising from the artist's specific mental attitude[8].

Also Sigmund Freud identified the form experience, rising from the unconscious and tending to be inarticulate, formless and perceptively layered. Correspondingly, profound artistic work is dynamic and layered in its perception, fusing motifs of different conscious and unconscious perceptive realms, like experience, recollection and association. The dynamic and layered nature of this perceptive state requires a mode of attention that is multi-dimensional. Also artists, like Paul Klee recognise the need for multi-dimensional attention in order to appreciate the layered and polyphonic nature of a profound art work[9]. And this perceptive requirement applies to both creative perception and thought. The mental state that is required to engage the unconscious realm in a degree to which it guides the creative process, may be called a diffuse mode of attention. This diffuse mode of attention depends upon engaging the unconscious and intuitive abilities of the artist, by suppressing conscious and articulate forms of creative thought that currently are dominant in the architectural discourse. In the creative process of constructing atmosphere in the design of an architectural plan, both the act and the work needs to be emancipated from the pre-conceived sense of purpose, goal and path.

Ehrenzweig, A. (1975). The Psychoanalyses of Artistic Vision and Hearing: An Introduction to a Theory of Unconscious Perception. London, Sheldon Press.p.18

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6. Ehrenzweig, A. (1970). The Hidden Order of Art. Frogmore, St Albans, Paladin. p. 163
7. Note the related distinction between focused vision and peripheral vision, in which the latter is the condition under which atmosphere may be perceived.
8. As described in, Pallasmaa, J. (2010). In Praise of Vagueness - diffuse perception and uncertain thought, University of Texas, Austin.p.4
9. Pallasmaa, J. (2010). In Praise of Vagueness - diffuse perception and uncertain thought, University of Texas, Austin.p.2

‘Every definite image in the mind is steeped and dyed in the free water that flows around it. With it goes the sense of its relations, near and remote, the dying echo of whence it came to us, the dawning sense of whither it is to lead. The significance, the value of the image, is all in this halo or penumbra that surrounds and escorts it.’

- William James

If the uncertain condition of the act of creativeness becomes it's very essence, the uncertain ingredients of the creative process become the method of creation. Ehrenzweig argues that, 'all creative thinking begins with a state of fluid vision comparable to intuition from which… later rational ideas emerge.'[10]. This indicates the sequence of steps in the creative process with its dynamic interchange of intuitive motifs and rational aspirations. After exploring the mental ground of creative conception, I would like to project this theory onto the dynamic mental processes that an architect undergoes during the creative conception of atmosphere in architectural design.

challenging the conscious Even though diffuse and unconscious processes have an overwhelming superiority over conscious intentionality's in the creative conception of atmospheric quality in architectural design, the latter is an inevitable part of the architectural practice. The requirements of the actual building assignment, the building program, the contextual conditions, and other kinds of qualities need to be integrated in the architectural plan. The architect's intuitive sensitivity and diffuse mode of attention during the design process are paradoxical to these intellectual aspirations. In order to prevent conscious forms of thought resulting from the integration of these qualities to obstruct the intuitive and unconscious processes, it would be desirable to integrate awareness of these qualities during the intuitive process by making these qualities part of unconscious cognition. In order to learn how to *construct atmosphere* one has may have to unlearn.

After exploring all these different qualities by emerging oneself in programmatic requirements and site surveys, the architect should as it were forget the attained knowledge. By emerging oneself in these conscious intentionality's, one may be able to absorb this knowledge not in an intellectual but in an embodied manner. The conscious intentionality's that have to be integrated into the intuitive creative process should be internalised and become part of embodied knowledge[11]. When the intellectual requirements are internalised as embodied knowledge, the diffuse mode of attention or a state of 'mediative thinking'[12] in which one is basically 'refraining from thinking', will not be obstructed by conscious forms of thought. But even the conscious intentionality's and rational aspiration that are

James, W. (1890). Principles of Psychology. Cambridge, Massachusetts 1983.

10. Ehrenzweig, A. (1975). The Psychoanalyses of Artistic Vision and Hearing: An Introduction to a Theory of Unconscious Perception. London, Sheldon Press.p.35

11. Embodied knowledge is a type of knowledge that is imprinted in one's body. The knowing-subject here is the body itself, not the mind. For an elaboration on embodied knowledge and embodied experience see chapter I. Sensitivity.

12. Heidegger's notion of 'meditative thinking' is a receptive and listening attitude towards nature in which rational aspirations are released. This is the opposite of the notion of 'calculative thinking' which is a rational way of thinking.

Alvar Aalto, *Kunsten Museum of Modern Art*, Aalborg, 1972.

part of creative conception, are subject of a diffuse mode of attention. The French mathematician Henri Poincaré (1854-1912) states in his study of the psychology of mathematical thought, it is vital to '*cloud one's consciousness in order to make the right decision'*[13]. The question is, how does one cloud consciousness while at the same time applying oneself to all the rational requirements and demands of an architectural plan?

The first phase of a design process often may feel as an overwhelmingly complex problem. The highly complex set of social, humanitarian, technological and economic demands and problems, obstructs the emergence of an architectural idea. The Finnish architect Alvar Aalto discusses the complexity and challenges of the creative process as being rooted in the human inability to rationally solve the 'countless, often mutually discordant elements' of the design task. He offers a solution in the suppression of rational thinking and calculating deliberation and a nurture of intuitive sensitivity and playful experimentation.

When I personally have to solve some architectural problem, I am constantly -almost without exception- faced with an obstacle difficult to surmount, a kind of 'three in the morning feeling'. The reason seems to be the complicated, heavy burden resulting from the way that architectural design operates with countless, often mutually discordant elements. Social, humanitarian, economic, and technological requirements combined with psychological problems affecting both the individual and the group, the movements and internal friction of both crowds of people and individuals – all this builds up into a tangled web that cannot be straightened out rationally or mechanically. The sheer number of various demands and problems forms a barrier that makes it hard for the basic architectural idea to emerge. This is what I do – sometimes quite instinctively – in such cases. I forget the whole maze of problems for a while, as soon as the feel of the assignment and the innumerable demands it involves have sunk into my subconscious. I then move on to a method of working that is very much like abstract art. I simply draw by instinct, not architectural syntheses, but what are sometimes quite childlike compositions, and in this way, on an abstract basis, the main idea gradually takes shape, a kind of universal substance that helps me to bring the numerous contradictory components into harmony.[14]

13. Ibid. As quoted in Pallasmaa, J. (2010). In Praise of Vagueness - diffuse perception and uncertain thought, University of Texas, Austin.
14. Aalto, A. (1991). 'The Trout and The Stream' [1948]. Alvar Aalto in His Own Words. G. Schildt. Helsinki, Otava.p.108

One of Alvar Aalto's early sketches for the design of Viipuri City Library (ca. 1929) illustrates an exploration of the landscape. *'I drew all kinds of fantastic mountain landscapes, with slopes lit by many suns in different positions, which gradually gave rise to the main idea of the building.'*

This very personal account of the way Aalto approaches the architectural process and his search for harmonious qualities in the developing architectural work, is remarkably similar to what I consider to be the approach and attitude of the architect that is required during the intuitive creative process of *constructing atmosphere*. The work of Aalto is widely considered as *poetic architecture* or episodic architecture[15]. Both descriptions refer to the central role of the human experience, sensitivity, humility, and atmospheric quality within Aalto's architecture. I consider Alvar Aalto's work to be greatly atmospheric architecture. The harmonious and cohesive character of his work, arising from the exact and sensitive orchestration of all the different architectural aspects, evokes an embracing experience that is self-evident, natural and harmonious. What the architect simply calls harmony, I would call an exceptional wholeness in atmospheric experience.

In the first phase of the design process the architect is primarily dependent upon an intuitive feeling. After the architect has done an orientation of the site, the program and other requirements, this knowledge is absorbed to become part of unconscious recognition. Only after the embodiment of this knowledge can the initial idea come into being. When the architect assumes a state of uncertainty in which the mind is calm, fragmented visions of the experiential quality may arise from the architect's inner mental space. And as vague and unfounded this birth of the idea may seem, these visions are a product of an 'involuntary medley of images, associations and recollection' that would have been impossible to grasp consciously. Moreover, it is this fluid layering of associations and recollections from previous experiences and the internalised knowledge of the building assignment and the existing atmosphere of the site, that accounts for the atmospheric richness and plasticity of the architectural work. So I would argue that the initial idea is not directly derived from a formal incentive like the specific gesture of the surrounding landscape, but rather it is indirectly and unconsciously derived from the internalised knowledge and experience of the surrounding landscape. In a state of uncertainty the ideas do not just rise, but rather they reveal their existence in a very concrete way in your own body[16]. The architect just has to be receptive to the innately diffuse and measureless flow of images and ideas that pre-exist in human imagination and thought.

Aalto, A. (1991). 'The Trout and The Stream' [1948]. In G. Schildt (Ed.), Alvar Aalto

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15. Wilson, S. J. C. (1995). The Other Tradition of Modern Architecture. London, Academy Editions.

16. Passinmäki, P. (2012). The Trout, the Stream, and the Letting-Be. Alvar Aalto's Contribution to the Poetic Tradition of Architecture. Jyväskylä, Finland, Alvar Aalto Museum.p.6

Louis I Kahn, *Indian Institute of Management,* Ahmedabad, 1974.

Louis Kahn marvelled over the sense of completeness embedded in the beginning of a design process: *'The spirit of the starts the most marvellous moment at any time for anything. Because in the start lies the seed for all things that must follow. A thing is unable to start unless it can contain all that ever can come from it. That is the characteristic of a beginning, otherwise it is no beginning - it is a false beginning."*[17]

It may be clear that this is the opposite of proving a preconceived idea, often in the form of a concept, which is given an instant and precise formulation. Rather the architect aspires to be receptive to the surfacing of the idea through the engagement of intuitive and unconscious processes. Through the accumulation of intuitive sketches the initial idea starts to crystallise. A guiding quality comes into existence that Aalto calls *universal substance*[18]. The initial idea acquires a generative quality that helps the architect to overcome the complexity of a design assignment throughout the design process. I would argue that Aalto's notion of *universal substance* as an inherent generative quality of the work actually refers to the intuitive feeling or unifying atmospheric quality that the work has required. This is the point in the creative process in which the first sense of atmosphere appears. The work has derived a character, unity and integrity of its own, independent of the character of its creator[19]. The first sense of atmospheric quality of the work will start to give direction to the design, rather then the architect's intentionality's and aspirations. Herewith the work itself starts to facilitate the decision-making process. Considering uncertainty as a humble, patient and listening attitude towards the developing work, the architect starts to co-operate with the developing work. The architect becomes the enabler of a work that has its own generative power. From this point onward the architect starts a process of interpretation and nurture of the developing sense of atmosphere into an architectural plan with an exceptional atmospheric quality, through a flow of sensitive creative exploration[20].

an experimental search In the practice of Peter Zumthor the role of atmosphere is acknowledged as a vital quality in architectural design. He describes the intuitive ideas arising in the first phase of the design process, as *sensation-images*[21]. This notion is very similar to the initial idea of the experiential quality of an architectural plan, arising from the intuitive sensitivities. It could be described

17. Kahn, L. I. (1991). New Frontiers in Architecture: CIAM in Otterlo, 1959'. Louis I Kahn: Writings, Lectures, Interviews, Rizzoli INternational Publications. p.85

18. Aalto, A. (1991). 'The Trout and The Stream' [1948]. Alvar Aalto in His Own Words. G. Schildt. Helsinki, Otava.p.108

19. Pallasmaa, J. (2013). "Atmosphere, Compassion and Embodied Experience." OASE 91(Building Atmosphere): 33-53. p.39

20. Pallasmaa, J. (2010). In Praise of Vagueness - diffuse perception and uncertain thought, University of Texas, Austin.p.11

21. Ventura, S. (8th of may 2014). Material experimentation in Peter Zumthor's creative process. Lisbon, Originally presented at ARbD'14 – Fourth International Conference on Architectural Research by Design: Unifying Academia and Practice through Research.

'A phenomenologist has to be systematically naive.'

- Gaston Bachelard

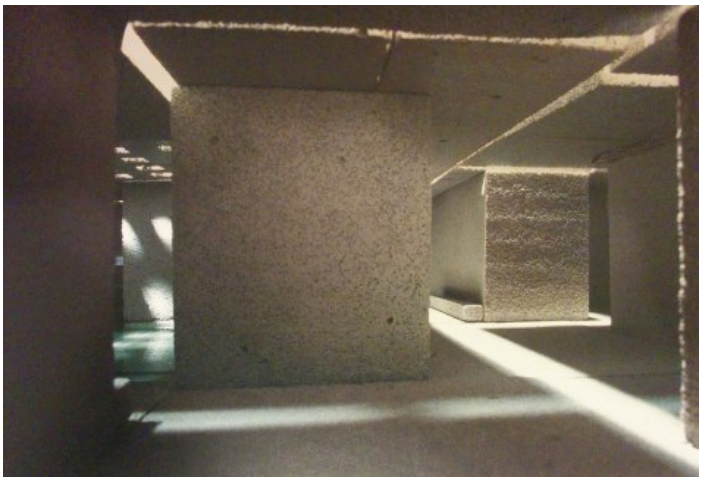
Luis Barragan, *Barragan House,* Mexico City, Mexico, 1948

as an undefined and ambiguous mental image of the atmospheric experience arising from a composition of sensations.

Corresponding with Aalto's search for harmony with *universal substance* as the guiding principle, Zumthor searches for the strength of the atmospheric and experiential quality in *the consistency of the autonomous block of sensations*. As the composition of sensations sustains an autonomous and independent quality, the sensation-image guides the architect through the design process. This allows the architect to experiment and explore the development of the sensation-image through the composition of sensations arising from material, bodily, architectural and contextual qualities[22]. The architect searches for the qualities that are in support of the sensation-image, but he may also discover qualities that in turn alter the initial sensation-image. Because new forms of thought may also develop through the process of design and experimentation. This process of constant challenge and regulation enables the architect to develop the vague image into inhabited space.

The call for an attitude of uncertainty in the design process applies to this phase of challenge and regulation as a critical yet humble attitude towards the developing plan, but also towards the architect's own imaginative ability. The imposed confident and certain attitude of the architect is contradictory to the limitations of the human ability to imagine an extremely complex and multi-sensuous environment. Despite the notorious 'God-complex' of the architect, we must acknowledge that the complexity of a real architectural setting with its enormous multiplicity of scenario's, cannot be completely conceptualised within the mental space of the architect. To measure the viability of the envisioned atmospheric settings and to evaluate the effect of the design decisions on the atmospheric quality, the architect needs a testing ground to crystallise the intangible mental image into a tangible design. The instruments to provide a tangible testing ground are provided by a multiplicity of representational products and tools, used throughout the process from intuitive image to a built atmospheric environment. This may be an intuitive sketch on paper, as is the case in Aalto's process, but this may also be an intuitive sketch in the shape of a physical model, as Zumthor likes to work with. This first translation of idea to sketch, induces the gradual transformation of the

22. Ibid. p.3



These sketch models are used to explore the light and illumination in the design of Therme Vals by Peter Zumthor.

implicit and undefined image into a tangible and explicit architectural body through the experimentation with the representational product. But these representations are not only a tangible testing ground and a means of communications, but they are the actual instruments that enable the fundamental dynamism of the experimental process.

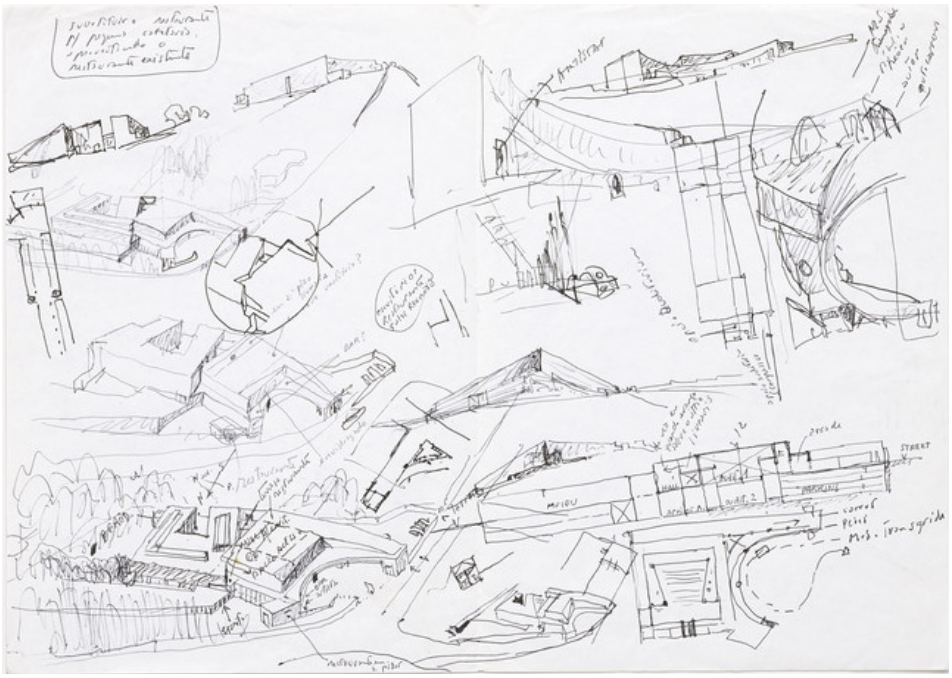
The intuitive idea and sketch are the outset of a cyclical process of orientation, interpretation and association in the development of the atmosphere quality and architectural plan[23]. With every full cycle, the architectural work comes closer to the envisioned architectural atmosphere, while simultaneously the initially envisioned qualities start to become more defined. The creation of atmospheric quality in architectural design requires an empirical way of working; a design process of uncertainty and experimentation, guided by the sensitivity and receptivity of the architect. Atmosphere thereupon transcends from subject matter to guiding principle in the design process. The atmospheric quality will suggest ideas in favour of the coherence and unity of the final design and a harmonious atmospheric quality. When the architect is receptive and has the sensitivity to sense this quality, has the humble attitude to be led by this quality, and allows the uncertainty required in an empirical and experimental process, the initial sense of atmosphere may develop into an integral atmospheric setting.

value in the undeliberate The creative process is a constant cycle of decision-making and reconsideration, rather then being a linear path that leads to the final design. The process may start with an intuitive idea based on an envisioned experiential quality, but while this idea develops into a more defined architectural plan the initial idea about the experiential quality may also alter. Furthermore, while one is developing this genesis of the design often ideas develop about other parts of the plan, like an interior detail or the structural composition, which distracts from the set-out plan. And this dynamism is fundamental to creative perception and thought. As Pallasmaa argues, *'All artistic structure is essentially 'polyphonic'; it evolves not in a single line of thought, but in several superimposed strands at once'*[24].

Even though the word sidetrack has a negative connotation, in these undeliberate lines of creative thought lies the change

23. Stellingwerf, M. and P. Koorstra (2013). Model & Scale as Conceptual Devices in Architectural Representation. EAEA Conference 2013: Conceptual Representation: exploring the layout of the built environment. p.2

24. Pallasmaa, J. (2010). In Praise of Vagueness - diffuse perception and uncertain thought, University of Texas, Austin. p. 2



In these first sketches by Álvaro Siza for the Serralves Museum (1991) in Porto, ideas about the urban scale and technical details are developed alongside each other.

of value. Things that go against your deliberate plan often turn out to be of most value, as the saying 'The best things in life are gifts' suggests. When allowing yourself to wander of the deliberate path, new discoveries may be done that ultimately enrich the final plan. These undeliberate creative thoughts and processes once more are an expression of creative conception led by intuitive sensitivities, and only appear in a state of uncertainty. Just as we defined that there is value in unconscious perception and association in an atmospheric experience, there is value in undeliberate perception and association in atmospheric experience.

Moreover, this dynamic interchange between the set-out plan or 'logical progression' of the architectural design, and the sidetracks or undeliberate lines of creative thought, seems to be intrinsically related to the conception of a coherence and harmony that is associated with atmospheric quality. In order to create an architectural plan with a harmonious and atmospheric quality, all the aspects of the architectural environment will all have to be equally developed to establish a quality of coherence in the whole of the design. Therefore all the different design aspects will need to be attended to in all the different phases and (side)steps of the design process. Herewith I propose not only an embrace, but an active nurture of the fundamental dynamism of creative thought and conception in all realms of the creative process, by assuming an attitude of uncertainty through a reciprocal mode of attention.

By pursuing instinctive design paths, a fertile dynamic or interchange between undeliberate and deliberate plans may naturally occur. But a reciprocal mode of attention may also be nurtured by actively shifting one's focus between the different aspects of the design task, in order to let the design mature over the full width of the spectrum. When moving back and forth between different design issues, from interior elements to contextual embedment, not only the aspects themselves evolve simultaneously but they start to inform each other. This parallel development and the responsiveness between the architectural aspects generates a strong interconnection that ensures a coherence in the overall plan.

A dynamic reciprocity between different aspects of the design tasks through different phases of the design process is advocated by several architects, however appearing in different shapes. Pallasmaa emphasises the

Dom Hans van der Laan,
Abbey Benedictusberg,
Lemiers, 1967.

dynamic reciprocity between the focus on the detail and the whole. His argument is derived from his observation of the natural process of human perception and thinking. As we have previously discussed, neuroscience tells us that the perception of atmosphere is an immediate experience of the whole. Atmosphere is perceived first as an entity in an unfocused condition, and only later can one focus and distinguish the details that are part of it[25]. The constant interchange of focus between the entity and the details is not only part of the natural process of perception and understanding of the atmospheric dimension, but should also be an integral part of the creative thought of the architect in the design process. This translates into a design approach that rejects a linear development of design from the bigger scale to the smaller scale, but pursues a dynamic reciprocity between the development of the details and the development of the whole.

concentrated confidence Another advocate for the simultaneous progression of all the design aspects and their integration in the whole of the plan is Peter Zumthor. Surprisingly though, he also argues that the human psychological capacity only allows one to focus on one aspect at a time. In his practice he applies an alternating focus on different architectural elements by attending to one specific architectural characteristic at a time[26].

Although Zumthor claims he only concentrates on one aspect at a time, it is almost impossible to explore one architectural without attending to another. It is for instance impossible to consider the material application and its atmospherical dimension, without considering the way the light falls upon the surfaces with this material application. Moreover, these architectural characteristics cannot be isolated in their development, because the atmospherical experience is dependent on the simultaneous perception of all the different architectural aspects and their cohesive interrelation.

When looking closer into the design methods of the architectural practice of Zumthor, we come across a terminology that summarises this approach of focus and simultaneity: *concentrated confidence*[27]. My personal interpretation of this approach is a combination of a concentration on one design aspect at a time while emotively judging the quality of the implemented characteristics and their effect on the whole. This method

25. Pallasmaa, J. (2013). "Atmosphere, Compassion and Embodied Experience." OASE 91: 33-53. p. 37

26. Havik, K. and G. Tielens ibid."Concentrated Confidence." (Building Atmosphere): 60-84.

27. Ibid.

Louis I Kahn, *Indian Institute of Management,* Ahmedabad, 1974.

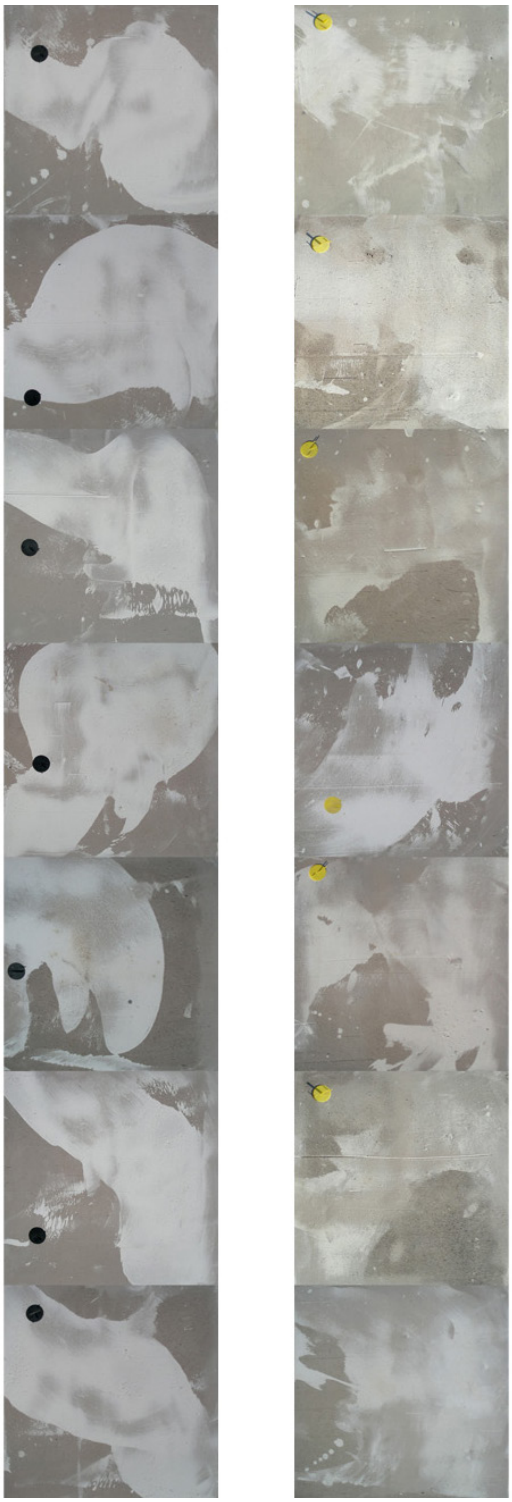
clearly rejects any rationalisation of the design decisions and solely depends upon an intuitive approach of the design task. And even though Zumthor seems to suggest an isolated concentration on the different aspects, the quality of the overall atmospheric dimension is ensured by relying on the emotive and intuitive capacity of the designer to sense the integrity or wholeness of the design. A qualitative atmospheric dimension is integrated in the architectural plan by intuitively coordinating all the separate architectural characteristics and their effect on the cohesion and harmony of the whole.

the architect as generalist An active nurture of the fundamental dynamism of thought and conception, by assuming an attitude of uncertainty through a reciprocal mode of attention, can be applied to different realms and aspects of the design process. Thus far we have seen a nurture of a dynamic reciprocity between different scales, different design phases, and different architectural characteristics. However, this dynamic reciprocity can also be applied as an integrated working method considering all the different design tasks.

For a designer to be able to create a wholeness in design, one must concern oneself with every task that the conception and realisation of the plan requires. The progress of the design project is informed by the progress of every separate task, from designing interior elements to administrative tasks, to model making. All these tasks should be mastered and executed by the designer and not be outsourced to others while specialising in a specific phase or task. By applying oneself to all the different tasks and instruments that a design assignment concerns, the architect has an overview of the development of every aspect and of the plan as a whole. This awareness and overview enables the architect to make design decisions in favour of a wholeness in atmospheric quality. When it concerns the construction of atmosphere, the architect may assume the role of a generalist.

Not only the individual designer should consider this generalisation of tasks and simultaneous attendance to every design aspect, but it also applies to design communities that may assemble and dissolve with every project. The architectural office of Tod Williams and Billie Tsien is an example of a 'design family' that has adopted such a working method[28]. They reject a separation

28. Williams, T. and B. Tsien (1999). "On Slowness." 2G International Architecture Review 9.



slowness & consideration
in the design process

Tod Williams &
Billie Tsien Architects,
material and pattern study

and specialisation of skills and assume the attitude of a generalist. Within the office everyone is responsible for their own work, but also has a responsibility for the good of the whole of the office. Both the involvement in all aspects of the design process and the execution of all the different tasks that concern a design project, by every member of the office, are inherent parts of the ideology of their office. They argue that a working method in which every individual is involved in every task, in every phase, of every project, benefits the office as a whole. The result is a collective knowledge of the progress of the design, which allows everyone to ask for assistants in the development of the plan at any point in the design process[29].

Although the architects admit to losing some efficiency through the rejection of the separation and specialisation of skills, the intense personal involvement accomplishes a sense of well being in the studio. Hence the wholeness of the studio as one designing body resonates into a wholeness in the plan. They argue that when the work is done well 'the spiritual aspect of the work will emerge'[30]. I would argue that this spiritual quality that they refer to, is the poetic and atmospheric quality of the architectural plan.

slowness of method In the current state of the architectural practice of speed and efficiency there seems to be no space or time to nurture the fundamental dynamism of the design process and its intensity, consideration and slowness. For the atmospheric dimension of the work to mature, a condensation of thought and feeling is necessary, a condition in which the designer can allow her or himself to be guided by the first hunch of atmosphere that the work presents. The search for wholeness and atmosphere in architectural design needs to be a patient one.

An intense personal involvement with the work that is developed throughout the process may obstruct a clear view on the state of the architectural plan and its atmospheric quality. Therefore I would argue that it is necessary to integrate an incubation time within the design process. This time of reflection may provide a condition in which the designer can distance oneself from the work, and the receptivity and sensitivity for the integrity of the work may be heightened. A period of reflection and a distanced perspective may provide overview, clearness and insight that is associated with the fresh perspective of an outsider.

29. The same principle applies to the separation in tasks generated by a difference in skills and knowledge of the individuals of the 'design family'. It is the task of the head of the office to have an overview of all the different tasks done by different staff members, while ensuring that the fragmentation of the tasks does not result in a fragmented plan.
30. Ibid.p.3

“There is a secret bond between slowness and memory, between speed and forgetting. Consider this utterly commonplace situation: A man is walking down the street. At a certain moment, he tries to recall something, but the recollection escapes him. Automatically, he slows down. Meanwhile, a person who wants to forget a disagreeable incident he has just lived through starts unconsciously to speed up his pace, as if he were trying to distance himself from a thing still too close to him in time.

In existential mathematics, that experience takes the form of two basic equations: the degree of slowness is directly proportional to the intensity of memory; the degree of speed is directly proportional to the intensity of forgetting.”

- Milan Kundera

This distance allows the designer to subconsciously process the integrity of the work and come to refocus on the primary qualities of the architectural plan that may have gotten obscured by the architect's intense involvement of or even the personal association with the work. Once these sensitivities are restored the architect may anew appropriate a state of uncertainty as a listening, humble and patient attitude towards the developing work, allowing the architect to make decisions in favour of the cultivation of the atmospheric quality of the developing plan.

Slowness creates a condition of heightened intuitive sensitivity for the integrity and atmospheric dimension of the architectural plan that is being developed. Moreover, slowness is related to embodied knowledge, the condition we identified as the key to atmospheric intelligence and the ability to construct atmosphere. The concept that illustrates the intrinsic relation between the body and the senses, and memory and creative conception, is Juhani Pallasmaa's notion of *the thinking hand*.

the thinking hand In our search of methods to evoke a state of uncertainty and diffuse mode of attention to nurture the superiority of unconscious process in creative conception, the role of embodied knowledge gained equal importance. In a state of uncertainty the architect no longer depends upon conscious intentionality's, but upon the engagement of the internalised knowledge that has become embedded in the body. As we have identified that ideas do not just rise, but rather they reveal their existence in the designer's own body, the engagement of this embodied knowledge should be addressed in the design process. Formulating methods to create a condition of receptivity, uncertainty, reciprocity and slowness, all lead back to this engagement of embodied knowledge. A method that engages all of these conditions and attitudes is to be deducted from the tool that is the ultimate intermediary between the architect's knowing body and creative thought. The creative conception of atmospheric quality through bodily memory, crystallises in the hand-mind connection embedded in the tools and instruments of the hand and the body.

Pallasmaa argues that there is an intimate connection between thinking and making, designing and constructing. His notion of *the thinking hand*[31] represents how the

As quoted in Williams, T., & Tsien, B. (1999). On Slowness. 2G International Architecture Review, 9.

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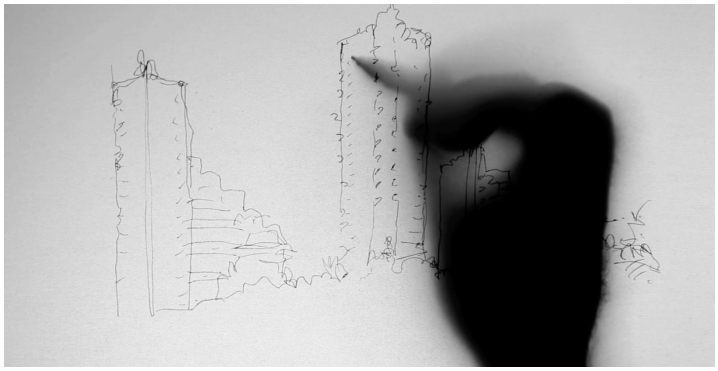
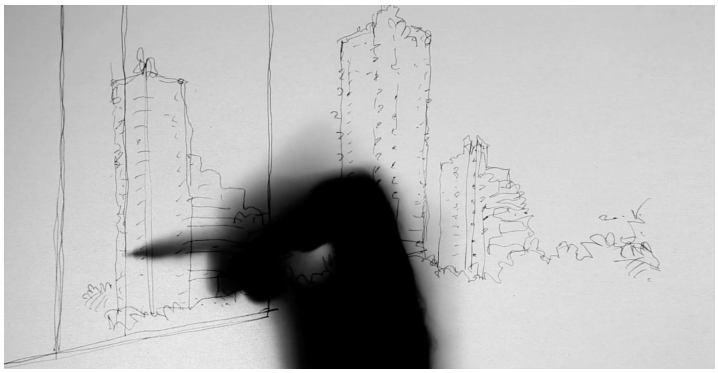
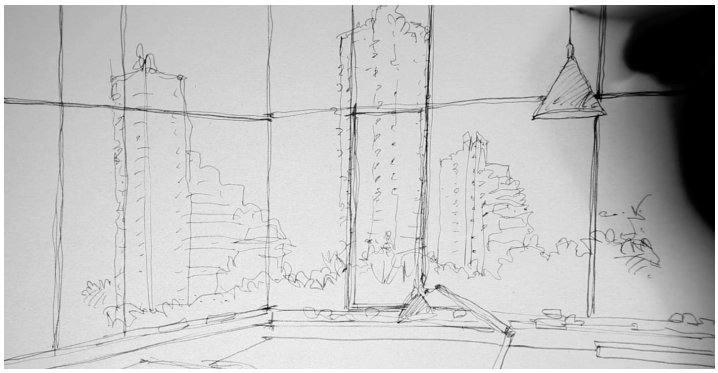
31. Pallasmaa, J. (2009). The Thinking Hand. Existential Wisdom in Architecture. Chisester, John Wiley.







Stills from 'Euritmia - An audiovisual experience in Rogelio Salmona's collective space for Bogota'.

two may be connected through the tool of the pencil. Since the creative conception of atmospheric quality in an architectural setting requires a reciprocity between understanding and making, the pencil may be the tool to unify the cerebral and the manual. “The hand-eye-mind connection in drawing is natural and fluent, as if the pencil were a bridge that mediates between two realities, and the focus can constantly be shifted between the physical drawing and the non-existent object in the mental space that the drawing depicts.”[32] Unfortunatley, the dominant tool in the architectural practice has become the computer, a tool of fragmentation, alienation and speed. And the pencil[33] that is undeniably connected with intuition, intensity and slowness seems to go extinct.

The pencil as design tool embodies the bridge between the imagining mind and emerging reality. Herewith the drawing is the perfect testing ground to make the envisioned atmosphere tangible and to test every design decision and its effect on the atmospheric quality, throughout the process. However this is merely a critical function of the conscious mind on what the knowing-body had extracted from the unconscious mind. Because as we have illustrated with Aalto’s intuitive sketches in the early stage of the design process, the hand may be the most intuitive design tool. An intuitive hand drawing has the quality to accumulate the innately diffuse and measureless flow of images and ideas that pre-exist in human imagination and thought. The hand as an instrument engages the knowledge embedded in the unconscious body rather then the rational aspirations of the conscious mind. This method of creative conception evolves around a somatic basis for the rise of creative thought, in which the architect depends upon his or her intuitive intentions and body consciousness. An attitude of uncertainty as is required in drawing naive sketches like these, enables the architect to take possession of one’s own body and it’s pre-theoretical meanings[34].

The act of drawing by hand also requires a concentration and thoughtfulness which creates a consciousness about the development of the plan. To achieve a wholeness in design all the different fragments need to be orchestrated in a way that ultimately establishes a balance in the bigger whole. In order to be able to interconnect these fragments the designer needs to be aware of all the steps made that led up to the current state of the plan. All these fragments are represented in different drawings from different phases

32. Ibid. p.60

33. Both the tool of the pencil and the physical model are examples of instruments that relate to *the thinking hand* and *the knowing-body*, Both bodily instruments have exceptional qualities in their relation to the intuitive creative process. However, the tool of the pencil will act as the primary example as we elaborate on the significance of *the thinking hand*, and we will elaborate on the role of the model in the creative process of *constructing atmosphere* in chapter III. FRAGILITY.

34. Passinmäki, P. (2012). The Trout, the Stream, and the Letting-Be. Alvar Aalto’s Contribution to the Poetic Tradition of Architecture. Jyväskylä, Finland, Alvar Aalto Museum. p.8

‘Even the hand has its dreams and assumptions. That is why it also helps us imagine (forms of) matter.’

- Juhani Pallasmaa

in the process and considering different architectural themes. The advantage of these handmade[35]is that these drawings may be laying around and therewith create a physically present collection of fragments that creates a sense of history of the development of the plan. They are a documentation of the work that has been done, but they also represent the work still to be done. This creates an understanding of the development of the plan, which is crucial in enabling the architect to make design decisions that contribute to a wholeness in design[36].

The tool of the pencil is an expression of merely all the qualities we defined as essential in de process of constructing atmosphere. The tool of the hand provokes a state of uncertainty as being a listening, humble and patient attitude towards the developing work. The hand drawing becomes a catalyser for embodied knowledge and intuitive processes, an intermediary for thinking and making, a testing ground for the envisioned experiential quality and design decisions, a creator of slowness, a representation of the history of development, and a condenser of creative conception. But most of all the tool of the pencil becomes the medium for the creative perception and thought involving the construction of atmosphere.

searching atmosphere In our exploration of the mental foundation of artistic phenomenon, and approaches and methods to integrate atmospheric quality in architectural design, we found that the basis of creative perception and thought are contradictory to the approach of the creative process as seen in contemporary architectural culture. The insistent demand for precision in academic education and practice, the appreciation of architectural work by its conceptual, intellectual or formal idea, the speed and spectacle with which architecture is created and consumed and the cultural portrait of the architect as a person of confidence and certainty, are fundamentally paradoxical to the mental foundations of artistic phenomena.

Gaining a phenomenological understanding of artistic creativity reveals the overwhelming superiority of deeply unconscious processes and complex organisation over the logical structure of conscious thought. Herewith the essence of the creative conception of complex, ambiguous and inarticulate qualities like atmosphere are its unconscious, inarticulate and diffuse ingredients. Additionally the

Pallasmaa, J. (2005). Identity, Intimicy, and Domicile. Rakennustieto Publishing. p.138

35. It must be noted that the digital storage of drawings does not create the overview and interconnection that physically present hand drawings do. However, when these digital drawings will be made physically present by generating prints, the sense of history of the development that the physical presence of hand-drawings generates may be approached.

36. On a personal note I would like to add that the sufficiently chaotic and messy environment that the presence of these drawings may provide, creates a sense of immersion in the body of the architectural plan. This shared presence and intense involvement with the work in turn creates a condition in which the architect may be more receptive and sensitive to the qualities of the developing work.

Werner Düttmann, *St. Agnes Kirche*, Berlin-Kreuzberg, 1967.

creative process with its multiplicity of superimposed strands of thought could be defined as fundamentally dynamic. The exploration of approaches and methods to nurture the superiority of unconscious processes and the fundamental dynamism of creative conception in favour of the integration of atmospheric quality into the design process, turned out to be dependent on the mental attitude of the architect.

The creative conception of atmospheric quality is an intuitive creative process in which the attitude of the architect defines to which extent the intuitive sensitivity, unconscious processes and fundamental dynamism of the creative process are engaged. The architect has to attain a receptive state of mind, which is enabled by assuming an attitude of uncertainty. The architect's attitude of uncertainty defines the kind of interrelation that the architect will have with the developing work throughout the design process. The first ideas and sense of atmosphere emerges only in a diffuse mode of attention, in which the architect trusts in his or her intuition and embodied knowledge. In this diffuse mode of attention rational thinking and calculating deliberation are released to allow the architect to be guided throughout the creative process by the unconscious bodily knowledge and intuitive sensitivity.

Once the architect trusts his or her intuition and body consciousness, a co-operation between the designer and the work comes into being, in which the attitude of uncertainty induces the architect's receptivity to the work expressed as a listening, humble and patient attitude. The designer does not objectify but internalises the work to arrive at a synthetic way of working where issues of construction and thematic intent become one with the architect's intuitive sensitivity. This also entails the embrace of the uncertainty of creative thought and its fundamental dynamism. The architect should nurture the undeliberate lines of thought and insights by assuming a reciprocal mode of attention for all the different aspects, phases and tasks evolving the design process. In this uncertain mode of attention an empirical process of playful experimentation comes into being, in which the architect depends upon his or her sensitivity and receptivity for the state of the developing work. Furthermore this illustrates the function of conscious processes and intellectual aspirations as primarily having a critical function. The intuitive sensitivity and the knowledge embedded in the body are the basis for

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.

- T. S. Eliot, *Four Quartets*

the somatic rise of ideas enabled by the architect's attitude of uncertainty, and the conscious mind merely acts as a critic of what the knowing-body has brought forth.

Eliot, T.S. (1943). Four Quartets. Harcourt.

This phenomenological understanding of the organising role of unconscious processes in creative conception, the layered nature of unconscious perception and the dynamic mental processes that an architect undergoes during creative conception illustrate the need for a poetical approach of the creative process rather then a rational approach. All the methods and approaches constructed around an attitude of uncertainty that I argued to enable the architect to integrate a qualitative atmospheric dimension in the design process of an architectural work, turn out to merely be the basis for the architect to reach a new way of being. The creative conception of atmosphere evolves around a state in which the creative work rises from the wisdom of the body, as if the ideas and images have always existed in the mental space of the architect to which one only had to be receptive. Opposed to the notion of *constructing atmosphere,* suggesting to be a product of the logical structure of conscious thought, the creative process of shaping the atmospheric dimension of an architectural work is an internalised emotive search. The architect's state of uncertainty enables the process of *searching atmosphere.*

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'Imperfection is in some sort essential to all that we know of life. It is the sign of life in a mortal body, that is to say, of a state of process and change.

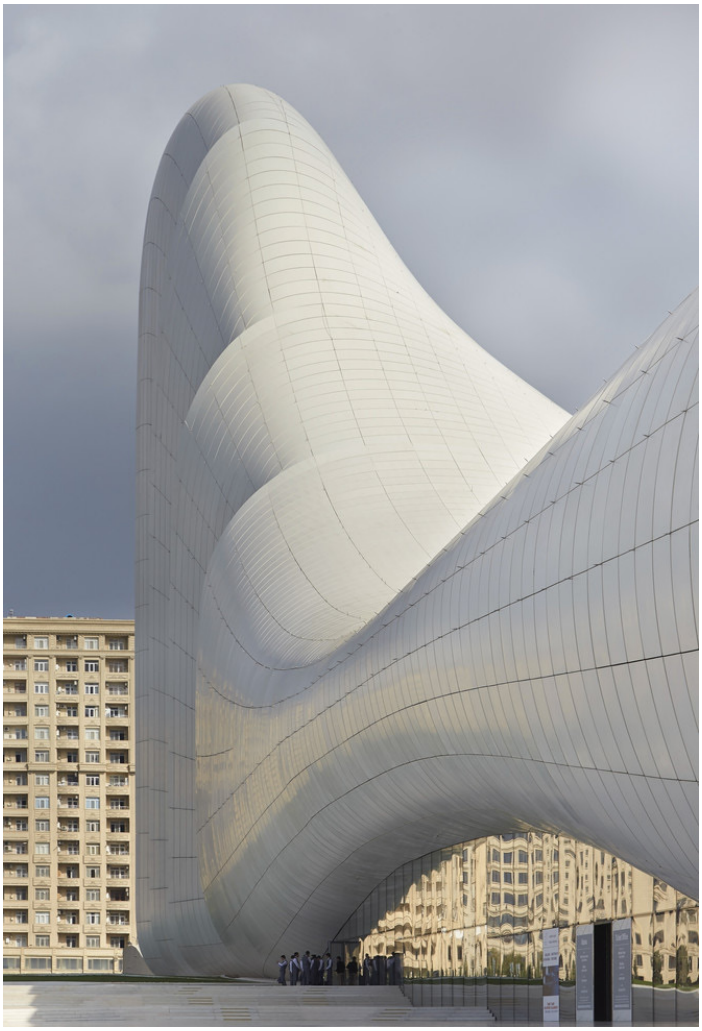
Nothing that lives is, or can be, rigidly perfect; part of it is decaying, part nascent [...]. And in all things that live there are certain irregularities and deficiencies, which are not only signs of life but sources of beauty'.

- John Ruskin

III. FRAGILITY

'Today's fashionable architecture seeks to seduce the eye, but rarely contributes to the integrity and meaning of it's setting.'

- Juhani Pallasmaa



Zaha Hadid Architects,
Heydar Aliyev Centre.
Baku, Azarbaijan, 2012.

the arrogance of perfection A trend has developed in contemporary architectural practice that contradicts most of the values I consider to be the essence of architecture and atmospheric experience. This kind of architecture is a product of an obsession with newness, spectacle, speed and image, and is conceived as a conceptual ideal rather then being rooted in human experiential reality. The desire to create striking images of architecture has become superior over creating real architectural environments. The result is a trend of buildings as sculptures, as images and as intellectual manifesto's. These buildings have a high aesthetic value when captured in an image or when rationally justified in a conceptual reduction. But this aesthetic of consumerism only serves the speed and efficiency with which it can be consumed.

As a result the architectural environment becomes a mere collection of immaterial and abstract artefacts. I feel that all architects are tempted to gravitate towards the aesthetic appeal of the perfectly articulated architecture of formal geometry. However real architectural quality does not exist in a vacuum, detached from the reality of life. Moreover, I believe that architecture that bears the evidence of life with its imperfections and irregularities, possess more atmospheric quality and beauty then a one-dimensional abstracted form.

The architect has a moral obligation to create a human environment that is connected to culture, society and context. The total disregard for the reality of time and use in the design of these contemporary architectural objects of aestheticization and consumption, results in disconnected and artificial conditions in our built environment. This lack of existential relation between the subject and its environment creates an atmosphere of detachment and alienation. This apposes the classic task of architecture to concretise and frame human existence in the fabric of the world[1].

I propose a dissociation of this detached and alienating architecture and instead revise our focus to creating architecture that is fundamentally embedded in human reality. After all architects operate within the realm of the real. The embrace of the vulnerability of real matter, real environments and real conditions will result in an architecture that bears the traces of life. This fragile[2] architectural quality

As quoted in Gary J. Coates, Erik Asmussen, architect, Byggforlaget, Stockholm, 1997, p. 230

Pallasmaa, J. (2012). Meaning in Architecture. Encounters II. P. MacKeith, Rakennustieto Publishing. p.125

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1. Pallasmaa, J. (2012). Meaning in Architecture. Encounters II. P. MacKeith, Rakennustieto Publishing. p.106
2. The term of *fragile architecture* was first used by Juhani Pallasmaa as an alternative to *weak architecture,* motivated by the negative connotations of the word 'weak' opposed to the more positive word 'fragile'. *'In accordance with Vattimo's notions, we can speak of a 'weak' or 'fragile' architecture, or perhaps, more precisely, of an 'architecture of weak structure and image', as opposed to an architecture of strong structure and image'. Whereas the latter desires to impress through an outstanding singular image and consistent articulation of form, the architecture of weak image is contextual and responsive.* Pallasmaa, J. (2000). Hapticity and Time - Notes on Fragile Architecture. later published in Encounters II. P. MacKeith, Rakennustieto Publishing.p.5

‘I believe that atmospheric qualities arise from the designer’s empathetic sensitivity and skill.’

- Juhani Pallasmaa

Álvaro Siza, *Perspective sketch of the Patio of the Bouça Housing Estate,* Porto, Portugal, 1972.

heightens the sensitivity of the existential condition of the self in relation to the architectural environment. This is expressed in the sense of belonging or identifying quality of the subject with its environment. These sensitivities are undeniably connected to a qualitative and harmonious atmospheric dimension as an expression of the integrity of the architectural environment. I am convinced that a concentration on humanising fragility in the design of architecture, will create an architectural environment that is strongly rooted in human experiential reality.

empathy & compassion An architectural environment with a cohesive atmospheric dimension that is embed in human experiential reality, is only to be conceived when the architect assumes a specific accumulation of attitudes. Besides the discussed interpretative skills and a critical attitude, the design of architecture connected to the fragility of life, requires the architect's extensive empathic ability.

Architectural environments are fragile under the influence of use and time. But this fragility is what transforms a formal structure into an environment that supports the human condition. The idea of fragility suggests a compassionate attitude and an empathetic observance. The architect needs to have the capacity to imagine human life, human emotion and human situations. Compassionate and empathic skills allow the developing architectural plan to be subject of its future inhabitation. Throughout the design process, human reality should be projected onto the developing architectural plan, being inhabited as it were by the users existing in the architect's mental world.

As a consequence of the new tradition of formal and image-focused architecture, a tension has developed between the drawing of the architect and the life of the building[3]. The distance between what makes sense to the architect and what makes sense to the future user, could be bridged by a compassionate attitude and an empathetic observance of the architect. To achieve this, the architect will need to temporarily be able to desert his or her role as expert and project the imaginary life of the future user onto the plan. This requires a shift in perspective from the architect's view of a meticulous one-dimensional structure to the user's view of a layered and ambiguous human environment. Once more, the assumption of an attitude of receptivity and uncertainty, here associated with the perspective of the user, enables

Pallasmaa, J. (2013). "Atmosphere, Compassion and Embodied Experience." OASE 91(Building Atmosphere): 33-53. p.43

3. Vervloesem, E., M. Dehaene, M. Goethals and H. Yegenoglu (2016). "Social Poetics: The Architecture of Use and Appropriation." OASE(96): 11-18.

Sverre Fehn, *The Nordic Pavilion*, Giardini della Biennale, Venice, 1962.

the architect to construct atmospheric quality that embeds architecture in human experiential reality.

In the design process this will translate into an approach that apposes a generic design strategy, and instead considers every new project to be incremental. Rather than treating the architectural work as an expression of a personal style, every new design project should be responding to the existing contextual reality. Throughout the process the design decisions should be generated by a response to the site, the client, the builder, the user and the broader social and cultural context. The task of the architect is to empathise with the future perceiver of the developing plan, even though their views may not always be coherent or even present.

When the design considers a private residence for a small family, the architect can familiarise oneself with the personal needs and requirement of the clients and empathise with their views. However, when the clients or users are anonymous the distance between the designer's view and the user's view is not as easily bridged. Especially in the design of buildings and environments in the public realm the architect's empathetic skills are stressed to the fullest. In these plans the needs and requirements of all the users are very diverse, diffuse and anonymous. Despite this ambiguity and complexity it is the architect's task to mediate between all the different needs of these users[4]. The answer may lie in the balance between specificity and generalisation. Forthwith, we will explore and discuss this and other methods and tools to enable the architect to emphasise with the future users of the developing plan.

I would like to add that the architect does not only have the responsibility to consider the desires and requirements of the actual or imaginary future occupant, but also has to filter and add to them. The requirements formulated by clients and future users are often very diffuse, inconsistent, and exclude requirements that they are not aware of having. The architect should have the ability to crystallise the formulated requirements into a program of requirements that may be evolved into an architectural environment that is suited to the current pattern of inhabitation, but is also suited to support changing conditions and requirements. The danger accompanying this tending and tolerant attitude is an occurrence of undesirable artistic conflicts.

4. Pallasmaa, J. (2013). "Atmosphere, Compassion and Embodied Experience." Ibid. 91(Building Atmosphere): 33-53. p.41

The public spaces designed by Rogelio Salmona are an example of architectural environments that are strongly embedded in their urban context through a complex interweaving of the new structure and the existing urban fabric. This embedment seems to account for the atmosphere of accessibility and 'publicness' that these spaces posses.

Rogelio Salmona, *Gabriel García Márquez Cultural Centre*. Bógota, Colombia, 1975.

The requirements of the users may be integrated in the design with an aesthetic tolerance, but the architect should be able to establish this without artistic compromise[5].

Moreover, I believe that the architect also has the responsibility to consider the impact the building may have on the bigger societal context. The architect should interpret the design assignment and integrate societal and cultural needs if possible. This societal and cultural responsibility has an amplified importance in the design of public space or public buildings.

Finally I would like to state that in our search for fragile architecture that aims to be fundamentally embedded in life and reality, the requirement of the architect's empathetic view should be adopted in the broadest sense; empathy for the users, a reflection on the physical, societal, cultural and historical context, and the perceptiveness of all these entities to change.

THE REALITY OF PERCEPTION

The conviction that retinal vision should be suppressed in order to create a viable condition for atmospheric perception as stated before[6], is paradoxical to the focused perspective, the dominance of form and image, and the non-interactive position of the observer as we see in the perception of artistic work like painting and sculpture. However, an experience of a painting has the ability to evoke such strong ideated tactile sensations that the perceiver may imagine a genuine physical encounter[7]. This ideated embodied encounter may evoke a similarly strong atmospheric experience as an actual physical encounter, and therefore may be as valuable in its atmospheric quality as an architectural experience.

The experiential reality of art is always an imaginative reality and therewith is essentially a recreation of the observer. Some greatly atmospheric paintings manage to engage the imagination of the observer in a way that the experience feels like a genuine physical encounter. In this kind atmospheric experience, perception, memory and imagination are fused into a lived experience[8]. This illustrates that our experience of the environment is in fact a fusion of our inner mental space and the outer physical world into a lived experiential reality. Therefore, in our search for an embedment of the built environment in reality, the architect needs to develop a method to establish

5. Pallasmaa, J. (2005). Identity, Intimicy, and Domicile: Notes on the Phenomenology of Home. Encounters I. P. MacKeith, Rakennustieto Publishing.

6. See chapter 0. Ambiguity for an elaboration on the role of the supremacy of the visual sense and the condition of multi-sensory engagement in the perception of atmosphere.

7. Pallasmaa, J. (2000). Hapticity and Time. Notes on Fragile Architecture. Encounters II. P. MacKeith, Rakennustieto Publishing. p.322

8. Böhme, G. (2003). The Space of Bodily Presence and Space as a Medium of Representation. Transforming Spaces. The Topological Turn in Technology Studies. M. Hard, A. Lösch and D. Verdichio. p.6

“We have an innate capacity for remembering and imagining places. Perception, memory and imagination are in constant interaction; the domain of presence fuses into images of memory and fantasy. We keep constructing an immense city of evocation and remembrance, and all the cities we have visited are precincts in this metropolis of the mind.”

- Juhani Pallasmaa

a relation between the inner mental world and the outer physical world.

Pallasmaa, J. (2012). The Eyes of the Skin, John Wiley and Sons Ltd. p. 72-74

A method to establish this connection, is by creating an architectural environment that stimulates the subject to project memory and association onto the experience. The personal field of association arising from memory and imagination enables the perceiver to have a personal interpretation of the perceived object, environment or atmosphere. In this fused state of perception the inner mental space starts to coincide with the outer physical world. This projection of personal qualities of memory and association onto the observation, creates a deepened identification with the perceived entity, which generates a sense of belonging or existential relation between the subject and the perceived work.

We defined the role of atmosphere acting as the intermediary between the perceiver and the perceived, between the subject and the environment, between the self and the world. Therewith atmosphere is the infrastructure of the existential relation that may be established between the architectural environment and its inhabitant or user. The atmospheric dimension facilitates the embedment of an architectural environment in human reality.

embodied images An example of how modest and how intertwined with associative thought the incentives for the existential engagement with place can be, is an architectural feature like a small ledge. The occupant of the space may project his/her memory of the ledge in his/her grandmother's kitchen on which she played as a kid, onto the current perception of the space. Herewith the recollection of the atmosphere in grandmother's kitchen which influenced the cultivation of the subjects identity, fuses with the observation of the space into a lived experiential reality in which the subject generates a strong existential relation to the newly encountered place. This illustrates that the architect should be aware of the images that objects can provoke. Every object with it's compositional, material and sensorial qualities can evoke these kind of associations that influence the atmospheric experience of the environment.

This example illustrates how specific subjective memory may be projected onto an experience. However, associative thoughts more often are generated by social,

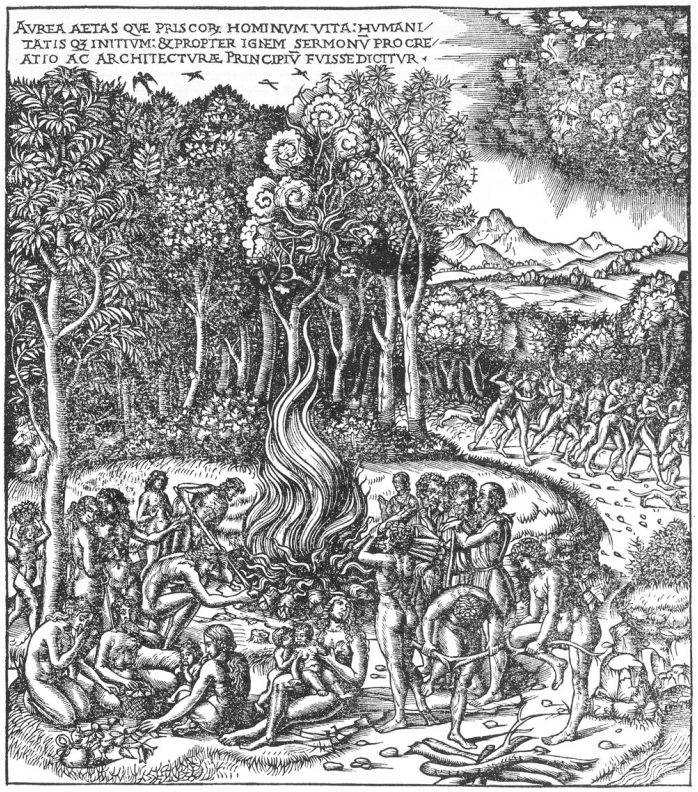


Illustration in Vitruvius'
De Architectura by
Cesare Cesariano, 1521.

cultural or even biological frameworks[9]. This indicates that the projection of associative thought onto an environmental experience is extremely likely to be shared by other perceivers, and that the architect is able to anticipate this largely shared subjective projection of associative thought onto the experience of the environment.

The unconscious projection of memory and imagination onto an experience is generated by what Juhani Pallasmaa calls an *embodied image*[10]. These images which are only perceived in an embodied and emotive manner, evoke unexpected associations that make these images part of us. Therefore when the associations evoked by an embodied image are unconsciously projected onto the lived experience, we project aspect of ourselves onto the conceived space, object or event. An embodied image has the ability to generate a strong existential relation between the subject and the perceived entity.

Our example of 'the ledge in grandmother's kitchen' is an embodied image in which subjective memory is stored, but more often the atmospheric associations are a product of common memory shared within a social, cultural or biological framework. An example of an embodied image that relates to essentially all humans because of its biological generator, is the fire pit. Vitruvius even ascribed the origin of architecture to the domestication of fire. This primal image embodies an atmosphere of togetherness, warmth and safety[11]. Another example of an embodied image that considers an almost global extent, but is generated by cultural meaning is the architectural element of the door. This embodied image, represents the transition between two worlds and therewith evokes an atmosphere of transition and discovery.

Embodied images can also be a product of the perceiver's imagination. In that case the architectural characteristic does not incite memory, but evokes an imaginative narrative with which the subject identifies and projects that onto the perceived space and atmosphere. In reality the lived experience will be a product of the fusion of observation, memory and imagination. Positive and highly existential atmospheric qualities like inclusiveness, interiority and intimacy occur in this projection of the self onto the space.

These examples of subjectively, socially, culturally and biologically generated associations and embodied images

9. For an elaboration on the social, cultural and biological *generators of atmosphere* see chapter 0. Ambiguity

10. Pallasmaa, J. (2011). The Embodied Image: Imagination and Imagery in Architecture, Wiley.

11. Pallasmaa, J. (2013). "Orchestrating Architecture: Atmosphere in Frank Lloyd Wright's Buildings." OASE 91(Building Atmosphere): 53-59. p.55

'Architecture need do no more, nor should it ever do less, than assist man's homecoming'.

- Aldo van Eyck

Lacaton Vassal Architects, *Cité Manifeste, Social housing*, Mulhouse, France, 2005.

that are deeply rooted in our collective memory, illustrate the layered nature of lived experiential reality. Associative thought and embodied images are valuable tools for the architect in the search of a sense of belonging in the design of architecture and the construction of atmosphere.

appropriation & identity We have established that an identification with the surroundings, or a sense of belonging is a product of an experiential reality that fuses observation, memory and imagination. The ultimate expression of an established sense of belonging is when the space becomes the subject of appropriation. This highly personal engagement with the structure could be seen as a projection of the self onto the space, just like we have seen with the projection of associative thought. However, when the subject starts to appropriate the space, the projection of identity evolves into the synchronisation of personal identity and environmental character. The identity of the subject starts to coincide with the identity of the place.

The home is the ultimate architectural object of appropriation. The personalisation of the lived spaces is so extensive that the architectural artefact becomes an expression of the personality of its dwellers and their patterns of life[12]. Moreover the home through its connection to life, has an atmosphere of identification, intimacy, domicile and safety. And these conditions are the manifestation of the task of architecture to enable men to concretise one's own existence in the world. Aldo van Eyck states 'Architectures need do no more, nor should it ever do less, than assist man's homecoming'[13]. This homecoming does not refer to the home, but rather to the atmosphere of homecoming. This quality therewith is applicable to all architectural settings, because it refers to the existential quality of the experience as a way to connect architecture to life.

Appropriation may be expressed through for instance the informal assignment of a new function to the space or by personalising the space by (re)placing objects to indicate the subjects presence and even mark their base. This subtle human behaviour represents a claim of space as an extension of the self. The appropriator constructs its own atmosphere of shelter, familiarity and intimacy, existing in a layered experiential reality of observation, memory and imagination. This embodiment of space is a manifestation of the personal identity reflected upon the environment.

Hertzberger, H., Van Roijen-Wortmann, A., & Strauven, F. (1982). Aldo van Ecyk. Amsterdam: Stichting Wonen. p.65

12. Pallasmaa, J. (2005). Identity, Intimicy, and Domicile: Notes on the Phenomenology of Home. Encounters I. P. MacKeith, Rakennustieto Publishing.

13. Hertzberger, H., A. Van Roijen-Wortmann and F. Strauven (1982). Aldo van Eyk. Amsterdam, Stichting Wonen. p.65

Techniques that are to be extracted from Monet's 'atmospheric paintings' are the creation of an immersive quality through the size and curve of the canvas, and a suggestive quality through the inexplicit form of the portrayed subject.

Claude Monet, *Les Nymphéas - Les Nuages* (The Water Lillies -The Clouds), Musée de l'Orangerie, Paris, 1915-1926.

Architecture that allows or even stimulates appropriation, evokes a sense of self through the environment. The atmospheric experience is an existential experience.

fragile architecture The first task of fragile architecture, being the creation of a connection between architecture and life, may be realised by creating the possibility to project associative thought upon the perceived environment. The artistic realm once more provides us with an example of possible applications of this method. When we look closer to 'atmospheric paintings'[14] like the ones of J.M.W. Turner or Claude Monet, we can extract some techniques that establishes an identification with work through the engagement of an associative field. The techniques applied are based on the suppression of explicit form and detail, in favour of the potentiality of memory and imagination. The unifying atmosphere is constructed out of suggestive elements like illumination, colour and movement, that create an unfocused and embracing experience. The suppression of explicit boundaries, the softening of light, the blurring of colours and the use of a large canvas are all techniques to create an immersive interaction. Herewith the visual experience has become an embodied experience in which the space of the world fuses with the mental space of the observer[15]. From these techniques used by atmospheric artist we can extract a method that evolves around weakening the logic of the perceived entity.

'The mind is at every stage a theatre of simultaneous possibilities.'

- William James

When projected onto the design of an architectural environment, this would concern the implementation of weak structure and image, also being referred to as 'fragile architecture'[16], the observer is encouraged to have a personal interpretation of the architectural setting based on personal associations. Herewith a dialogue occurs between the observer and the space. This interrelation between architecture and observer heightens the sensitivity of the existential condition of the self through the surrounding. Architecture that has this fragile quality therewith heightens the identification with the architectural environment and the sense of belonging.

ARCHITECTURE OF TOLERANCE

We have encountered two methods to engage the identity of the self through the experience of the environment, namely the creation of an associative field and the stimulation of appropriation of space. Both methods depend upon open interpretation and possibility. I believe that an architecture

James, W. (1890). Principles of Psychology. Cambridge, Massachusetts 1983. p.290

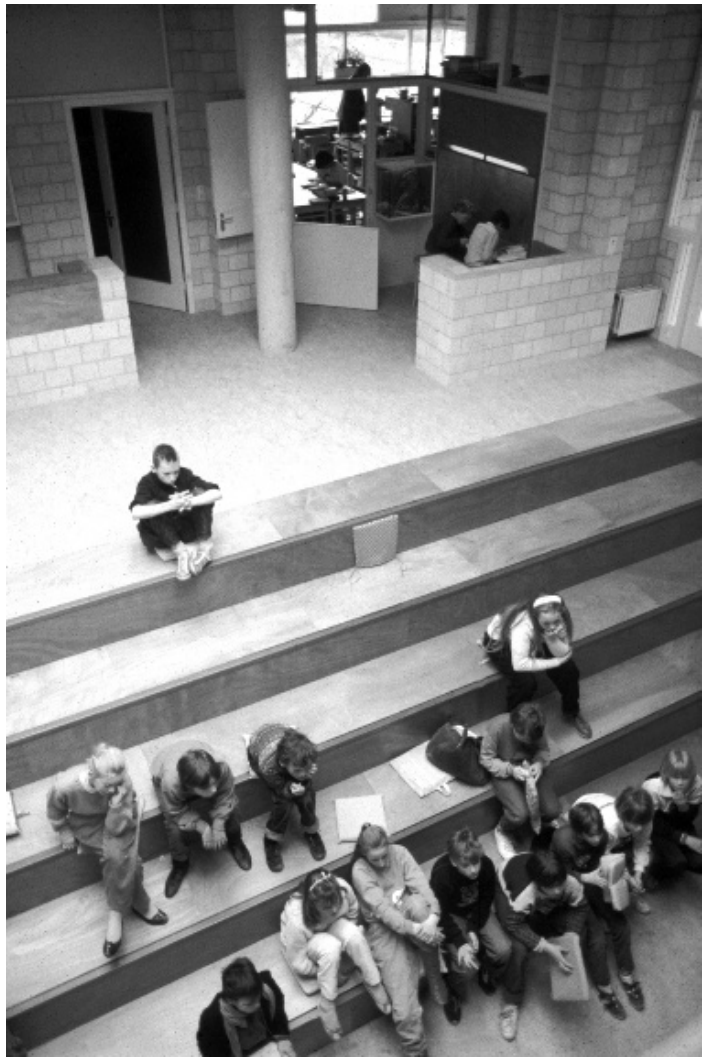
14. Pallasmaa, J. (2014). "Space, place and atmosphere. Emotion and peripheral perception in architectural experience." Lebenswelt 4(1). p. 234

15. Ibid. p. 234

16. Pallasmaa, J. (2012). Encounters II: Architectural Essays, Independent Publishing Group.

'Whatever space and time mean, place and occasion mean more. For space in the image of man is place, and time in the image of man is occasion.'

- Aldo van Eyck



Herman Hertzberger, *Apollo School,* Amsterdam, 1983.

of tolerance has the ability to stimulate associative thought and appropriation, to ultimately create existential meaning of the habitation of space.

An architectural articulation that is tolerant for interpretation will have to incite a layered architectural experience, fusing observation, memory and imagination to engage the mental space of the perceiver. These architectural incentives will need to engage all the different fields of generators in an implicit way, for the subject to project the personal associative field onto the lived experience. Previously we have touched upon fragile architecture as a method to allow personal interpretation, through the suppression of formal articulation and the nurture of weak structure and image. The suppression of formal articulation relates to the subjectivity of the projection of personal associations onto the experience, because a specificity in architectural articulation will engage associative thought of some, but will obstruct associative thought of others. However, we have seen that different users of an architectural environment have a substantial overlap in associative field, because of a shared social, cultural, and off course biological background. It even is so substantial that behavioural studies show that behaviour varies less from person to person within settings, then the behaviour of one person across different settings[17]. So both exclusive specificity and generalising uniformity can obstruct personal association. Therefore I propose a balance between specificity and generalisation, by giving implicit incentives for associative thought, rather then explicit directions. This suggestive architectural articulation creates a tolerance for associative thought and personal interpretation.

sense of possibility The conception of an architectural environment that is tolerant to appropriation requires a similar approach. For the users to appropriate the space and engage with the environment in an existential sense, the architectural setting should not only evoke a sense of place and a sense of belonging, but also a sense of possibility. An architectural environment should not specify human behaviour, but rather invite action for the user to fully engage with the space. By creating conditions, rather then directions, the spontaneous aspects of human behaviour are nurtured and encouraged. Aldo van Eyck was an advocate of creating conditions with a tolerance for different kinds of use, and a structure that invites the user to appropriate the space.

Hertzberger, H., A. Van Roijen-Wortmann and F. Strauven (1982). Aldo van Eyk. Amsterdam, Stichting Wonen.

17. Wilson, E. O. (1984). The Human Bond With Other Species. Cambridge, Massachusetts, Harvard University Press. p.37 [As quoted in Pallasmaa, J. (2000). Meaning in Architecture. In P. MacKeith (Ed.), Encounters II: Rakennustieto Publishing. p.102]

Henri Matisse,
The Blue Window,
Museum of Modern Art,
New York, 1913.

An example of an architectural element that invites spontaneous behaviour and appropriation is the staircase. The staircase is a functional element for vertical circulation, but it often is spontaneously appropriated, being used as a display, a playing area, a seat or even an auditorium. The sense of possibility that this architectural element emits is related to its manifestation as an embodied image. The staircase embodies the act of moving vertically from one world to another, which evokes an atmosphere of transition. The stairs can even embody a religious connotation, like the descent to hell or ascent to heaven. But a variation of the stairs that is an explicit part of public life can also be an embodied image. An amphitheater is a culturally generated embodied image, that projects an atmosphere of togetherness and spectacle, and evokes a sense of overview and hierarchy. The staircase, being the primal expression of the amphitheater, evokes similar atmospheric associations. The architectural element of the staircase does not only create a sense of possibility, but also generates an associative field.

'The most subtle aspect of human behaviour is spontaneity'.

- Juhani Pallasmaa

incompleteness & fragmentation Tangible architectural characteristics that create a sense of possibility and actively stimulate associative thought, are incompletion and fragmentation. We can recognise a multifarious application of incomplete and fragmented qualities in other creative fields. A mere fragment of a window-sill in a Matisse painting is enough to make the observer imagine the experience of the physical enclosure of the window.

These incomplete and fragmented qualities tend to have a suggestive character, which makes them very relevant in the attempt of engaging memory and imagination in architectural and atmospheric experience[18]. The connection between incompleteness and fragmentation, and memory and imagination originates in the cognitive process of recollection. The process of recollection is situational and spatial. The memory of an event or encounter is attached to the place or setting it took place. When we remember an encounter or experience of our past, the setting tends to reoccur as a collage of spatial fragments. Emotive sensitivities may surface, like the way the light entered the space, the intimacy of enclosure or the way your footsteps echoed, but merely as remnants of the embodied experience of the past. Even though the setting and the occasion are only recalled as fragments, the atmospheric

Pallasmaa, J. (2005). The Place of Man: Time, Memory, and Place in Architectural Experience. Encounters I. P. MacKeith, Rakennustieto Publishing.

18. Pallasmaa, J. and P. MacKeith (2012). Encounters II: Architectural Essays, Independent Publishing Group. p. 23-33

Joseph Michael Gandy, *Bank of England.* Commissioned by Sir John Soane, 1830.

experience is recalled as a whole. The vacuum between the fragments is filled in by the perceiver through memory and imagination to merge into a relived experience. The perceiver is enabled to project personal associations upon the experience, which creates a sense of belonging and identification with the architectural setting.

Ruins and eroded settings have a special evocative strength because their physical, historical and programmatic fragmentation compels the perceiver to fill in the blanks. A great architect that was aware of the ability of suggestive fragments to engage memory and imagination is John Soane. He tended to construct a built environment expressed as a collage of historical remnants. His fascination with historical fragments and ruination even moved him to commission an image of his design of the Bank of England in a ruined state. Soane did not try to withstand the vulnerability of material structure in the mercy of time, but he ideated the abandoned and ruined state. The incomplete and historically fragmented environments that he designed, have an exceptional sense of depth and continuity, qualities that embed the perceiver in time and place.

The weakening of architectural logic by incompleteness and imperfection engages the inner mental space of the perceiver by allowing to layer observation with personal association. Additionally, the suggestive architectural articulation stimulates the user to appropriate the space and to adapt it to changing requirements and conditions. The architecture assumes a fragile and humble position and functions as a supportive background to life.

responsive architecture Our society and built environment are changing with enormous speed and on an enormous scale. The built environment is not a static entity, but is constantly receptive to the ever-evolving constellation of matter and time. Rather then to create an architecture in a state of perfection and completion, the architect should aim to design fragile architecture that is responsive to the messiness of life and that is contextual to its history, culture and society[19].

The initial conditions, prevailing during the conception of the design or the realisation of the structure, will alter. The architect bears the responsibility of designing an architectural environment that is suited to its unpredictable

19. Pallasmaa, J. (2000). Hapticity and Time - Notes on Fragile Architecture. later published in Encounters II. P. MacKeith, Rakennustieto Publishing.

‘An atmosphere cannot be an autonomous state; it cannot be in standstill, frozen. Atmospheres are productive, they are active agents.’

- Olafur Eliasson

Villa Savoye in a state of decay before its renovation (1985-1997).

Le Corbusier, *Villa Savoye,* Poissey, France, 1931.

life, always out of reach. This unpredictable life of a building will be subject to constant changes in functional requirements, material conditions and cultural dynamic. In architecture a state of perfection or completion does not exist, if only ephemeral[20]. Architecture that is constructed around perfect ideated conceptual environments, results in temporal and timeless abstracts that prove not to be able to stand the test of time. The pristine white artefact always has to succumb to the revenge of time and use.

However, architecture that is responsive to life and has a tolerance for change, does not have to be imperfect, incomplete or bear traces of life in an aesthetically unpleasing manner. Programmatically responsive architecture that is in support of human experiential reality has to be both tolerant to programmatic, material and cultural change and additionally have an aesthetic tolerance for this change.

Earlier we touched upon the value of the undeliberate in the process of creative thought and conception, but unforeseen developments may also be of value throughout the life of the building. A structure may present itself being perfect for an unexpected function or use, or the undesirable weathering or patina of a material surface may reveal a beautiful pattern of stains. In these unforeseen adaptations may lie an astounding poetic beauty that emerges from the imperfections of life. So rather then aspiring a dramatic and temporal architecture, the beauty of everyday adaptations should be accentuated.

Certainly, it would be of great value to anticipate these changing qualities. For instance anticipating the effect of weathering on the chosen materials, or predict possible changes in programmatic requirements. However the architect is not able to anticipated the enormous multiplicity of scenario's that could be derived from a real architectural setting. Therefore I propose an embrace of unforeseen changes, rather then trying to anticipate and control every possible aspect of the architectural setting.

robust architecture Programmatically responsive architecture has quit a wide range of possible interpretations and expressions.An architectural structure could be adaptive to programmatic change by implementing architectural parts and layers that are

Böhme, G., C. Borch, O. Eliasson and J. Pallasmaa (2014). Architectural Atmospheres: On the Experience and Politics of Architecture. Basel, Birkhäuser. p. 93

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20. Ibid.

The transformation of Palais de Tokyo by Lacaton & Vassal (2012-2014) into a *Site of Contemporary Creation*, is an example of atmospheric architecture that imbues a sense of change and tolerance through the robust and unfinished expression of its structure.

movable, changeable or flexible according to its temporal functional requirements. These kind of adaptive structures tend to be light, repetitive, fragmented and uncertain in their expression. And even though these structures are able to quickly adapt to programmatic change, the fragmentation, the homogeneity the lack of solidity and weak connection to its spatial context, results in an environment that lacks coherence, complexity and embedment.

An in my opinion preferred design approach to create an environment that is responsive to change, is to design a structure that tolerates change, rather then to anticipate it. A method of creating environments that are tolerant to change, is the conception of a robust architectural expression that has the ability to absorb change and imperfections. This robust architecture is not dominant in its expression, but rather has a sense of natural presence and continuity, generated by qualities like groundedness, composure, embedment and natural material application. The robust architectural quality generates a confidence and self-evidence that aims to accommodate, rather then to impress. A strong quality that does not impose itself onto life in the foreground, but acts as a backdrop in support of life. These structures are embedded in the immediate present, but also have a natural duration. Like an anonymous tradition that exists in a temporal continuum, mediating our relation to the ephemeral dimension of time[21]. Is the denial of the fragility of matter not the ultimate expression of the deeply rooted chronophobia[22] of mankind? Architecture has the ability to concretise the course of time by not resisting it's passing, but to embrace it's defining character and beauty.

Additionally, these robust architectural structures have a resistance, not towards time, but in its experiential reality. In order to experience spaces and structures one has to make the effort to walk around and feel its physical presence. When people explore a new environment they always tend to touch the walls and feel its structure and resistance. By sensing the physical presence of the structure, one also senses one's own physical presence in relation to it. In this state of 'mindful physical presence' as Gernot Böhme refers to it, the desire to feel the vitality and vibrancy of the self can be satisfied by the resistance of things against one's own physical status[23]. This mental and physical engagement with space should be more profound when

21. Pallasmaa, J. (2000). Hapticity and Time. Notes on Fragile Architecture. Encounters II. P. MacKeith, Rakennustieto Publishing.

22. Chronophobia is the fear of time. Or rather the fear of the passing of time.

23. Böhme, G. (2013). "Atmosphere as Mindful Physical Presence in Space." OASE 91(Building Atmosphere): 21-32. p.31

'It is as though space, cognizant… of its inferiority to time, answers it with the only property time doesn't possess; with beauty.'

- Joseph Brodsky

Scarpa has an exceptional sensitivity for the way the elements - in particular water - will gradually transform and enrich the aesthetic quality and expression of the materials over time.

Carlo Scarpa, *Brion Cemetery,* San Vito d'Altivole, Italy, 1969-1978.

the architect aims to stimulate appropriation of the space. Therewith the resistance of the structure should also be more profound. I believe that for a user to appropriate the space, it has to resist. The space should be conquered in order to be appropriated and acquire the status of being an extension of the identity of the user. Robust architecture provides the experience of a physical resistance to its perceivers, establishing an existential relation between user and environment.

An example of robust architectural environments that evoke an exceptional sense of possibility and incentive to appropriate, is to be found in industrial structures. These structures tend to have a robust architectural expression, resulting from the priority of functionality and durability. Since there is no or little regard for the aesthetic appeal during the life span of the building, imperfections and the traces of use are visible throughout the spaces. The scars that the structure carries posses a beauty and poetic in its own right. The functional character of industrial structure also tends to generate architectural characteristics like incompletion and fragmentation. The structure is often adapted, transformed or expanded throughout time to meet the changing requirements. These interventions make out a collage of historical fragments, concretising time and place.

When industrial architecture is transformed and used for another purpose, the spaces tend to preserve the atmosphere of production from its previous life. The robust and historically fragmented qualities of the structure evoke a sense of possibility. But the atmosphere of production that is stored in the industrial structure, evolves this quality in an active generator of activity. The users are invited to appropriate the space and use it according to their temporal needs, and thereby actively participate in the creation of the present. Industrial structures embody both a sense of possibility and production, resulting in an atmosphere of active freedom.

An example of robust architecture with an exceptional sense of possibility which is strongly embedded in culture and time, is an architectural project by Lina bo Bardo(1914-1992). The SESC Pompéia Factory Leisure Centre (1986) in São Paulo, Brazil, is also referred to as the citadel of freedom[24], illustrating both its protective

As quoted in Pallasmaa, J. (2012). Space, Place, Memory and Imagination. Encounters II. P. Mack-eith. Helsinki, Raken-nustieto Publishing. p.47

24. Bardi, L. B. and M. C. Ferraz (1994). Lina Bo Bardi. Milano, Instituto Lina Bo e P.M. Bardi.

Lina Bo Bardi, *Serviço Social do Comércio Pompéia,* São Paulo, Brazil, 1982.

atmosphere and the appropriation of the building by the public. An extremely hybrid and changeable programme varying from theatre, to urban beach and informal exhibition space, is housed in a re-appropriated ensemble of industrial buildings. It is a place of political and cultural production deeply embedded in public life. It is a prime example of architecture that establishes an existential relation between its users and their environment and is deeply embed in culture and the human reality of everyday life.

CONTEXTUAL EMBEDMENT

Human ties to place, culture and time are fundamental to human biology en well-being. Architecture that is embedded in reality, should be embedded in its context. Herewith architectural design should be approached as the construction of a building that is becoming part of its surrounding. Approaching every new project as being incremental: a cumulation off all existing qualities like, the site, the users and the broader social and cultural context. Atmospheric architecture should respond to the existing contextual conditions.

cultural identity The engagement of a perceiver with the built environment, projecting identity memory and imagination onto the experience, is dependent on the association with the personal, social, cultural and biological context of the perceiver. The more incentives for associations with these contextual qualities, the more the subject has a sense of belonging and feels connected to the environment. Based on this notion of embedding architecture in reality and engaging the sense of self of the perceiver, I would like to explore methods to embed architecture in its cultural and physical context by addressing notions like cultural identity, history of place, existing environmental character and the relation to landscape.

Globalisation has permeated the architectural profession and fundamentally disregards the relevance of ties to culture and place as a primary necessity for human well-being. The result is an extensive lack of a sense of belonging, interiority and domicile in the built environment, a notion described by Edward Relph as existential outsideness. ‘Existential outsideness involves a self-conscious and reflective uninvolvement, an alienation from people and places, a homelessness, a sense of the unreality of the

Eugène Etget, *The Pantheon,* 1924. Albumen silver print. 22.1 x 17.7 cm. The J. Paul Getty Museum, Los Angeles.

world, and of not belonging.'[25]

Architectural design can concretise the perceivers connection to culture and place, by establishing a relation with local and regional architectural cultures. These 'traditions' are deeply rooted in historicity and the reality of the specific culture. It must be noted that this does not entail the introduction of nostalgic values, like the remodelling of primitive structures. Rather this cultural embedment should be established through architectural design that relates to the existing condition of the architectural culture, by association with or referring to these values while still pursuing innovation. Establishing this cultural embedment through architectural design, ultimately strengthens the cultural identity and personal rootedness[26].

connection to place Just like a building is part of its surroundings, atmosphere is part of its surroundings. Atmosphere is not contained by the envelope of the building, but the atmosphere in a building may extent into its urban or rural setting, gradually changing according to the transition of the environmental character of the interior to that of the exterior. Atmosphere should be approached as a continuum.

The existing atmospheric dimension of a larger environment is often referred to as genius loci[27]. However, a distinction is made between atmospheric quality and genius loci, effectively described by cultural geographer Pierce Lewis[28]. He distinguishes sense of place from spirit of place. The former refers to the lived awareness of the unique environmental character, arising from the experiencer of place. And the latter is defined as the unique singular quality of a specific environment that infuses it with a unique character[29]. Throughout the research I have employed the notion of atmosphere as the intermediary between the subject and the object. Herewith the notion of atmosphere is a product of a dynamic reciprocity between sense of place and spirit of place. But regardless of the terminology used to refer to the unique emotional environmental presence, the architect needs to consider the existing atmospheric dimension that arises from all the different contextual entities at the building location.

A sensitive approach to the embedment of architecture in the landscape is emblematic of the work of Frank Lloyd Wright. The architect illustrates the embedment of the structure in

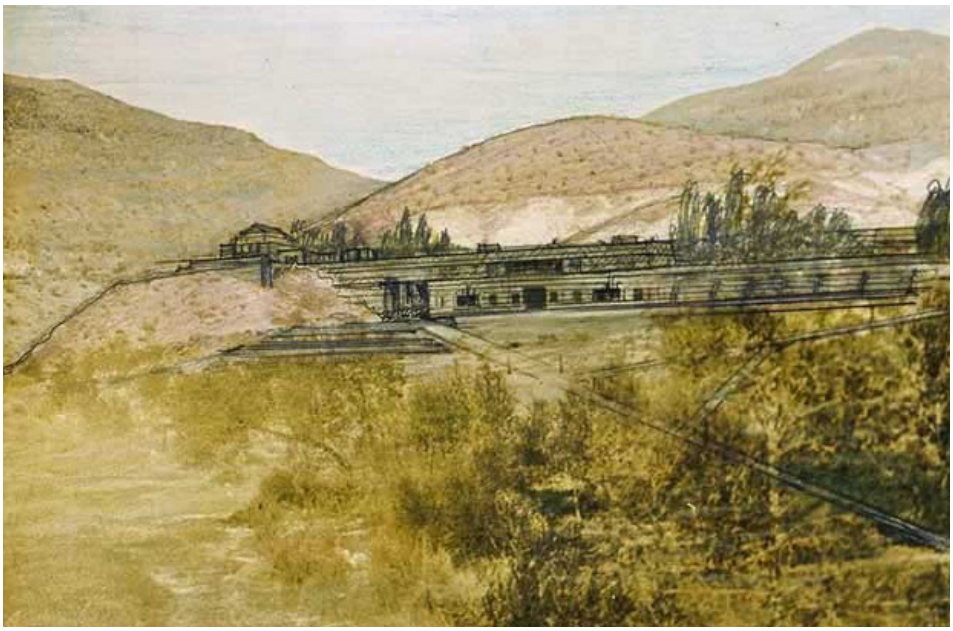
25. Relph, E. (1986). Place and Placelessness. London, Pion Limited. p. 51 from: Pallasmaa, J. (2000). Meaning in Architecture. Encounters II. P. MacKeith, Rakennustieto Publishing.

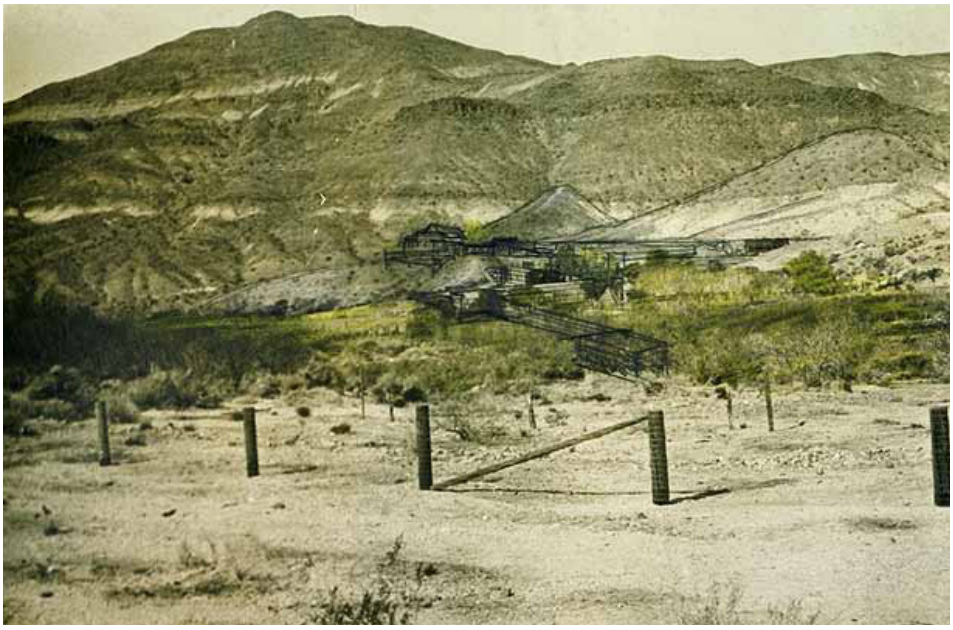
26. Ibid. p. 101-103

27. Norberg-Schulz, C. (1989). Genius Loci: Towards a Phenomenology of Architecture, Academy Editions Ltd.

28. As quoted in Pallasmaa, J. (2014). "Space, place and atmosphere. Emotion and peripheral perception in architectural experience." Lebenswelt 4(1).

29. The terminology *genius loci* was introduced in the phenomenological architectural discourse by theorist Christian Norberg-Schulz, as a concept involved in 'place-making'. It has been suggested that the notion of *genius loci,* as meant by Norberg-Schulz, is widely misinterpreted and the concept does in fact refer to the prevailing character arising from the experience of the ones using place, rather than from deliberate 'place making'. Referred commentary exemplified by Jivén, G. and P. J. Larkham (2003). "Sence of Place, Authenticity, and Character: A Commentary." Journal of Urban Design 8(1): 67–81.





F. L. Wright, *Sketch perspective on photograph for the A.M. Johnson Desert Compound,* 1924.

the landscape with the notion 'organic atmosphere'. This misleading concept does not involve biomorphic forms, but rather refers to 'its deep grasp of the genetically derived ways in which we are in constant dialogue with our settings and domicile'[30]. This indicates that in Wright's architecture biological (and cultural) context are the most important generators for the atmospheric dimension arising from this embedded architecture.

The architect's ability to read the atmospheric essence of the landscape, is the fundament of meaning of all the architectural qualities that will be derived from them. The theme of internal duality, a design method focusing on a layered balance in architectural characteristics, appears in Wright's work as the presence of a sense of shelter and intimacy and a sense of prospect and control. Both atmospheric qualities could be defined as 'bio-historically acquired instinctual and unconscious environmental reactions'[31], generated by natural selection. The varying types and degrees of enclosure generate these atmospheric qualities. This is a result of the composition of matter. For instance, a frequently seen material articulation to be recognised in his work, is the articulation of a plane above and below without horizontal borders, creating a sense of intimacy while ensuring a sense of overview. These sensitivities directly relate to the shared human bio-instinctual generators, creating an atmosphere that is connected to the 'biological context'. Because these instinctual reactions are shared by all humans, the atmospheric experience is more or less universal: a quality of which Wright seems to be extensively aware. Furthermore, this balance between enclosed and open space, illustrates the architects sensitivity of the manifestation of atmosphere as continuum.

Other connections to the landscape are established by engaging culturally and biologically derived primordial images. The greatly imagination-evoking elements of fire and water[32] take in a prominent place in his work. Most of his projects include multiple fireplaces acting as the focal points of the spaces and evoking unconscious images of togetherness. But water also is often present in his designs, reflecting air and light and evoking images of movement and vitality. A more common manifestation of these primordial elements in architectural design, can be found in the consideration of the weather and light conditions prevailing at the site.

30. Pallasmaa, J. (2013). "Orchestrating Architecture: Atmosphere in Frank Lloyd Wright's Buildings." OASE 91(Building Atmosphere): 53-59. p. 55

31. Ibid. p. 53

32. Gaston Bachelard argues that these opposing elements are the true stimulants for fantasy, dreaming and imagination. Bachelard, G. (1994). The Poetics of Space: the classic look at how we experience intimate places.

'I would emphasise the history that is stored in the landscapes, in cities and buildings, stored in the objects we live with.'

- Peter Zumthor

Peter Zumthor, *Thermal Baths,Vals,* Switzerland, 1996.

Finally, the relation with the landscape is defined by echoing its history and material in the built structure. An example of literal applications of the material of the landscape, are walls of rammed earth or handrails made out of branches. But also more subtle references in detail elaboration, referring to the articulation of local rock formations or other landscape features embed the structure in its physical context.

'I enjoy framing the landscape: it strengthens the power of the place.'

- Peter Zumthor

framing the landscape Another architect who has an exceptional ability to intuitively grasp the significance of the connection to the landscape through the atmospheric dimension, is Peter Zumthor. The architects have a similar attitude towards the role material qualities have in the search for a connection to the surroundings. An example is the application of locally quarried stone and locally harvested wood in rural settings, but also the application of traditional building techniques with brick or concrete in historically industrial settings is an example of a connection to local or regional identity.

In the process of designing architecture that is embedded in its context, it is an important condition that the architect approaches every element and every scale as having the potential to establish a connection to the context or landscape. This means that the whole of the building has the same potential to be embedded in the landscape as the smallest architectural feature has. The threshold, the windowsill or a door handle may not seem to have this potential, but in fact these features greatly influence the atmospheric experience when occupying the transitional space between interior and exterior. These details decide the enclosure of the view of the landscape, the way the entrance connects building and landscape, and even the formulation of the different quarters of the building[33].

Despite the similarities, Zumthor has a slightly different idea about the relationship between the viewer and the landscape then Wright does. Rather then articulating a continuing space from interior to surroundings, Zumthor tends to frame the landscape[34]. He tends to make smaller openings, with which he claims to emphasise the horizon[35]. This type of defining of the perspective forces the viewer to concentrate on the landscape, rather then to immerse oneself in it. Even though I have touched upon the intensive interrelation between immersive sensations and atmospheric quality, the framed views do evoke a

Havik, K. and G. Tielens (2013). "Concentrated Confidence." OASE 91(Building Atmosphere): 60-84.

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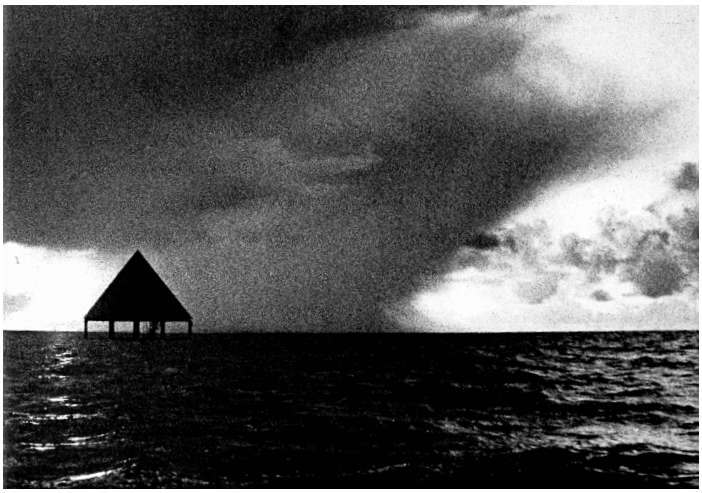
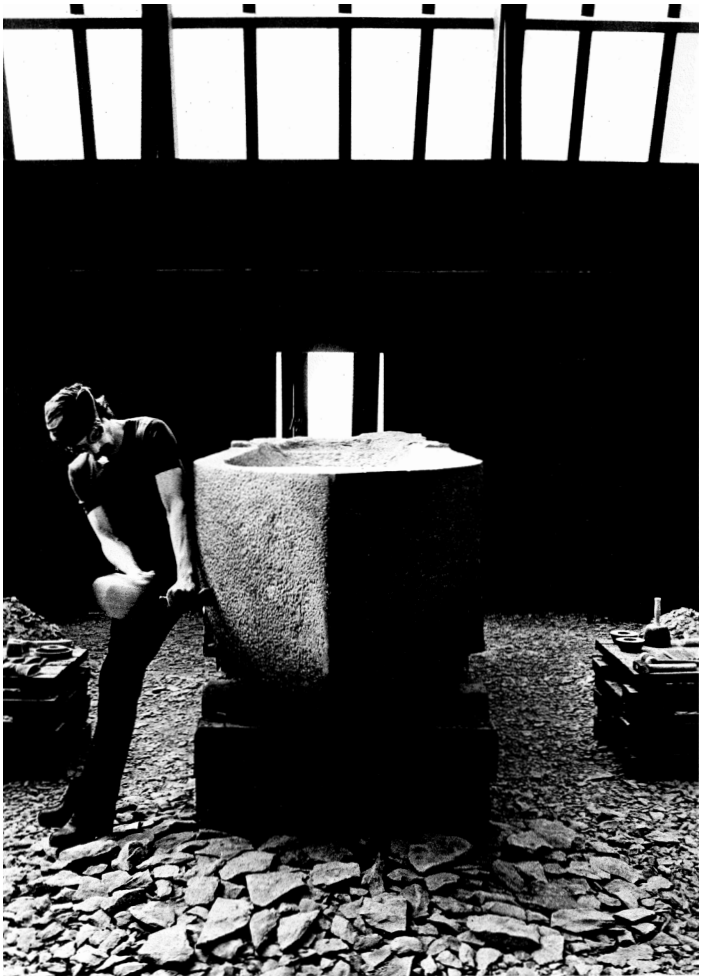
33. Havik, K. and G. Tielens (2013). "Concentrated Confidence." OASE 91(Building Atmosphere): 60-84.

34. The method of framing the landscape is applied in Zumthor's design of the Kolumba Museum in Cologne in an exceptional manner. The framing not only generates a concentrated view on the urban setting, but the highly orchestrated scenario additionally creates the sense of a framed scene, referring to the paintings of landscapes occupying the same space.

35. The desire to concretise the horizon may have to do with the fact that Zumthor grew up in the Swiss Alps. This mountain landscape fundamentally denies the perceiver a view of the horizon. It may be hard to imagine for a person who grew up in the flat dutch landscape, but the concretisation of the horizon evokes a strong orientational sensations compared to the landscape.





This artwork evolved around a wooden structure that was built in the IJsselmeer, where the artist took residence for three months. In this period an exercise in the transformation of matter was done by the artist through the sculpting of a boat of stone.

Hannsjörg Voth, *Boot aus Stein,* 1978-1981.

heightened awareness of the landscape which turns out to be a method to connect the perceiver to his or her environment in its own right.

'When I come across a building that has developed a special presence in connection with the place it stands in, I sometimes feel that is imbued with an inner tension that refers to something over and above the place itself. It seems to be part of the essence of its place, and at the same time it speaks of the world as a whole.'[36]

Architecture is a product of the landscape it is situated in, but its presence simultaneously generates a new experience and gives new meaning to the landscape. Design methods to establish a connection between architecture and land are focused on deriving meaning from the landscape, but architecture that is embedded in its context rather will be a product of a dialogue between building and surrounding[37]. This means that existing conditions that shape local identity should not merely be adopted into the new building, but the design rather should transcend the local identity to give new meaning. This approach of adding to the existing qualities while aiming to become an integral part of it, creates architecture and a built environment that are perceived as a harmonious and atmospheric whole.

By designing a building that is deeply rooted in place, time and culture, the existential sense of the perceiver is being engaged, generating a sense of belonging. Moreover, all these contextual values have become part of our being, not just mediating but defining our personality. The identity of the self coincides with the identity of the context you are part of. As atmosphere is part of the surroundings and part of the self, I am an intrinsic part of my surroundings mediated by the atmosphere. As Maurice Merleau-Ponty captures this fused state of being, 'The world is wholly inside, and I am wholly outside myself.'[38]

THE LANGUAGE OF MATTER

Gaston Bachelard in his phenomenological study, makes a distinction between 'formal imagination' and 'material imagination'. He argues that associative thought arising from material images evoke a deeper and more profound experience, then from formal image[39]. In this regard, the language of matter is preferable over formal language, because matter evokes unconscious images and emotions, which stimulates the projection of the self onto

36. Zumthor, P. (17 juni 2010). De Meelfabriek - A project of redevelopment and urban renewal. Lecture by Peter Zumthor. Theater De Doelen, Nederland Architectuur Instituut (currently named Het Nieuwe Instituut).

37. Pallasmaa, J. (2013). "Orchestrating Architecture: Atmosphere in Frank Lloyd Wright's Buildings." OASE 91(Building Atmosphere): 53-59.

38. Merleau-Ponty, M. (1962). The Phenomenology of Perception. London, Rouledge and Kegan Paul. p.407

39. Bachelard, G. (1969). The Poetics of Space - the classic look at how we experience intimate places. Boston, Beacon Press.

‘People interact with objects. As an architect that is what I deal with all the time. Actually, it’s what I’d call my passion. The real has its own magic. Of course, I know the magic that lies in thought. But what I’m talking about here is something I often find even more incredible: the magic of things, the magic of the real world.’

- Peter Zumthor

the experience. But the language of matter also has other qualities that make it the preferable architectural domain for the architect to concentrate on. I would argue that the language of matter is the architectural dimension that is most rooted in reality.

Material language is a fragile language. We have seen that fragmentation in both historical layers and physical layers, weakens the formal architectural image in favour of the presence of an associative field and unconscious images. Material surfaces possess this fragmented and layered quality through its infraction under the influence of weathering and use. The fragile quality of matter embeds the structure in reality through the traces of life and the passing of time that are expressed in its material surface. Material qualities are the most perceptible to the revenge of time and the imperfections of human reality. It is this vulnerability of matter that makes this architectural dimension the closest to life[40].

As architects we construct spaces and environments, but these are merely voids that are limited by matter. It is matter that defines infinite space and it is matter that is the real domain of the architect. Therewith it is also this material dimension that shapes the space of emotional sensibility and generates atmosphere. Matter has a sensorial essence. Each material evokes a specific set of sensations according to the architect's transformation of material into expressive matter[41]. In architectural design different material qualities are combined to create a specific set of sensations. Atmosphere arising from an architectural work is created through its unique composition of materials. We should think of material as a vast set of elements such as stone, wood, metal, but also temperatures, tactility and colours. But even living entities are matter, like water, vegetation and the human body, with its sensations, memories and intuition[42]. All is material, and is part of the palette with which the architect composes matter into an architectural setting and constructs atmosphere. In order to design an architectural environment with atmospheric quality, the architect should have a profound understanding of both material quality and material composition. It is real matter that is the architect's actual area of expertise.

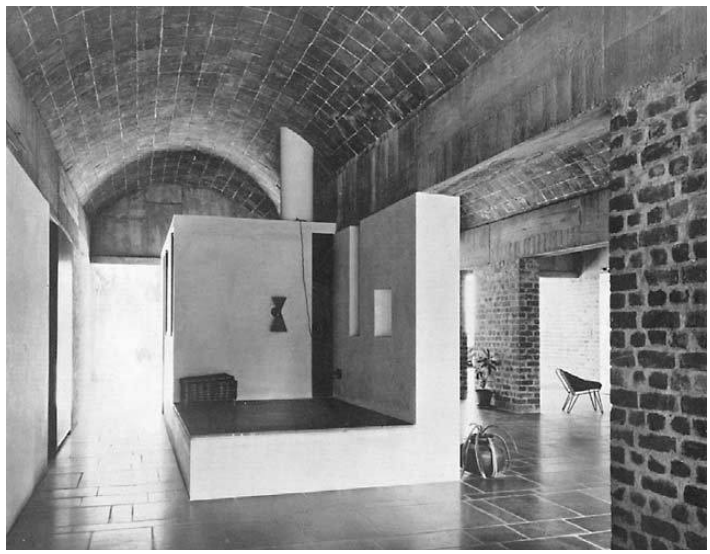
inherent material qualities Materials and the surfaces they construct, speak of the reality and time they are embedded in. The condition of the material surface

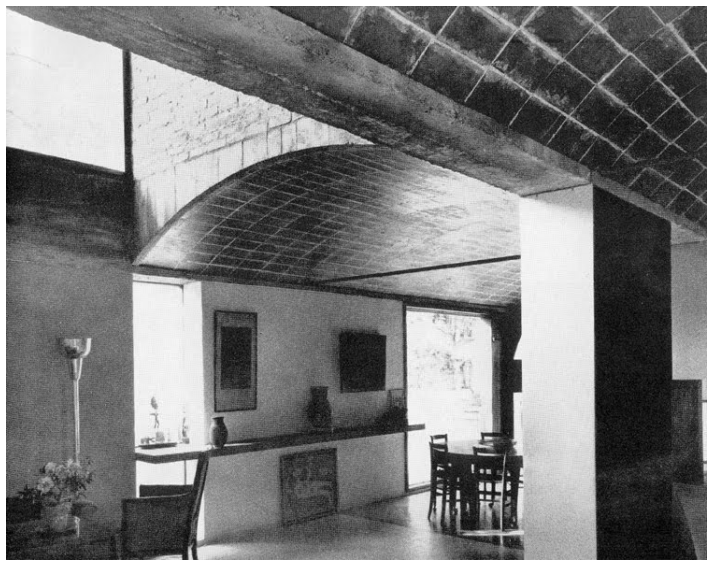
Zumthor, P. (2006). Atmosphere - Architectural environments - Surrounding objects. Basel - Boston - Berlin - Birkhäuser. p. 18-19

40. Pallasmaa, J. (2000). Hapticity and Time. Notes on Fragile Architecture. Encounters, Rakennustieto Publishing.

41. Ventura, S. (8th of may 2014). Material experimentation in Peter Zumthor's creative process. Lisbon, Originally presented at ARbD'14 – Fourth International Conference on Architectural Research by Design: Unifying Academia and Practice through Research.

42. Ibid. p. 11





Le Corbusier, *Villa Sarabhai,* Ahmedabad, India, 1951.

is a historical documentation of its past life. This past life may be the former function of the space it envelopes; a collection of scratches on the wall documenting the growth of the children that lived there, or the climatical conditions of the surrounding; a pattern of discolouration through the weathering of the material. But some materials also speak of their existential origin, possessing qualities that recall primordial images that are stored in our common memory. These existential material qualities have a profound effect on the atmospheric dimension.

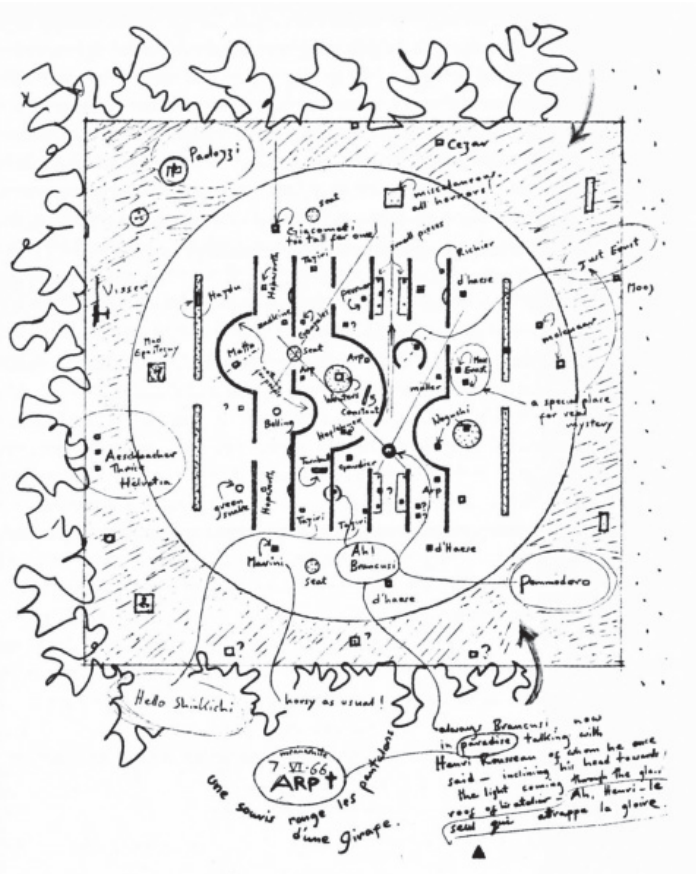
For instance, brick evokes a sense of gravity and permanence through its geological history and its creation under the stress of fire. And wood speaks of its former life as a tree, through the annual rings and direction of the fibres, concretising time and its transformation to becoming a human artefact. Consequently, the inherent characteristics of the material determine the technical properties, which greatly influences the possible applications, and therewith effects the atmospheric experience.

Inherent material qualities like weight and the reaction under force, usually result in a traditional technical application of the material, which we become used to encountering in our architectural environment. For instance, the technical properties of brick naturally do not allow a flat ceiling surface, but rather should be applied as a vault. Consequently we get used to encountering brick applied as ceiling, expressed as a vault. Because of the familiarisation with specific technical applications, we start to account the technique as being natural or 'logical' in the application of that specific material. The sense of logic, or the lack of it, that the material application evokes, can be exploited by the architect in the construction of atmosphere. For instance, when a brick volume is located at the ground level, the 'logical' technical application of stacking the heavy bricks, results in a sense of calm and groundedness according to the material properties. However, when a brick volume is elevated and rests upon a slender construction, the 'alogical' material application may evoke a sense of discomfort or even distress.

material compatibility The specific arrangement of material surfaces defines place and its atmosphere. The architect is the conductor of matter, creating material surfaces, structure, architecture and the built environment. Orchestrating all these material qualities also entails

'Architectural settings that layer contradictory ingredients project a special charm.'

- Juhani Pallasmaa



Aldo van Eyck, *Sketch in plan of the Sonsbeek Pavilion,* 1966.

choosing material expressions that are compatible with each other[43]. Depending on specific material qualities like weight, tactility, transparency, and existential qualities, the material expressions may be in conflict with each other or find harmony. If a rough and robust material expression in for instance stone is combined with a very light and soft wood, the softness may not be able to counteract the robustness. Material compatibility depends upon the 'critical proximity' the combined materials posses[44].

A frequently encountered theme in contemporary architecture is clear contrast between architectural characteristics. Material composition is no exception. Extremities like heavy-light, robust-smooth and rectangular-circular are being emphasised to generate a stark contrast. However, all to often these material compositions are in conflict, including the negative connotations that impair the atmospheric quality greatly, like the lack of harmony, alienation and discomfort.

I believe that highly atmospheric settings are created when the architect does not aim at an extreme difference between contradictory ingredients, but carefully layers them. The dutch architect Aldo van Eyck aims at this layered architectural expression with his terminology 'the twin phenomenon[45]'. This principle depends upon opposing concept pairs like, open-closed, light-dark, big-small. These concept pairs entail material quality and composition in the broadest sense, from inherent material qualities to the spatial articulation of the material surfaces. The reciprocity and simultaneous reconciliation of opposites that the 'twin phenomenon' entails, creates a balance in stimuli that will result in an architectural setting with a harmonious atmosphere.

I have been very critical of contemporary architecture that focuses on the conceptual abstract form and singular visual image. However, I have to recognise that qualities like geometrical abstraction also have their place in the creation of a harmonious atmosphere, as part of an opposing concept pair in which balance is pursued. The reality of architectural practice also has to consider these qualities, and even the construction of atmospheric settings will be a product of a combination of conceptual strength and sensual subtlety.

Pallasmaa, J. (2000). Hapticity and Time. Notes on Fragile Architecture. Encounters, Rakennustieto Publishing. p.329

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43. Zumthor, P. (2006). Atmosphere - Architectural environments - Surrounding objects. Basel - Boston - Berlin - Birkhäuser. p.22

44. Ibid. p. 27

45. The aim of the theory of *het tweelingfenomeen* is to create a dynamism within a rigid structure and vice versa. This is closely related to Van Eyck's ideology to create conditions for the future dwellers of his architectural projects rather then directions.

'Whereas the usual design process proceeds from a guiding conceptual image down to the detail, this architecture develops from real experiential situations towards an architectural form.'

- Juhani Pallasmaa

Hugo Häring, *Cowshed Gut Garkau*, Germany, 1926.

the architectural body The formal reduction of contemporary architecture that is focused on the conceptual abstract form and singular visual image, tends to totally disregard material qualities. This type of design process is guided by the architectural form and conceptual image, rather then emotional atmosphere and real experiential situations. As Pallasmaa argues, 'Architecture that is merely rich in form does not arouse our imagination or provide images for our minds. The value and reality of the inner subjective mental world is disgarded.'[46]

Episodic architecture, a late interpretation of Modernism[47], represents an approach of architectural design as a discipline of constructing experiences, rather then constructing abstract formal geometry. In the design process the singular visual image makes place for a fragile 'image of matter'. These architectural designs reject form as the ground for coherence, and depend upon the constancy of emotional atmosphere as the unifying architectural quality. 'Whereas the usual design process proceeds from a guiding conceptual image down to the detail, this architecture develops from real experiential situations towards an architectural form.'[48] The plan is a gradual progression made up out of scenes, episodes and detail elaborations, unified by the constancy of material sensations. This focus on a sequence of qualitative experiences often results in a formally fragmented plan lacking a coherent formal composition. However this fragmentation in form is in favour of a coherence in experiential and material composition. The layering of contradicting ingredients also resides here; a composition of similarity and contrast resulting into a unified, but dynamic whole.

Another design method that is guided by material composition in favour of experiential quality, evolves around the sensorial essence of matter. This considers an approach of the architectural body as being a composition of different layers of matter with different experiential qualities. A differentiation in construction, facade and interior elements allows the architect to explore the different material qualities and their tectonic quality as they come together. The building is approached as an anatomical body consisting out of bones, flesh and skin. 'Form is not something we work on, we apply ourselves to all other things. Sound, noises, material, construction, anatomy,

Pallasmaa, J. (2000). Hapticity and Time. Notes on Fragile Architecture. Encounters, Rakennustieto Publishing. p.329

46. Pallasmaa, J. (2005). The Place of Man: Time, Memory, and Place in Architectural Experience. Encounters I. P. MacKeith, Rakennustieto Publishing.

47. Also being referred to as the 'Second Tradition' of modernity, according to Colin St. John Wilson's recent book: Colin St. John Wilson, *The Other Tradition of Modern Architecture*, Academy Editions, London, 1995. Architect's like Alvar Aalto, Hans Scharoun, Hugo Häring and Frank Lloyd Wright are being described as an unorganised 'resistance movement' against the CIAM's rigid orthodoxy.

48. Pallasmaa, J. (2000). Hapticity and Time. Notes on Fragile Architecture. Encounters, Rakennustieto Publishing. p.326

Built structures that are articulated as architectural bodies: the skeleton and the monolith.

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Top: Peter Zumthor, *Steilenest Memorial,* Vardø, Norway, 2011.
Bottom: Peter Zumthor, *Therme Baths,* Vals, Switzerland, 1996.

etc. The body of architecture in the primary stages is construction, anatomy, putting things together in a logical fashion.'[49]

This does not mean the architect should not apply oneself to form, but rather should approach form as an integrated component of material quality and composition. When Peter Zumthor applies oneself to the developing architectural body, sometimes this body has a material quality that in its natural occurrence is a monolithic form. In that case the architectural body is approached from the inside out, defining a mass as the hollowing out of a material to reveal the light that is the substance of the interior[50] .

An example of the development of the architectural body as a hollowed out monolithic form, is Zumthor's most famous project Therme Vals in Switzerland. These baths in the rocky landscape of the Alps is designed as a material composition between the stone of the landscape, the water of the earth, the light from the sky and the flesh from its occupants. 'Mountain, stone, water, building in stone, building with stone, building into the mountain - our attempts to give this chain of words an architectural interpretation, to translate into architecture their meanings and sensuousness, guided our design for the building and step by step gave it form.' [51]

In contrast, a project that is an example of the same careful material composition but with an approach of the architectural body as light and layered anatomy, is the Steilneset Memorial in Vardø, Norway. This structure, in memory of those persecuted in the seventeenth-century Finnmark Witchcraft Trials, is red as a body in which each layer has its own material quality. The carefully composed combination of these material qualities and the subsequent tectonics arise sensations of frailness and the ephemeral quality of time.

the maker and the detail The architect composes material qualities to form an architectural setting. But before these material qualities can be composed, the architect needs to transform matter into expressive matter[52]. Part of the profound understanding and mastery of material that is required to construct emotional spaces and atmospheric architecture, is the process of making. The art of building, the actual process of how one builds, is a lost concept for many architects. Even though the architect no

49. Zumthor, P. (2006). Atmosphere - Architectural environments - Surrounding objects. Basel - Boston - Berlin - Birkhäuser.

50. Berteloot, M. and V. Patteeuw (2013). "Form/ Formless. Peter Zumthor's Models." OASE 91(Building Atmosphere).

51. Zumthor, P. (1998). Peter Zumthor Works: Buildings and Projects 1979-1997. Basel, Boston, Berlin, Birkhäuser. p.156

52. Ventura, S. (8th of may 2014). Material experimentation in Peter Zumthor's creative process. Lisbon, Originally presented at ARbD'14 – Fourth International Conference on Architectural Research by Design: Unifying Academia and Practice through Research.

In the summer of 2014 I participated in Hello Wood Project Village, a project that brings together an international team of students and professionals in the field of architecture to collaborate to design and built a collection of architectural experiments in a rural area of Hungary.

longer has the formal role of a master builder, handling the material on site and overseeing its composition, the union of thinking and making in the profession did not loose its relevance.

We have elaborated on the potential of the human body as a knowing entity and the union of mental and intellectual skills. I believe that when the architect actively expands her or his knowledge on the existential qualities of different materials, she or he may be more capable of orchestrating material qualities into expressive material compositions with great atmospheric quality. To experience the actual resistance of a material when you handle it physically and transform it to gain the desired expression, is very valuable for the architect in the construction of atmosphere.

I personally made the effort to develop my knowledge about the actual building process, by spending time on a building site as both an architect and a construction worker[53]. These experiences gave me great insight in the problems one may encounter on a building site. Conditions that are in stark contrast with the sterile environments in which we architects draw up the perfect plan. But moreover it taught me things that I consider to have become part of my embodied knowledge. The attention with which a brick wall should be laid, the temperament and velocity of freshly mixed concrete, the varying resistance of the wood to the chisel according to its annual rings. By handling the materials and feelings its resistance, I absorbed the knowledge as part of my being, and it will no doubt subconsciously instruct my future design process.

The notion of the architect as maker implies the design of the built environment could be considered craftsmanship. I would not define the architect as a craftsman, because of the ongoing change the concept of craft is subjected to[54]. However, the consideration involved in the process of making and the attention to detail are qualities associated with craft, that should also be involved in the process of constructing atmosphere in the built environment.

The profound understanding and mastery of materials is most strongly illustrated by the architectural detail, as the famous saying from Mies van der Rohe suggests[55]. In the detail the understanding of the material quality is illustrated through the way sensitivities like weight, tactility,

53. Among other project I was responsible for a small building project, considering the construction of a 35 m2 guesthouse in Heemstede, the Netherlands. The construction work involved the construction of a concrete foundation and floors, the laying of brick walls, and very extensive woodwork using hammer and chisel (see image on previous page).

54. The notion of *craftsmanship* has a lot of historical connotation, like the exclusive use of manual skills, the romantic notion of the humble craftsman in his workshop, and the use of low-tech primordial materials and traditional methods. These connotations are no longer suitable to contemporary realms of making, mainly because of the role technology has taken on. However, the notion of *craftsmanship* is currently subject to revision. Attention to detail, a sensitivity and consideration in the decision making process are qualities that are often mentioned in these efforts to update the notion of craft.

55. 'God is in the details' - Ludwig Mies van der Rohe

‘The tradition of craftsmanship is clearly gaining increasing value and appreciation in today’s reality of the technological world, mechanical production and the regrettable loss of the touch of the human hand in our mechanically mass-produced products and environments. In traditional cultures the entire life world is the product of human hands and the daily sphere of work and life means an endless passing of the hand skills and their products on to others; a traditional life world is a counties meeting and join of the hand of successive generations.’

- Juhani Pallasmaa

temperature and acoustic qualities are being treated. The specific composition of the material surfaces however transcend the material qualities into the tectonic realm.

Pallasmaa, J. (2012). The Eyes of the Skin: John Wiley and Sons Ltd. p.103

The tectonic realm represents a fusion of material composition, building technology and the emotional quality, appreciating all the architects fields of expertise. Tectonic qualities involve sensitivities like scale, rhythm and detail, but above all the reciprocal relation between the matter the architect composes to give shape to the space of emotional sensibility. The tectonic quality signifies the architect's ability as maker and as the conductor of real matter.

The corporeality of things and structures embeds all the elements of the architectural realm in reality. The material dimension is the area of expertise of the architect, and therewith the architect should have a profound understanding of material qualities and the sensations that may arise from them. The unique composition of materials with it's unique set of sensations, evokes the emotional sensibility of atmospheric quality. A mastery of the language of matter, enables the architect to construct atmosphere.

The architectural realm of matter involves materials and their sensitivities, but also living entities and even the corporeality of the human body with its sensations of memory and fantasy, are part of this material composition and the sensations arising from them. Therewith, the vast realm of matter may be orchestrated by the architect to embed the structure in its historical, cultural and physical context. The material qualities and composition have the ability to concretise place and time, and generate a profound existential relation between the perceiver and the architectural environment, generating true meaning in architecture. Because ultimately, the immaterial arises from the material.

THE MODEL AS METHOD

Moments in architectural history are typified by the method of architectural representation prevailing at that point in time. For instance, the current technique of computational rendering typifies contemporary architectural practice and its focus on hyperreality and speed. The instruments for architectural representation generate a specific

‘All is material, all enters the plane of composition to create an intensive space, while the space contracts and diffuses the qualities of its composing elements: its atmosphere.’

- Susana Ventura

Demand’s work consists of large photographs of temporary life-size paper constructions that he builds in front of the camera. The images - as the artist says - depict ‘places we know from our collective memory’.

Thomas Demand, *Copyshop 1999*. C-Print/ Diasec 97 x 107.2 cm.

mode of representation that seems to coincide with the understanding of the architectural phenomenon[56]. An understanding of architecture and space as an atmospheric and human experience, therewith should also be reflected in the preferred mode of representation.

The dutch movement De Stijl adopted the architectural model as the preferred representation of space. Part of the ideology of De Stijl concerned the approach of space as being an infinite continuum, and the approach of architecture as being a three-dimensional composition of planes, lines and points. The inherent qualities of the physical architectural model are very suitable for this specific understanding and approach of space. Moreover, the members of De Stijl adopted the physical architectural model as an instrument to test the developing spatial composition throughout the design process[57].

The physical architectural model has an inherent duality, that continuously has been interpreted and reinterpreted within the architectural discourse. The architectural model is the subject of a shift between realities; the model as a representation of an architectural work and the model as a reality in itself[58]. The architectural discourse has assumed different positions towards this duality. There are models that are made to represent the reality of the building as accurately as possible, there are architectural objects that exist only and primarily as model, models that totally disregard the differentiation between reality and model, and models that are meant to investigate architectural principles. In this range of positions towards the duality of the model; representation, object, sculpture and instrument, it will be the latter that will come to play an important role in the process of constructing atmosphere.

In the previous chapters I have proposed the nurture of the architect's atmospheric intelligence to heighten the sensitivity to the atmospheric dimension, an approach of uncertainty, a receptive state of mind, as a condition to engage this sensitivity, and the nurture of fragility as the connecting quality between architecture and reality. I would argue that the physical architectural model is an exceptionally suited instrument to engage sensitivity, to allow uncertainty and to nurture fragility in the design of atmospheric architecture.

Ventura, S. (8th of may 2014). Material experimentation in Peter Zumthor's creative process. Lisbon, Originally presented at ARbD'14 – Fourth International Conference on Architectural Research by Design: Unifying Academia and Practice through Research. p.11

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56. Pallasmaa, J. (2010). In Praise of Vagueness - diffuse perception and uncertain thought, University of Texas, Austin. p. 6

57. Even though the motivations behind the preferred mode of representation are very similar to the motivations behind the understanding of architecture as spaces of emotional sensibility, it must be noted that there also is a big dissimilarity considering perspective and scale. Namely, the interchangeable nature and scale of these spatial compositions as having the possibility to be architecture, furniture or even a daily object. The realised works assumed a model-like character.

58. Holtrop, A., J. Floris and H. Teerds (2011). "Models - The Idea, the Representation and the Visionary." OASE 84(Models): 11-23. p.22

‘If architecture is a veritable genre of space creation, then the model is fictional.

If architecture serves to stabilise, reinforce and build up the structure of the real, models can be understood as the architecture of the imaginary.

If architecture can structure our sense of reality, models can loosen and disrupt that structure - revealing the freedom that we have…

On the horizon of reality lies a skyline of paper volumes, cardboard coulisses and canvas cathedrals: everything reality does not yet believe in. ‘

- Milica Topalovic

a tangible testing ground The model is an instrument for communication, towards the clients, once's peers, but moreover to the architect oneself. The model allows the architect to test the envisioned atmospheric qualities in a tangible way, enabling the architect to concretise and strengthen the atmospheric quality of the work throughout the design process. The way in which the architectural articulation affects the perceiver is made visible in the model. When the architect has the imaginative ability to project a synthetic embodied experience[59] upon the perception of the model, the atmospheric effect of the architectural articulation can be tested.

The construction of atmosphere is primarily dependent on the architect's sensitivity for the atmospheric dimension, and the creative conception of atmosphere therewith depends upon the intuition of the architect. Intuitive sensitivity is the engagement of embodied knowledge and experience, which in turn is most effectively engaged in a state in which the cerebral is suppressed and the manual stimulated[60]. Creative conception that is based on embodied knowledge is stimulated by tools, like the model which stimulate a dynamic reciprocity between making and thinking. With the architectural model as instrument, the architect can evaluate ideas in an intuitive manner through the engagement of his or her embodied knowledge.

an open way of working When the architectural model is deployed as a working model, the instrument may have a naivety, that suppresses formal conception and intellectual aspirations and allows the architect to be led by his or her sensitivity for the developing atmosphere. These working models are made out of impermanent materials and solely serve as a means to test the architect's initial ideas, in contrast to the presentational models that have a more permanent character and that are expected to have an autonomous aesthetic appeal. The naivety of the working model, lacks the certainty and confidence of a final product[61], and therefore gives the architect enough time and space to sense the atmospheric quality of the work and add to it. With this distinction between working model and presentation model in mind[62], the introduction of the architectural model as a primary instrument in the process of constructing atmosphere, considers the working model. An approach of the architectural model as an object of evaluation, rather then an object of seduction.

As quoted in Holtrop, A., J. Floris and H. Teerds (2011). "Models - The Idea, the Representation and the Visionary." OASE 84(Models): 11-23. p. 23

59. Böhme, G. (2003). The Space of Bodily Presence and Space as a Medium of Representation. Transforming Spaces. The Topological Turn in Technology Studies. M. Hard, A. Lösch and D. Verdichio.

60. Pallasmaa, J. (2009). The Thinking Hand. Existential Wisdom in Architecture. Chisester, John Wiley.

61. Williams, T. and B. Tsien (1999). "On Slowness." 2G International Architecture Review 9. p.3

62. In dutch a linguistic distinction is made between *het model* (the working model) and *de maquette* (the presentation model). From hereon forward, the terminology (*architectural) model* is used to indicate the working model, unless stated otherwise.

‘This is too difficult to do without models. It is too complex, and I am not a genius.’

- Peter Zumthor

Peter zumthor explains the design of one of the three buildings at the old Allmannajuvet zinc mines in Sauda, Norway with a scale model.

The model encourages an open way of working. The model allows the architect to communicate with his or her colleagues or peers, while at the same time it is open to direct interventions. While the architects are discussing the architectural qualities, an extra opening in the facade can be cut to let in more light, or the skylight may be covered with some sketching paper diffusing the light. The impact of these interventions are directly visible and can be observed and adjusted freely.

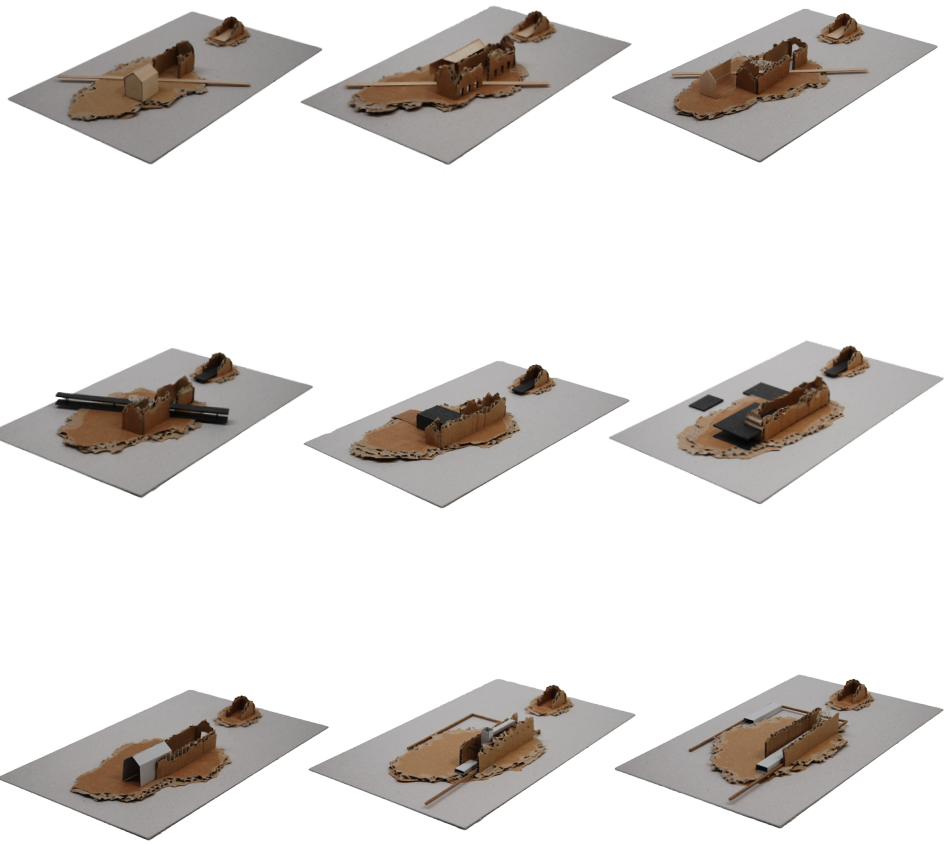
A cyclical process develops in which the model is the instrument to orientate, to interpret and to associate. The initial preferences regarding material, form or composition, based on the envisioned atmosphere are investigated in the first orientation. Subsequently the collection of sketch models are being interpreted on both an intellectual and an intuitive level, revealing the inexplicit preferences that become apparent in the model[63]. Finally the model may be transformed according to the associations and new ideas provided by the language of the model. With every full cycle, the architectural work comes closer to the envisioned architectural atmosphere, while simultaneously the initially envisioned qualities start to become more defined. The architectural model supports an empirical way of working; a design process of uncertainty and experimentation, guided by the sensitivity and experience of the architect.

The introduction of an approach of uncertainty is also embedded in the implementation of the model as an empirical instrument in the design process, as the model provides insight in unforeseen qualities. The dynamic and indeterminate character of the model encourages change and therewith a process of discovery. It is a way to encourage sidetracks and discover value in unforeseen characteristics, that ultimately are able to enrich the design. The accidental re-placement of a piece of cardboard may provide insight in a quality that was not intended or anticipated. Or the way different pieces of 'sketch material' come together, may inform the tectonic quality of the detail in the architectural work. In the early stages of the design process a series of thematic explorations through sketch models, will provide the initial steps of orientation, interpretation and association. But these inexplicit and poetic representations of non-entities or accidental compositions, also create a process with a sense of discovery. The model has 'the capacity to render the unimagined visible and to provide space for the unexpected'[64].

Havik, K. and G. Tielens (2013). "Concentrated Confidence." Ibid. 91(Building Atmosphere): 60-84. p.67

63. Stellingwerf, M. and P. Koorstra (2013). Model & Scale as Conceptual Devices in Architectural Representation. EAEA Conference 2013: Conceptual Representation: exploring the layout of the built environment.

64. Holtrop, A., J. Floris and H. Teerds (2011). "Models - The Idea, the Representation and the Visionary." OASE 84(Models): 11-23. p.21



The illustrated models are the products of a thematic exploration in the early stages of a design project I did in my early masters. In this project the primary design tool was the physical architectural model, in which the sketch models were to be both intellectually and intuitively appreciated according to the three steps of orientation, interpretation and association.

a tool of concentration The model requires a specific way of looking. Architectural principles like the building's relation to context, space and atmosphere as continuum, and the materiality and physicality of architectural structures, are impossible to disregard when the model is the primary instrument in the process of architectural design. The model forces to consider the building as a structure with a base and context rather then an autonomous object. This obligates the architect to consider the building as being part of it's surrounding. And even though some models on big scales treat buildings as a solid mass to grasp the urban plan, the model encourages the architect to consider both the spatial and atmospheric dimension of the exterior and the interior to be continuous. The exterior facade and the interior surfaces should be considered as reciprocal parts of a whole, since both their material composition influences the space and atmosphere gradually transitioning from building to environment.

Additionally, the model is an instrument to induce a concentration on all the different architectural aspects in a dynamic way. Peter Zumthor has adopted a design method that is based on an alternating focus on different architectural elements by attending to one specific architectural characteristic at a time[65]. The model is approached reciprocally in the concentration on materiality, composition, acoustics and light, and their relation to themes like landscape, intimacy and the architectural body. And this dynamic reciprocity also applies to the different perspectives and scales of the architectural work[66]. The model allows the architect to reciprocally concentrate on specific architectural themes, scales and sensitivities, while developing the overall atmospheric quality by engaging the architect's sensitivity for the atmospheric whole[67].

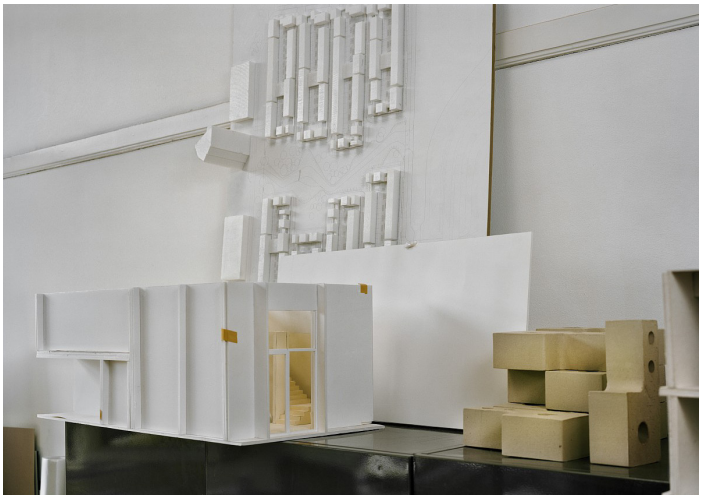
The chosen scale of a model could be considered as a conceptual device in architectural representation[68]. Models are subjected to an inevitably abstraction, and consequently the meaning communicated by the model remains implicit. The scale of a model, related to it's abstraction and level of detail, is a device to generate a thematic focus. This kind of reductive representation is a strong method of communication, however these kind of models are their own reality rather then illustrating qualities in the full scale of built reality. Switching between different scales with their different thematic focus throughout the design process, provides an understanding and insight of

65. Havik, K. and G. Tielens (2013). "Concentrated Confidence." Ibid. 91: 60-84.

66. The value of reciprocal concentration may also apply to different kinds of media. Switching between digital and manual techniques may enrich the realistic representational quality of the architectural model. The precision and unambiguity of a computational techniques like laser-cutting, and the tangibility and discovery-driven process of manually made physical models, may mutually enrich each other in the design process.

67. Ibid.

68. Stellingwerf, M. and P. Koorstra (2013). Model & Scale as Conceptual Devices in Architectural Representation. EAEA Conference 2013: Conceptual Representation: exploring the layout of the built environment. p.4



An impression of the model atelier of dutch architecture office Winhov. Within the office models are considered an important tool in the design process.

the complexity and interconnection of built reality, 'van stoel tot stad'[69]. An additional value is the physical presence of the models that are made throughout the process, as a documentation of the different options considered and a physical memory of the development of the plan.

approaching reality The synthetic sense of the architect, and his or her ability to project an embodied experience of the architectural atmosphere upon the tool at hand, is vital to the process of constructing atmosphere. The inherent characteristics of the physical model, like its physical presence, material substance and three-dimensionality, approach the reality of an embodied experience the closest. The supportive role of the model as instrument in the evocation of a synthetic embodied experience, is closely related to the instrument's ability to provide the possibility to assume an empathetic view of the future user. The model can be picked up and turned around, to provide a dynamic view of the spaces at eye-level. The way in which the model can be perceived, the perception at eye-level, the unfocused condition and the dynamic view, approaches the way the future user may perceive the atmospheric dimension. And even though the model is limited to being a fragment of the depicted environment, the dynamic nature of the model suggests completeness and an immersive bodily presence that no other instrument can provide.

The model may also be the most realistic in its representation of some vital atmospheric sensitivities, like the way the light falls, the sense of enclosure, and the diffuse way of perception. Other modes of representation or instruments, like drawings or renderings may depict these sensitivities, but are easily manipulated to become a misleading representation of reality. Additionally the model possesses a materiality and physicality, embedding the tool in reality rather then conceptual thought.

Even though some architects adopt the model as primary design instrument, the manner in which the final architectural work is presented differs strongly. In the office of Adam Caruso and Peter St John the models are central to their specific approach to architectural design[70]. Even though Caruso rejects the prioritisation of a single viewpoint and emphasises the importance of a dynamic view, the dominant mode of representation is a frozen image. The architects choose not to present the architectural models[71],

69. Bakema, J. B. (1964). Van Stoel tot Stad- Een verhaal over mensen en ruimte, W. de Haan.

70. Floris, J. and H. Teerds (2011). "On Models and Images - An interview with Adam Caruso." OASE 84(Models): 128-133. p. 132

71. An additional value to presenting both the presentation models and the working models, is that these artefacts represent the history and progress of the design process.

'The models, and the photographs of the models are a way of getting closer and closer to an image that is already in our minds, it is about articulating all of the qualities in that image. I like the fact that in a competition one can try to communicate the concept and the atmosphere of a project in one or two such images. I would say that the preoccupation in the office is not the production of models, but of finding the image of a project.'

- Adam Caruso

Caruso St. John Architects, *Model of Chichester Museum,* 2006.

but instead present the photographs made of these models. The positive notion of this reduction of the instrument is that the client or non-architects can imagine an immersive experience more easily, as if the image depicts a full-scale and complete environment. But even though, the photographer has to assume a mode of concentration, is able to shift the viewpoint and focus on details, the image produced does not have these qualities that are so essential to the experience and evaluation of atmosphere.

As quoted in Floris, J., & Teerds, H. (2011). On Models and Images - An interview with Adam Caruso. OASE, 84(Models), 128-133.

The physical architectural model has inherent characteristics that makes it an exceptional instrument to construct atmosphere. An instrument that allows an empirical design process, engaging sensitivity, stimulating uncertainty and nurturing fragility in the design of atmospheric architecture. But even though the model can be approached as its own reality, it will always be a reduced projection of built reality. However extensive the architect evaluates the atmospheric dimension in the architectural model, the complexity of the built reality with its dynamic between building, site and use will always bring something unexpected. It is in the unexpected that real poetic arises; the architect may only decide the condition under which it does.

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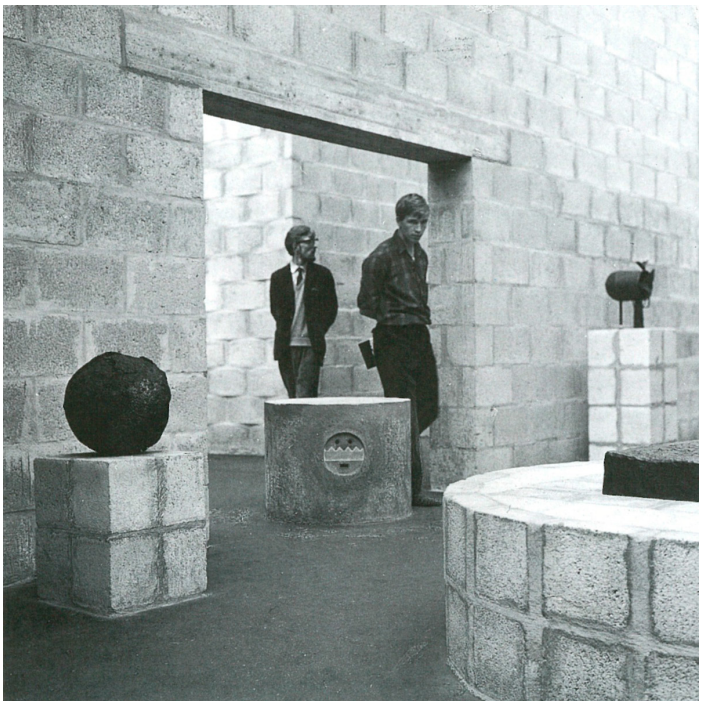
CONCLUSION

'The making of a good building, the harmonious building, one adapted to its purposes and to life, [is] a blessing to life and a gracious element added to life, is a great moral performance.'

- Frank Lloyd Wright



Aldo van Eyck, *Sonsbeek Exhibition Pavilion.* Arnhem, 1966.

in praise of balance Early on in the process of trying to understand the curious atmospheric phenomenon, I sensed that its ambiguous nature would be the generating force behind my fascination and motivation and at the same time would be the main obstacle of this research. This quality that felt so real and was so present everywhere, could not be a mere vague entity that we could not speak about. How could this experience of a density of feeling, a sense of well-being, a natural presence, a harmonious wholeness and poetic beauty emitting from space, be a quality that is not worth exploring and should remain in the untouched realm of vagueness? I am convinced that the mystification the atmospheric phenomenon is subjected to, is a product of Western culture and not of its insinuated mundane and empty vagueness. The strong tradition of focused rationality in established architectural discourse has not been ready to confront and understand ambiguous, diffuse, unfocused, emotive, sensitive and emergent phenomena. Fortunately, atmospheres are the subject of a fast-growing field of research in which vagueness and ambiguity are praised rather then rejected as insignificant.

Wright, F.L.(1955). Unknown source. Courtsey of The Frank Lloyd Wright Foundation.

The vague and indeterminate nature of the atmospheric dimension turned out to shape this research. A glance at the table of content, with titles like ambiguity, sensitivity, uncertainty and fragility reveals a celebration of soft, sensitive and subtle entities rather than strong, imposing and controlling structures. However, the research title *Constructing Atmosphere* from the outset of the research has projected an internal contradiction that should not be disregarded. As a response to the supremacy of conceptual idealism in the architectural discourse this work clearly advocates for soft experiential realism. Because of this dynamic one may easily loose perspective on the fact that we need both entities to create atmospheric architecture. In the reality of architectural practice, neither the one or the other should be given absolute priority. For truth lies in the interplay between them. Even though the tone of this research suggests otherwise, I would like to note that I do not condemn architecture of formal strength. Great atmospheric architects like Peter Zumthor, Sigurd Lewerentz, Lina Bo Bardi and Aldo van Eyck illustrate that it is vital to combine conceptual strength with sensual subtlety.

This balance between the strong and the soft also applies to the ambiguity of the undefinable phenomenon, the

‘As atmosphere is the common reality of the perceiver and the environment, it has the ability to mediate and establish a connection between the perceiver and the context, providing both a sense of reality and a sense of belonging. An architectural environment that is rooted in its context and reality through the atmospheric dimension, has the ability to concretise cultural identity and individual rootedness which are irreplaceable grounds of humanity.’

sensitivity for the atmospheric dimension, the uncertainty in approach of the design process, and the fragility in architectural orchestration. The architect who wants to understand the atmospheric phenomenon has to embrace ambiguity. The architect who wants to be(come) sensitive to the atmospheric dimension has to grow by receptivity, not force. The architect who wants to integrate atmosphere in the design process needs to assume an attitude of uncertainty, while being confident in one's own sensitive state. And the architect who wants to orchestrate the architectural aspects into an atmospheric whole will have to create strong structures with fragile qualities. In the end we as architects are employed with the task of constructing architecture and searching for atmosphere.

the existential condition Initiating this research I sensed that atmospheric quality is intrinsically linked with experiential quality, although I did not yet know what this interrelation meant. As did I have an innate interest in notions like humility, appropriation and contextuality in architectural design, yet I did not know how these qualities would relate to the atmospheric dimension just yet. It turned out that these qualities would all be an intrinsic part of atmospheric quality and ultimately would make me discover the quality that I consider to be the task of architecture.

As architects we have a responsibility to create an environment that supports and nurtures the state of man. Architecture is an envelope and background for life, not an object, an image or a language. In our mode of culture with its unprecedented speed and change, architecture has the ability to provide a counterbalance in concretising cultural continuity. Architecture that is embedded in its cultural, societal and historical context provides its inhabitants a contextual structure that concretises one's own identity. We are a part of countless contexts and identities that are constituent parts of our personality, and therefore our identity is an exchange with our context. Consequently, when an architectural environment is rooted in landscape, culture and societal reality as well as human experiential reality, it continues a cultural and collective narrative but also concretises personal identity. As atmosphere is the common reality of the perceiver and the environment, it has the ability to mediate and establish a connection between the perceiver and the context, providing both a sense of reality and a sense of belonging. An architectural environment that is rooted in its context and reality through

Luisa Lambri, *Untitled (Casa de Vidro, #02),* 2003 (Lina bo Bardi) São Paulo, Brazil, 1951.

the atmospheric dimension, has the ability to concretise cultural identity and individual rootedness which are irreplaceable grounds of humanity.

This existential issue of the atmospheric experience and the inhabitation of space illustrates that the sense of self coincides with the sense of the world around us, with spatial constructs as their mediator. As such, the atmospheric dimension acts as an intermediary between the perceiver and the perceived, between the subject and the object, between the feeling body and the spatial environment, between the self and the world. Only architecture has the ability to articulate the existential meaning of the human inhabitation of space. The true task of architecture is concretising the existential condition of man. Mediating between the self and the world, architecture provides the horizon by which to comprehend the world as well as ourselves.

on humility My final note inevitably should be about the role of the architect. If the architect's primary responsibility is to create an architecture that supports man's existential condition, the claim on the architect's ability to fulfil this task is overwhelmingly great. The strong tradition of powerful and confident personae in architectural society has created the illusion that the architect is a hero, in control of all that evolves the realm of man and matter. Considering the atmospheric dimension of the architectural environment the enabler of the existential meaning of the inhabitation of space, this core quality of architectural design cannot simply be addressed or controlled. To concentrate on how to construct atmosphere does not only involve the risk of impairing the essence of the ambiguous phenomenon, but also may mean the dissolution of the figure of the architect. A shift in the role of the architect from hero to humble figure, in favour of atmospheric architecture inevitably means the surrender of some of the domain of control of the architect. But the architect should not aspire to control, but should aspire to support. If the architect is humble enough to abandon the illusion of his or her superior position, and to commit oneself to creating a condition that allows sensitivity, uncertainty and fragility, atmospheric quality may be found. After all real atmospheric quality and human meaning in architecture and the built environment is not to be controlled or constructed, but arises from life itself.

This work begins
with the active presence.

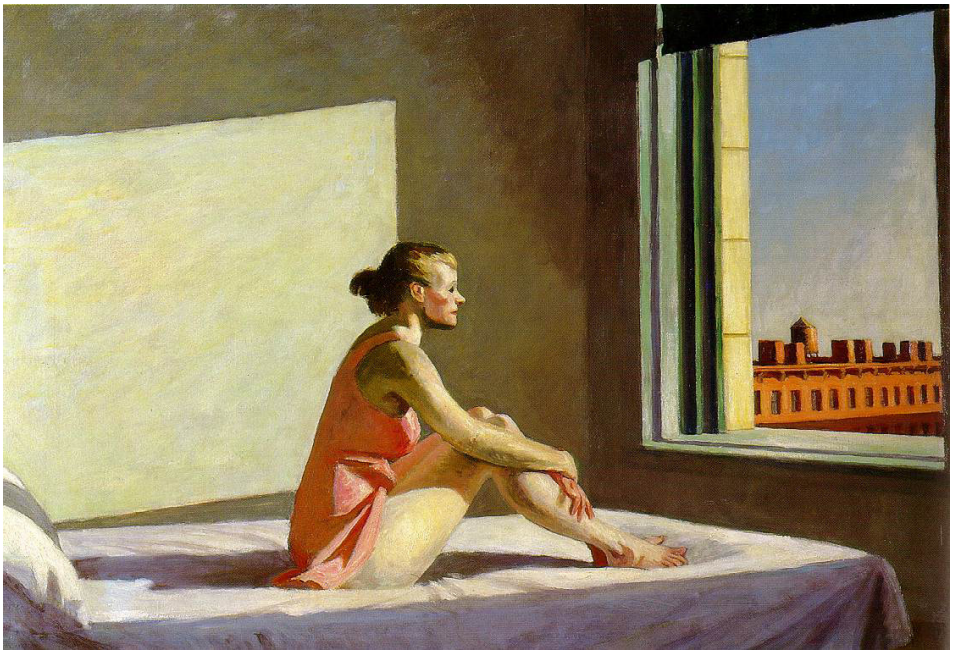
'Work' is amidst change.
It is without predefinition from
a material, from modes that are
plugged in, or attached.
It is not in context with what is
named an 'installation'.
The air, the light of the sun,
the water, the dialogue of people
can't be affixed or 'installed'.

It is not a subject. It is not an object.
It is not passive. It is not finished.

What could be called 'work' would
be in concert with the whole of
world and with what is in continuous
movement as is language itself.

- Maria Nordman

EPILOGUE



Edward Hopper, *Morning Sun,* 1952, Oil on canvas, 71.1 x 101.6 cm, Metropolitan Musum of Art, New York.

embracing duality Throughout my study I gravitated towards a kind of architecture that I could not yet define. I did several attempts of exploring topics like architecture and the senses, spatial psychology and phenomenology. But either the weight of the theory - so paradoxical to the sensitive quality I was looking for - or the general dismissal of the poetic vagueness inherent to this quality, led me to eventually abandon my search. It was in the first weeks of doubt and indeterminacy at the start of the process of graduation in Explore Lab that I found the quality I had come to consider the essence of qualitative architecture: atmosphere.

Nordman, M. (1986). *De Sculptura - works in the city.* München: Schrimer/ Mosel. p.9

As I started the journey of exploring this topic I was convinced that the way to approach this topic was as ambiguous and sensitive as the topic itself. But soon it became clear that in order to grasp this phenomenological phenomenon, I had to surrender myself to a substantial body of literature which ultimately resulted in a theoretical research. The phenomenological knowledge that I had to gain in order to understand the perception of atmosphere, the knowledge on the mental ground of creative perception and thought that I had to gain to understand the process of integrating atmospheric quality in the design process, and the knowledge on the relation between atmospheric quality and architectural characteristics that I had to gain in order to understand how to achieve architectural atmosphere, led to a research that was far from limited or defined. It is the enormous scope of the topic that unconsciously generated a shift in the research from the predefined topic to the formulation of my personal view on what architecture should be. My search for atmospheric quality in the design of architecture and the built environment ultimately turned out to be the infrastructure for the crystallisation of my personal view on the existential task of architecture.

I am so grateful for the chance I got to be uncertain, to explore and to grow. As I applied for Explore Lab Studio I could make an endless list of topics and themes that fascinated me, but with every one of them I could not shack the nagging feeling of it being to mundane or not enough. This feeling of doubt and dissatisfaction is easily dismissed by ascribing it to personal characteristics like perfectionism and inflexibility, which I have done myself so many times. I tend to be precise and am eager to get to the essence of every topic I explore. This is also the reason that this research has been as extensive as it has

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movement as is language itself.

- Maria Nordman

been. However, during this graduation research I also have gotten the chance to allow my other more intuitive and sensitive inclinations to surface.

Nordman, M. (1986). *De Sculptura - works in the city.* München: Schrimer/ Mosel. p.9

In spite of my tendency for rational accuracy, in the end I will always depend upon my intuition to find a subtlety, balance and poetic quality in the overall work that I consider to be the dimension that accounts for real meaning. Just like the atmospheric dimension, real meaning arises when you can abandon rationality and be uncertain enough to allow yourself to sense it. I feel this internal duality will always to some extend be the source of a personal conflicted state during every research or design process I will venture. But at the same time the consideration and attentiveness for the task at hand may also accumulate a quality that otherwise may not have surfaced. Rather then apologising for this inherent personal duality like I have done, I may rather embrace it, as I have discovered that an architect may need both accuracy and indeterminacy to create meaningful architecture.

This process has been really demanding, but has also been more formative than any process during my whole study in architecture. I have really gotten the chance to explore what I think architecture should be and who I want to be as an architect. I feel like this is the proper conclusion to my time as an architecture student and at the same time the modest outset for a vision and conviction that I expect to alter and develop throughout the rest of my career as an architect.

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COLOPHON

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~~CONSTRUCTING ATMOSPHERE~~

in search of atmospheric architecture