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Hapticity and Time

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Hapticity and Time

Juhani Pallasmaa

Notes on fragile architecture

Materials and surfaces have a richly complex language of their own that evolves and changes over time. In this major essay, Juhani Pallasmaa puts the case for haptic, sensuous architecture.

Modern consciousness and sensory reality have gradually developed towards the unrivalled dominance of the sense of vision. This thought-provoking development has been observed and analyzed by a number of philosophers in recent years. [1] David Michael Levin, one of today's thinkers concerned with the hegemony of vision, motivates the philosophical critique of the visual bias in the following words: 'I think it is appropriate to challenge the hegemony of vision in the ocularcentrism of our culture. And I think we need to examine very critically the character of vision that predominates today in our world. We urgently need a diagnosis of the psychosocial pathology of everyday seeing -- and a critical understanding of ourselves, as visionary beings'. [2]

I believe likewise that many aspects of the pathology of today's architecture can also be understood through a critique of the ocular bias of our culture. As a consequence of the power of the eye over the other sensory realms, architecture has turned into an art form of instant visual image. Instead of creating existential microcosms, embodied representations of the world, architecture projects retinal images for the purpose of immediate persuasion. Flatness of surfaces and materials, uniformity of illumination, as well as the elimination of micro-climatic differences, further reinforce the tiresome and soporific uniformity of experience. All in all, the tendency of technological culture to standardize environmental conditions and make the environment entirely predictable is causing a serious sensory impoverishment. Our buildings have lost their opacity and depth, sensory invitation and discovery, mystery and shadow.

Multi-sensory experience: the significance of touch

Every significant experience of architecture is multi-sensory; qualities of matter, space and scale are measured by the eye, ear, nose, skin, tongue, skeleton and muscle. Maurice Merleau-Ponty emphasizes this simultaneity of experience and sensory interaction as follows: 'My perception is [therefore] 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'. [3]

Even the eye collaborates with the other senses. All the senses including vision, are extensions of the sense of touch: the senses are specializations of the skin, and all sensory experiences are related to tactility. Ashley Montagu's view, based on medical evidence, confirms the primacy of the tactile realm: '[The skin] is the oldest and the most sensitive of our organs, our first medium of communication, and our most efficient protector [...]. Even the transparent cornea of the eye is overlain by a layer of modified skin [...]. Touch is the parent of our eyes, ears, nose, and mouth. It is the sense which became differentiated into the others, a fact that seems to be recognized in the age-old evaluation of touch as 'the mother of the senses'. [4] Touch is the sensory mode which integrates our experience of the world and of ourselves. Even visual perceptions are united and integrated into the haptic continuity of the self; my body remembers who I am and where I am placed in the world. In the opening chapter of *Combray*, Marcel Proust describes how the protagonist wakes up in his bed and gradually reconstructs his world on the basis of 'the memory of the sides, knees and shoulders'. [5]

The task of architecture is to make visible 'how the world touches us', [6] as Maurice Merleau-Ponty wrote of the paintings of Paul Cézanne. Paraphrasing another notion of Merleau-Ponty's: architecture concretizes and frames human existence in the 'flesh of the world'. [7] In developing Goethe's notion of 'life-enhancing' in the 1890s, Bernard Berenson suggested that when

experiencing an artistic work we imagine a genuine physical encounter through 'ideated sensations'. The most important of these Berenson called 'tactile values'. In his view, the work of authentic art stimulates our ideated sensations of touch, and this stimulation is life-enhancing. [8] Genuine architectural works, in my view, also evoke similar ideated tactile sensations which enhance our experience of ourselves.

The retinal-biased architecture of our time is clearly giving rise to a quest for a haptic architecture. Ashley Montagu sees a wider change taking place in Western consciousness: We in the Western world are beginning to discover our neglected senses. This growing awareness represents something of an overdue insurgency against the painful deprivation of sensory experience we have suffered in our technologized world'. [9] Our culture of control and speed has favoured the architecture of the eye, with its instantaneous imagery and distant impact, whereas haptic architecture promotes slowness and intimacy, appreciated and comprehended gradually as images of the body and the skin. The architecture of the eye detaches and controls, whereas haptic architecture engages and unites. Tactile sensibility replaces distancing visual imagery by enhanced materiality, nearness and intimacy.

We are not usually aware that an unconscious element of touch is unavoidably concealed in vision; as we look, the eye touches, and before we even see an object we have already touched it. 'Through vision, we touch the stars and the sun', [10] as Merleau-Ponty writes. Touch is the unconsciousness of vision, and this hidden tactile experience determines the sensuous quality of the perceived object, and mediates messages of invitation or rejection, courtesy or hostility.

Matter and time

'Architecture is not only about domesticating space', writes Karsten Harries, Professor of Philosophy at Yale University, 'It is also a deep defence against the terror of time. The language of beauty is essentially the language of timeless reality.' [11] Architecture's task to provide us with our domicile in space is recognized by most architects, but its second task in mediating our relation with the frighteningly ephemeral dimension of time is usually disregarded.

In its quest for the perfectly articulated autonomous artefact, the main line of Modernist architecture has preferred materials and surfaces that seek the effect of flatness, immaterial abstractness and timelessness. Whiteness, in Le Corbusier's words, serves 'the eye of truth', [12] mediating thus moral and objective values. The Modernist surface is treated as an abstracted boundary of volume, and has a conceptual rather than a sensory essence. These surfaces tend to remain mute, as shape and volume are given priority; form is vocal, whereas matter remains mute. The aspiration for geometric purity and reductive aesthetics further weakens the presence of matter, in the same way that a strong figure and Contour reading diminishes the interaction of colour in the art of painting; all real colourists in painting use a weak Gestalt in order to maximize colour interaction. Abstraction and perfection transport us into the world of ideas, whereas matter, weathering and decay strengthen the experience of time, causality and reality.

As a consequence of its formal ideals, the architecture of our time is usually creating settings for the eye which seem to originate in a single moment of time and evoke the experience of flattened temporality. Vision places us in the present tense, whereas haptic experience evokes the experience of a temporal continuum. The inevitable processes of ageing, weathering and wear are not usually considered as conscious and positive elements in design; the architectural artefact exists in a timeless space, an artificial condition separated from the reality of time. [13] The architecture of the modern era aspires to evoke an air of ageless youth and of a perpetual present. The ideals of perfection and completeness further detach the architectural object from the reality of time and the traces of use. Consequently, our buildings have become vulnerable to the effect of time, the revenge of time. Instead of offering positive qualities of vintage and authority, time and use attack our buildings destructively.

A particularly thought-provoking example of the human need to experience and read time through architecture is the tradition of designed and built ruins, a fashion that became a mania in eighteenth-century England and Germany. While

engaged in the construction of his own house in Lincoln's Inn Fields - which, by the way, incorporated images of ruins - John Soane imagined his structure as a ruin by writing a fictitious study of a future antiquarian. [14]

There are architects in our time, however, who evoke healing experiences of time. The architecture of Sigurd Lewerentz, for instance, connects us with deep time; his works obtain their unique emotive power from images of matter which speak of opaque depth and mystery, dimness and shadow, metaphysical enigma and death. Death turns into a mirror image of life; Lewerentz enables us to see ourselves dead without fear, and placed in the continuum of timeless duration, the 'womb of time', to use an expression of Shakespeare's from Othello. These are dreams of the fired clay brick in the same way that Michelangelo's sculptures and buildings are dreams of marble; the observer is permitted to enter the unconsciousness of stone.

The language of matter

Materials and surfaces have a language of their own. Stone speaks of its distant geological origins, its durability and inherent symbolism of permanence; brick makes one think of earth and fire, gravity and the ageless traditions of construction; bronze evokes the extreme heat of its manufacture, the ancient processes of casting and the passage of time as measured in its patina. Wood speaks of its two existences and time scales; its first life as a growing tree and the second as a human artefact made by the caring hand of a carpenter or cabinetmaker. These are all materials and surfaces that speak pleasurably of time.

As a reaction to the loss of materiality and temporal experience, we again appear to becoming sensitive to messages of matter, as well as to scenes of erosion and decay. Materiality, erosion and ruins have been favoured subject matters of contemporary art from Arte Povera and Gordon Matta-Clark to Anselm Kiefer and the films of Andrei Tarkovsky. The art of Jannis Kounellis expresses dreams and memories of matter, whereas Richard Serra's and Eduardo Chillida's uniquely authoritative masses of forged iron awaken bodily experiences of weight and gravity. These works directly address our skeletal and muscular system: they are communications from the muscles of the sculptor to those of the viewer. Contemporary art and architecture are again recognizing the sensuality and eroticism of matter. The popularity of earth as a subject and medium of artistic expression is another example of this growing interest in images of matter. The imagery of Mother Earth suggests that after the utopian journey towards autonomy, immateriality, weightlessness and abstraction, art and architecture are moving back towards primordial female images of interiority, intimacy and belonging.

Collage and assemblage are favoured techniques of artistic representation in our time; these media enable an archaeological density and a non-linear narrative through the juxtaposition of fragmented images deriving from irreconcilable origins. Collage invigorates the experience of tactility and time. Collage and film are the most characteristic art forms of our century, and have penetrated into all other forms of art, including architecture.

Material imagination

In his phenomenological investigation of poetic imagery, Gaston Bachelard makes a distinction between 'formal imagination' and 'material imagination'. [15] He considers images arising from matter project deeper and more profound experiences than images of form. Matter evokes unconscious images and emotions, but modernity at large has been primarily concerned with form. However, engagement with material imagination seems to characterize the entire 'Second Tradition' of modernity, to use the title of Colin St. John Wilson's recent book. [16]

In his development away from the retinality of the Modern Movement towards a multi-sensory engagement, Alvar Aalto made a distinct step towards 'images of matter'. Significantly, at the same time, he rejected the universalist ideal of modernity in favour of a regionalist, organic, historic and romantic aspiration. In his episodic architecture, Aalto suppresses the dominance of a singular visual image. This is an architecture that is not dictated by a dominant conceptual idea right

down to the last detail; it grows through separate architectural scenes, episodes, and detail elaborations. Instead of an overpowering intellectual concept, the whole is held together by the constancy of an emotional atmosphere, an architectural key, as it were.

In the mid- 1930s Erik Gunnar Asplund, Erik Bryggman and Alvar Aalto made remarkably parallel moves away from the Functionalist aesthetics of reduction towards a layered and multi-sensory architecture. Asplund described this change of ideals in a 1936 lecture: "The idea that only design, which is comprehended visually, can be art is a narrow conception. No, everything grasped by our other senses through our whole human consciousness and which has the capacity to communicate desire, pleasure, or emotions can also be art'. [17]

This transition implies a departure from the predominantly visual and masculine air of modern architecture towards a tactile and feminine sensibility. The feeling of external control and visual effect is replaced by a heightened sense of interiority and tactile intimacy. Sensuous materiality and the sense of tradition evoke a benevolent experience of natural duration and temporal continuum. Whereas the architecture of geometry attempts to build dams to halt the flow of time, haptic and multi-sensory architecture makes the experience of time healing and pleasurable. This architecture does not struggle against time, it concretizes the course of time and makes it acceptable. It seeks to accommodate rather than impress, evoke domesticity and comfort rather than admiration and awe.

The architecture of experiential events

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. As drawings, in fact, these buildings might sometimes appear vague, fragmentary or incomplete, as the design aims solely at qualities arising in the lived experiential situation. This is an architecture of sensory realism in opposition to conceptual idealism. Speaking of his cultural realism, Aalto writes: 'Realism usually provides the strongest impulses [also] for my imagination'. [18]

Architecture is usually understood as a visual syntax, but it can also be conceived through a sequence of human situations and encounters. Authentic architectural experiences derive from real or ideated bodily confrontations rather than visually observed entities. Authentic architectural experiences have more the essence of a verb than a noun. The visual image of a door is not an architectural image, for instance, whereas entering and exiting through a door are architectural experiences. Similarly, the window frame is not an architectural unit, whereas looking out through the window or daylight coming through it, are authentic architectural encounters.

In his description of the design process of the Paimio Sanatorium, Aalto formulates a design philosophy progressing from the identification and articulation of experiential situations: '[...] a building has to be conceived from inside outwards, that is, the small units and details with which a person is engaged form a kind of framework, a system of cells, which eventually turns into the entity of the building. At the same time as the architect develops a synthesis from the smallest cells onwards, the opposite process exists and the architect keeps the entity in his mind'. [19]

Using this method of analyzing experiential situations, Aalto conceived the sanatorium as a carefully and empathetically studied instrument of healing for the benefit of human beings at their weakest, 'the horizontal human being', [20] as Aalto calls his hospitalized client. Aalto's sanatorium could well be the one building in the history of modernity that contains the highest concentration of technical innovations, yet it is firmly rooted in human experiential reality.

Fragile architecture

Our culture aspires to power and domination and this quest characterizes Western architecture as well; architecture seeks a powerful image and impact. Referring to a way of philosophizing that does not aspire to totalize the multitude of human

discourses into a single system, the Italian philosopher Gianni Vattimo introduced the notions of 'weak ontology' and 'fragile thought', *il pensiero debole*. [21] Vattimo's idea, which has aroused world-wide interest since the early 1980s, seems to be interestingly parallel to Goethe's method of 'Delicate Empiricism' (*Zarte Empirie*), an effort 'to understand a thing's meaning through prolonged empathetic looking and understanding it grounded in direct experience' [22] 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. It is concerned with real sensory interaction instead of idealized and conceptual manifestations. This architecture grows and opens up, instead of the reverse process of closing down from the concept to the detail. [23] Because of the negative connotations of the word 'weak', we should, perhaps, use the notion 'fragile architecture'.

The idea of 'weakness' as an architectural principle has emerged simultaneously in various writings. As I was developing my own views of fragile architecture, I came across an essay entitled 'Weak Architecture' (1987) by the Spanish architect and theoretician Ignasiola Sola-Morales. [24] Also Peter Eisenman has used the notion of weak architecture in his writings [25] Sola-Morales projects Vattimo's ideas on the reality of architecture somewhat differently from my interpretation. 'In the field of aesthetics, literary, pictorial and architectonic experience can no longer be founded on the basis of a system: not a closed, economic system such as that of the classical age [...] the present-day artistic universe is perceived from experiences that are produced at discrete points, diverse heterogeneous to the highest degree, and consequently our approximation to the aesthetic is produced in a weak, fragmentary, peripheral fashion, denying at every turn the possibility that it might ultimately be transformed definitively into a central experience', [26] Sola-Morales writes. He defines 'event' as the fundamental ingredient of architecture and concludes as follows: "This is the strength of weakness; that strength which art and architecture are capable of producing precisely when they adopt a posture that is not aggressive and dominating, but tangential and weak" [27]

A recent issue of *Daidalos* [28] devoted to urban strategies, refers to Sola-Morales's essay and develops the ideas of 'weak urbanism'. The dominant trends of town planning have also been based on strong strategies and strong urban form, whereas the medieval townscape as well as the urban settings of traditional communities have grown on the bases of weak principles. Strong strategies are reinforced by the eye, the sense of distant control, whereas weak principles give rise to the haptic townscape of intimacy and participation.

A similar weak structure has also emerged in literature and cinema. The new French novel, *nouvelle roman*, deliberately fragments the linear progression of the story and opens it up to alternative interpretations. The films of Michelangelo Antonioni and Andrei Tarkovsky, on the other hand, exemplify a weak cinematic narrative, [29] which is based on improvisation, and creates a deliberate distance between the image and the narrative with the intention of weakening the logic of the story and thus creating an associative field of clustered images. Instead of being an external spectator of the narrative event, the reader/viewer is made a participant who accepts a moral responsibility for the progression of the events.

The power of weakness

The idea of fragility suggests listening and dialogue. In the early 1980s, the Finnish painter Juhana Blomstedt entitled a series of his paintings 'The Listening Eye'. [30] This notion suggests a humbled gaze liberated from the desire for patriarchal domination. Perhaps, we should also conceive architecture through a listening eye. Geometry and formal reduction serve the heroic and utopian line of architecture that rejects time, whereas materiality and fragile form evoke a sense of humility and duration.

The idea of weak image in architecture seems to run parallel with the idea of 'weak force' in physics, as well as the weak processes of nature when compared to the use of excessive physical violence in our technological processes. [31] Besides, architecture is an art form of inherently weak impact compared, for instance, with the flood of emotions mobilized by

theatrical, cinematic and musical experiences. The strength of architectural impact derives from its unavoidable presence as the perpetual unconscious pre-understanding of our existential condition. A distinct 'weakening' of the architectural image takes place through the processes of weathering and ruination. Erosion wipes away the layers of utility, rational logic and detail articulation, and pushes the structure into the realm of uselessness, nostalgia and melancholy. The language of matter takes over from the visual and formal effect, and the structure attains a heightened intimacy. The arrogance of perfection is replaced by a humanizing vulnerability. This is why artists, photographers, filmmakers and theatre directors tend to utilize images of eroded and abandoned architecture to evoke a subtle emotional atmosphere.

In his essay on Peter Brook's manipulation of the architectural space through destruction for theatrical purposes, [32] Andrew Todd writes: 'The walls engage time in a complex way. There is an after-echo of the original bourgeois music hall form, and this is rendered profound, even tragic, by the opening up of the layers of time on the walls. The top skin which seals the imagination at a specific style or period has been scorched away, so the walls exist in an indeterminate time, part way between cultural definition and eschatological dissolution. But this is no dead ruin: Brook has not been afraid to bash the place around a little more, breaking holes, putting in doors [...]. One can also speak of another virtual patina the walls have acquired through the accruing memory of Brook's work in there'. [33] This description evokes Rainer Maria Rilke's stunning chapter in *The Notebooks of Malte Laurids Brigge*, where the protagonist reads the life that has been lived in an already demolished house through the traces it has left on the end wall of the neighbouring building; in fact these are signs by which the young man reconstructs essential aspects of his childhood and self. [34] A similar weakening of architectural logic also takes place in reuse and renovation. The insertion of new functional and symbolic structures short-circuits the initial architectural logic and opens up the emotional and expressive range. It is indeed thought-provoking, that architectural settings which layer contradictory ingredients project a special charm. Often the most enjoyable museum, office or residential space is that which is fitted into a recycled building.

The ecological approach also favours an adaptive image, parallel to the inherent weakness of ecologically adapted processes. This ecological fragility is reflected in today's art, as, for instance, in the poetic works of Richard Long, Hamish Fulton, Wolfgang Leib, Andy Goldsworthy and Nils-Udo, all set in a subtle dialogue with nature. Here again, artists set an example for architects.

The art of gardening is an art form which is inherently engaged with time, change and fragile image. On the other hand, the geometric garden exemplifies the attempt to domesticate nature into patterns of man-made geometry. It is evident that the tradition of landscape and garden architecture can provide inspiration for an architecture liberated from the constraints of geometric and strong image. The biological models, bio-mimicry, have already entered various fields of science, medicine and engineering. Why should they not be valid in architecture? It seems to me that the more subtle line of high-tech architecture is already heading in that direction.

Images of fragile architecture

The architecture of the Japanese garden, with its multitude of parallel, intertwining themes fused with nature, and its subtle juxtaposition of natural and man-made morphologies, is an inspiring example of the aesthetic power of weak form. The remarkably sensitive architecture of Dimitris Pikionis in the footpaths leading to the Acropolis in Athens, the reassuringly abstracted waterfall of Lawrence Halprin's Ira's Fountain in Portland, Oregon, and Carlo Scarpa's meticulously crafted architectural settings, are contemporary examples of an architecture that places us in a different relation to space and time than the architecture of eternal geometry. These are examples of an architecture whose full power does not rely on a singular concept or image. The work of Pikionis is a dense conversation with time and history to the degree that the design appears as a product of anonymous tradition without drawing attention to the individual creator. Halprin's designs explore the threshold between architecture and nature; they have the relaxed naturalness of scenes of nature, yet they read as a man-made counterpoint to the geological and organic world. Scarpa's architecture creates a dialogue between concept and

making, visuality and tactility, artistic invention and tradition. Although his projects often seem to lack an overall guiding idea, they project an impressive experience of architectural discovery and courtesy.

Alvar Aalto's Villa Mairea [35] is, of course, an early masterpiece of the episodic architecture of fragile formal structure; it is made from a sequence of architectural parts or acts in the same way as a theatrical play consists of acts and a piece of music of movements. The composition aims at a specific ambience, a receptive emotional state, rather than the authority of form. This architecture obscures the categories of foreground and background, object and context, and evokes a liberated sense of natural duration. An architecture of courtesy and attention, it invites us to be humble, receptive and patient observers. This philosophy of compliance aspires to fulfil the humane reconciliatory task of the art of architecture.

Perspectival space and peripheral vision

The historic development of the representational techniques of space is closely tied to the development of architecture itself. The perspectival understanding of space gave rise to an architecture of vision, whereas the quest to liberate the eye from its perspectival fixation has enabled the conception of multi-perspectival and simultaneous space. Perspectival space leaves us as outside observers, whereas simultaneous space encloses and enfolds us in its embrace. This is the perceptual and psychological essence of Impressionist and Cubist space; we are pulled into the space and made to experience it as a fully embodied sensation. The special reality of a Cezanne landscape, as well as of fragile architecture, derives from the way they engage our perceptual and psychological mechanisms.

While the hectic eye of the camera captures a momentary situation, a passing condition of light or an isolated, carefully framed and focused fragment, the experience of architectural reality depends fundamentally on peripheral and anticipated vision; the mere experience of interiority implies peripheral perception. The perceptual realm that we sense beyond the sphere of focused vision is as important as the focused image that can be frozen by the camera. This assumption suggests that one reason why contemporary spaces often alienate us -- compared with historical and natural settings that elicit powerful emotional engagement -- has to do with the poverty of peripheral vision. Focused vision makes us mere outside observers; peripheral perception transforms retinal images into a spatial and bodily involvement and encourages participation. That is why a photographic image is usually an unreliable witness of true architectural quality; architects would do better if they were less concerned with the photogenic qualities of their works.

Even creative activity calls for an unfocused and undifferentiated subconscious mode of vision, [36] which is fused with integrating tactile experience. The object of a creative act is not only enfolded by the eye and the touch, it has to be introjected, identified with one's own body and existential experience. In deep thought, focused vision is blocked; thoughts travel with an absent-minded gaze. In creative work, the scientist and the artist are directly engaged with their body and existential experience rather than an external logistic problem.

The margin for tolerance and error

The ideal of strong image aspires to the perfectly articulated and final artefact. This is the Albertian aesthetic ideal of a work of art 'to which nothing can be added or subtracted'. By definition, a strong image has minimal tolerance to change and consequently it contains an inherent aesthetic vulnerability in relation to the forces of time. A weak Gestalt, on the contrary, allows additions and alterations; a fragile form possesses aesthetic tolerance, a margin for change. The criteria of tolerance also takes place on a psychological level; contemporary designs are often so constrained in their exclusive aesthetics that they create a hermetic and arrogant sense of isolation and autism, whereas a fragile structure projects a welcoming openness and a sense of aesthetic relaxation.

Strong image is obliged to simplify and reduce the multiplicity of problems and practicalities to condense the shapeless diversity of the task into a powerful singular image. Strong image is often reached by means of severe censoring and

suppression; the clarity of image frequently contains hidden repression. Here I would like to stress that Lam not condemning the architecture of formal strength; lam merely critical of visually formalist architecture, and suggest an alternative to the prevalent reductive aesthetics of Western architectural thought. Besides, there are architects today who combine conceptual strength with sensual subtlety, like Peter Zumthor and Steven Holl. Also in the case of Luis Barragan an apparently strong image glides into the elusive world of dreams.

It was John Ruskin's view that: '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'. [37]

Aalto elaborated Ruskin's idea when speaking about 'the human error' [38] and criticizing the quest for absolute truth and perfection: 'We can say that architecture always contains a human error, and in a deeper view, it is necessary; without it the richness of life and its positive qualities cannot be expressed'. [39] Architectural design usually aspires to a continuity of ideas and articulation, whereas fragile architecture seeks deliberate discontinuities. The design process of Aalto, for instance, seeks differences and discontinuities instead of a unifying logic. Elaborating an idea of Michel Foucault's, Demetri Porphyrrios identified Aalto's thinking as heterotopic in opposition to the usual Modernist homotopic manner of thought. [40] Referring to discontinuities in design logic, Aalto uses the expression 'sympathetic error'. [41] He was himself a master of turning last minute design alterations or on-site mistakes into brilliant detail improvizations.

Aestheticization: beauty as a preconception

Traditional architectural environments rarely read as outstanding singular aesthetic objects; they present variations on the unselfconscious themes of tradition. Even aesthetically awkward units add up to attractive environments. The pleasurable experience of vernacular settings arises from a relaxed sense of appropriateness, causality and contextuality rather than any deliberate aspiration for preconceived beauty. In our culture of material abundance, lost in a spiritual desert, architecture has become an endangered art form. It is threatened by quasi-rational, techno-economic instrumentalization, on one hand, and the processes of commodification and aestheticization on the other. Paradoxically, architecture is simultaneously turned into objects of vulgar utility and objects of shrewd seduction.

The architecture of modernity -- and particularly of our consumerist era -- has become too consciously engaged with aesthetic effects and qualities. Our culture has aestheticized politics as well as war, and aestheticization now also threatens the art of architecture. Joseph Brodsky ventures to criticize Ezra Pound for his too direct engagement with beauty: 'The Cantos, too, left me cold; the main error was an old one: questing after beauty. For someone with such a long record of residence in Italy, it was odd that he hadn't realized that beauty can't be targeted, that it is always a by-product of other, often very ordinary pursuits'. [32]

'We should understand that beauty is not a mysterious veil thrown over a building but a logical result of having everything in the right place', [43] wrote Erik Bryggman wisely already in the early 1920s.

Focused on visual imagery and detached from social and contextual considerations, the celebrated architecture of our time - - and the publicity that attempts to convince us of its genius -- too often has an air of self-satisfaction and omnipotence. Buildings attempt to conquer the foreground instead of creating a supportive background for human activities and perceptions. Architectural projects of our day are often impudent and arrogant, and our age seems to have lost the virtue of architectural neutrality, restraint, and modesty. Authentic works of art, however, always remain suspended between certainty and uncertainty, faith and doubt. The task of responsible architects is to provide resistance to current cultural erosion and to replant buildings and cities in an authentic existential and experiential soil. At the beginning of the new millennium,

architectural culture would do well to nurture productive tensions between cultural realism and artistic idealism, determination and discretion, ambition and humility.

This text was originally delivered by Juhani Pallasmaa for the 1999 RIBA Discourse Lecture. It was illustrated by 130 paired slides to create a counterpoint of words and images. The illustrations are a selection of the slides.

(1.) For instance; Martin Jay, *Downcast Eyes -- The Denigration of Vision in Twentieth Century French Thought*, University of California Press, Berkeley and Los Angeles, 1994.

David Michael Levin, *Modernity and the Hegemony of Vision*, University of California Press, Berkeley and Los Angeles, California, 1993.

(2.) Levin, p205.

(3.) Maurice Merleau-Ponty, 'The Film and the New Psychology'. In Maurice Merleau-Ponty, *Sense and Non-Sense*, Northwestern University Press, Evanston 1964, p.18.

(4.) Ashley Montagu, *Touching: The Human Significance of the Skin*, Harper & Row, New York, 1986 (1971), p3.

(5.) Marcel Proust, *Kadonnulla aikaa etsimassa (Remembrance of Things past)*. Otava, Helsinki, 1968, p8.

(6.) Maurice Merleau-Ponty, 'Cezanne's Doubt', in Maurice Merleau-Ponty, *Sense and Non-Sense*, Northwestern University Press, Evanston 1964, p19.

(7.) The notion derives from Merleau-Ponty's dialectical principle of the intertwining of the world and the self. He also speaks of an 'ontology of the flesh' as the ultimate conclusion of his initial *Phenomenology of perception*. This ontology implies that meaning is both within and without, subjective and objective, spiritual and material. See Richard Kearney, 'Maurice Merleau-Ponty', *Modern Movements in European Philosophy*, Manchester University press, Manchester and New York 1994, pp73-90.

(8.) Montagu, pp308-309.

(9.) Montagu, pXIII.

(10.) As quoted in *Modernity and the Hegemony of Vision*, p14.

(11.) Karsten, Harries, 'Building and the Terror of Time', *Perspectia: The Yale Architectural Journal*, 19, New Haven, 1982, pp59-69.

(12.) As quoted in Mohsen Mostafavi and David Leatherbarrow, *On Weathering*, The MIT Press, Cambridge, Mass., 1993, p76.

(13.) See *On Weathering*.

(14.) See John Soane, 'Crude Hints' republished in *Visions of Ruin: Architectural Fantasies & Designs for Garden Follies*, John Soane Museum, London, 1999.

(15.) Gaston Bachelard, 'Introduction', *Water and Dreams: An Essay On the Imagination of matter* (1942), Dallas Institute, Texas, 1983.

(16.) Colin StJohn Wilson, *The Other Tradition of Modern Architecture*, Academy Editions, London, 1995.

(17.) Erik Gunnar Asplund, 'Konstoch Teknik' (*Art and Technology*), Byggmastaren, 1936.

As quoted in Stuart Wrede, *The Architecture of Erik Gunnar Asplund*, MIT Press, Cambridge, Mass, 1980, p153.

(18.) Alvar Aalto, untitled manuscript for a lecture held in Turin, Milan, Genoa and Rome in 1956. Published partly in Italian in Alvar Aalto, 'Problemi di architettura', *Quaderni ACI*, Edizione Associazione Culture Italiana, Turin, 1956.

(19.) Ibid, p3.

(20.) Ibid, p4.

(21.) Vattimo introduced the notion in the late 1970s. The idea was developed in a volume of essays entitled *IL pensiero debole* edited by Vattimo in collaboration with Pier Aldo Rovatti. Vattimo also discusses the notion in his seminal *The End of Modernity* (1985), John Hopkins University press, Baltimore, 1991.

(22.) 'There is a delicate empiricism which makes itself utterly identical with the object, thereby becoming true theory'. Goethe, *Goethe: Scientific Studies*, Princeton University Press, 1934, p307. As quoted in David Seamon, 'Goethe, nature and Phenomenology: An Introduction', David Seamon and Arthur Zajone, *Goethe's Way of Science*, State University of New York Press, Albany, 1988, p2.

(23.) Distinguishing between opening and closing design strategies and artistic structures, Lawrence Halprin speaks of 'open and closed scores'.

(24.) Ignasiola Sola-Morales, *Differences: Topographics of Contemporary Architecture* (1987), MIT Press, Cambridge, Mass, 1997, pp57- 70.

(25.) In his recent prize-winning scheme for the Cultural City of Galicia in Spain, Eisenman generated the architectural structure semi-automatically by the traditional street pattern of the historic centre of the adjacent pilgrimage town of Santiago de Compostela and the imagery of a natural mountain top. The formal language is consequently the result of a generative process rather than distinct formal intention.

(26.) Sola-Morales, pp58 and 60.

(27.) Sola-Morales, p70

(28.) Simon Hubacker, 'Weak Urbanism', *Daidalos*, 72, Berlin, 1999, pp10-17.

(29.) See Juhani Pallasmaa. *The Architecture of Image: Existential Space in Cinema*. Unpublished book manuscript, 1999.

(30.) Harold Arnkil, Juhana Blomstedt, *Weilin+Goos*, Helsinki 1989.

(31.) The power of a weak force in nature can be illustrated by comparing the toughest known material of nature with that of ours. None of the man-made metals or high-strength fibres of today can come even close to the combined strength and

energy-absorbing elasticity of spider dragline. The line spun by the spider is five times stronger than steel, and much tougher than polyaramid Kevlar, the material used in bullet-proof vests and facial masks; it can absorb five times the impact force of Kevlar without breaking. According to an article in Science News, 21 January 1995, a web resembling a normal fishing net in its thickness of thread and the scale of the mesh could catch a passenger plane in flight. The spider line is produced with low energy at spider body temperature whereas in the production of Kevlar petroleum-derived molecules are poured into a pressurized vat of concentrated sulphuric acid and boiled at several hundred degrees Fahrenheit to force it into a liquid crystal form. The energy input is very high and there are problematic toxic by-products. Janine M. Benyus, *Biomimicry*, William Morrow, New York, 1998, pp132, 135.

(32.) Andrew Todd, 'Learning from Peter Brook's Work on Theatre Space'. Unpublished manuscript, 25 September 1999.

(33.) Ibid, p4.

(34.) Rainer Maria Rilke, *The Notebooks of Malte Laurids Brigge*, W.W. Norton & Co, New York and London, 1992, pp47-48.

(35.) See Juhani Pallasmaa (editor), *Alvar Aalto: Villa Mairea 1938-39*, Alvar Aalto Foundation and Mairea Foundation, Helsinki, 1998.

(36.) For the role of unconscious vision, see Anton Ehrenzweig, *The Hidden Order of Art* (1967), Paladin, London, 1973.

(37.) As quoted in Gary J. Coates, Erik Asmussen, architect, *Byggforlaget*, Stockholm, 1997, p230.

(38.) Alvar Aalto, 'Inhimillinen Virhe' (The Human Error), Goran Schildt, editor, *Nain Puhui Alvar Aalto (Thus Spoke alvar Aalto)*, Otava, Helsinki, 1997.

(39.) Ibid, p282.

(40.) Demetri Porphyrion, *Sources of Modern Eclecticism*, Academy Editions, London, 1982.

(41.) Alvar Aalto, 'Speech at the Centennial Celebration of the Faculty of Architecture', Helsinki University of Technology, 5.12.1972. Schildt, p283.

(42.) Joseph Brodsky, *Watermark*, Penguin Books, London, 1992, p70.

(43.) Erik Bryggman, 'rural Architecture', Riitta Nikula (editor), *Erik Bryggman 1891-1955, Architect*, Museum of Finnish Architecture, Helsinki, 1991, p279.

1 Fragile architecture - Scarpa's entrance to the Architectural Faculty of Venice University.

2 Pathology of the eye - still from Bunuel and Dali's *Un Chien Andalou*.

3 Significance of skin - Bonnard's scintillating *Nude in a Bathtub*.

4 Architecture of the muscles - steps at the Helan Shrine Garden, Tokyo.

5 Architecture and time - detail of Aalto's iconic *Villa Mairea*.

6 Multi-sensory experience - the town of Casares in southern Spain.

7 Image of brick--saynatsalo Town Hall by Alvar Aalto.

8 A dream of stone tomb of Giuliano de Medici by Michelangelo.

9 Image of memory and matter- Athens Wall, installation by Yannis Kounellis.

10 Imagination of form -Ledoux's Spherical House for a Bailiff.

11 Imagination of matter -- sensuous Islamic fountain.

12 Architecture of strong Image - Lethbridge University In Alberta by Arthur Erickson.

13 Architecture of fragile Image -- garden of Katsura Detached Palace.

14 Fragile art -- Broken Stones Scratched White, by Andy Goldsworthy.

15 Landscaping for Acropolis in Athens, by Dimitris Pikionis.

16 Appropriateness and humility of design -- a Finnish seal hunter's lunchbox. The boatlike object can float on bllgewater.

17 Architecture engaging peripheral vision -- Aalto's Finnish Pavilion for 1939 New York World's Fair.

18 The strength of fragility -- Pollen from Hozelnut, installation by Wolfgang Laib.

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Hapticity and Time. Warning: Use of undefined constant medium - assumed 'medium' (this will throw an Error in a future version of PHP) in /home1/portuga2/public_html/rpithesis/wp-content/themes/workaholic/functions.php on line 104. link. [http://21stcenturyscholar.org/DECLINE OF THE CULTURE OF TEACHING PART 1 + 2](http://21stcenturyscholar.org/DECLINE_OF_THE_CULTURE_OF_TEACHING_PART_1_2) I think a lot about the culture of organizations and what I experience today is a de-valuing of teaching "that we are all replaceable parts. Hapticity must be distinguished from denticity. Polydentate ligands coordinate via multiple coordination sites within the ligand. In this case the coordinating atoms are identified. If the coordinating atoms are contiguous (connected to each other), the η -notation is used, as e.g. in titanocene dichloride: dichlorobis(η -5-2,4-cyclopentadien-1-yl)titanium. [<http://www.iupac.org/reports/provisional/abstract04/RB-prs310804/Chap9-3.04.pdf> IUPAC Red book]. Hapticity and fluxionality. Hapticity is the coordination of a ligand to a metal center via an uninterrupted and contiguous series of atoms. The hapticity of a ligand is described with the Greek letter η ('eta'). For example, η -2 describes a ligand that coordinates through 2 contiguous atoms. In general the η -notation only applies when multiple atoms are coordinated (otherwise the η° -notation is used). CSDS Teaching Module: Hapticity © CCDC. You will notice that each of these structures contains at least one metal-carbon bonding interaction. Bonds between metal and carbon atoms are referred to as organometallic bonds. A ligand that contains a carbon atom which bonds to a metal is an organometallic ligand. To manipulate structures in the 3D viewer: 1. Structures can be rotated by moving the cursor in the display area while keeping the left-hand mouse button pressed down. Whereas the architecture of geometry attempts to build dams to halt the flow of time, haptic and multisensory architecture makes the experience of time healing and pleasurable. This architecture does not struggle against time, it concretizes the course of time and makes it acceptable.