The Symbolic Dimension

Meaning and Metaphor in the Archetypal Language of Architecture

by

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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.



ABSTRACT

The timeless task of architecture is to create embodied, existential metaphors that structure and sustain our experience of the world. This vital role has been obscured in recent centuries, but maintains critical importance - even ethical imperative - in our increasingly urbanized habitat, where built objects are the predominant frame of human existence. Fixing verticals and horizontals, architecture is always a symbolic act: it describes the conditions of relationship between man and environment, whether integrated or isolated.

The premise of this thesis is a search for the dimension of deeper meaning - missing in most contemporary buildings - that can help to reconnect us with a higher order and assert our place within it. Returning to first principles, it examines cultural constructions across a broad historical period to recall the archetypal language of architecture and its didactic function: concretizing elemental dichotomies and eternal human truths. The essential conditions of body and space, earth and sky have intuitive meaning and enduring implications – this a priori tectonic vocabulary is the basis for orientation and identification (enabling dwelling), and the focus of the thesis work. Its interest is the resonance between inner experience and external environment that engages us in powerful architectonic expressions, relating body, building and world.

The work presented narrates these explorations on three levels, within the scope of Western architecture and its primary influences. Part 1 establishes a philosophical foundation for this generalizing approach, rooted in universal structures, and substantiates a synoptic viewpoint. Two ubiquitous models of natural hierarchy - the upright human figure and the stratified cosmos - are manifest in built form from time immemorial; Part 2 presents a body of historical research into these parallel realms of metaphor in traditional belief structures. Surveying the paradigm shifts (both physical and conceptual) that shape our present built environments, Part 3 culminates in a speculative discussion of contemporary power structures and conflicting spatial concepts today, where architecture supplies alternative realities and artificial 'worlds' instead of reinforcing meaningful existential connections. Approaching present and future uncertainties through archetypal absolute values, the objective of this discourse is to regain some common ground - underlying the fragmented contemporary condition - where reconciliation between man and environment may yet occur.

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As for the final product, I can only dedicate this to my husband, editor, photographer, and best friend, who has been waiting for me at the end of this road for a very long time – thank you.

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PREFACE:
AN INQUIRY IN PROGRESS

"Work on philosophy – like work in architecture in many respects – is really more a work on oneself. On one's own interpretation. On how one sees things…"[1]

- Ludwig Wittgenstein

The philosophy behind this thesis, like the shape of a work of architecture, has evolved over the course of its creation. My convictions have been reconsidered, redirected, sometimes rejected and reformulated altogether. Even upon completion, the discourse herein represents only a segment of a learning curve: between previous explorations (including the arc of these graduate studies) and future research aspirations, the work to follow remains an open question. At its best, to borrow from contemporary anthropologist Marshall McLuhan, this thesis is a proliferating aphorism: it operates as an architectural hypothesis, an extended probe laid down to generate more questions than it answers.

It is apparent to me that our contemporary environment, as both mirror and mold of human experience, is missing some fundamental depth and potential impact. Proposing an architectural solution to repair these disconnections is beyond my capacity, but composing a discussion around a few basic considerations (among countless possible alternatives) is within my grasp. What I have designed is my own path through various disciplines, theories and ideologies, in hopes of rediscovering the route to what's been lost. It is, by nature, a tentative structure: presenting possibilities for the reader's consideration is its only objective.



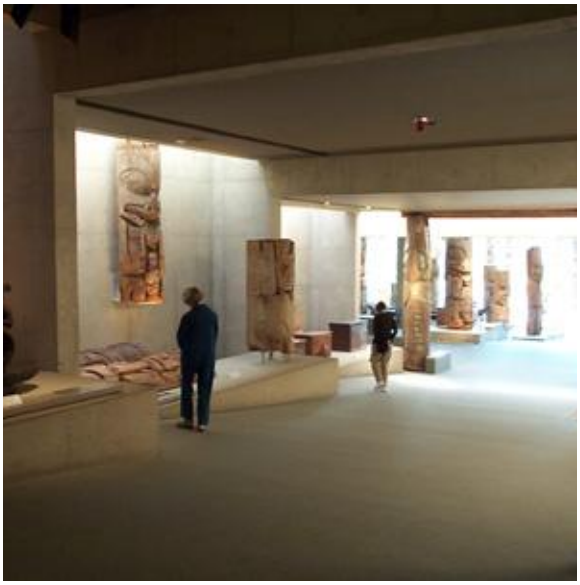
ENCOUNTERING ARCHITECTURE

"It seems to possess the ability to transform the inhabitant into a participant, to effectively 'change one's life'."[2]

- Alberto Perez-Gomez (on La Tourette)

This thesis presents a way of interpreting architecture, as a series of symbolic gestures. It considers the built world in terms of *encounters*, rather than objects, shaping human experience through architectonic space. It seeks the intensity of engagement that Perez-Gomez describes for Le Corbusier's La Tourette, largely lacking in today's buildings – but not lost altogether. Arthur Erickson's Museum of Anthropology provides a compelling example of iconic contemporary architecture, realizing its powerful symbolic program through intuitive tectonic language.

My own first encounter with this building was on a busy day: the human activity in the entrance area seemed at odds with the qualities of the space. Post and beam stand sentry here, in eternal equipoise. Austere concrete, washed in grey light and shadows, commands little attention but waits for silence. Voices drop, steps slow as people move into the darkness of the entry ramp, where patterns of light focus the gaze onto display walls on both sides. I follow, letting mass, space and light guide my visit. The building initiates a quiet ceremony, engaging the visitor in its expressions.



Within the confined entry ramp, the closeness of ceiling and floor create an introspective and protective space. The floor slopes downwards toward the Great Hall, accelerating the body forward through the display sequence, but the lateral emphasis of the ramp space – its tectonic weight and solidity overhead lifting at the edges, where slivers of natural light enter through recessed clerestories – draws the eye to either side, making me linger in the comfortable shadows. This sheltering privacy creates intimacy between the temporary observer and the timeless occupants of this exhibit, as if they might divulge their secrets. But the pull of gravity and the bright open space beyond cannot be denied: the ceiling drops lower still, pushing me out of this enveloping canal into the 'crossroads'.

Transverse hallways now open to either side, illuminating other possibilities to explore later, but I cannot resist the tectonic cues that continue to propel me forward – the expanding lightness of the Great Hall is just ahead. As I descend, flowing like a river down this ramp, the space beyond (both interior and exterior) is slowly revealed … finally bursting outward and skyward just as the ramp meets the flatness of the floor, like the surface of the sea. All forward-downward-inward motion is stilled, pooling at my feet; I feel I have arrived at my destination, and drift freely. Patterns of light and shadow lie across the floor, articulating its broad surface.

The trabeated Great Hall is larger and tangibly lighter, opening rectangles of glass between posts and beams. Its massive members step upwards and inwards toward the sea, shifting the lateral focus of the enclosed entry ramp to a vertical emphasis. Arranged symmetrically in a narrowing V-shaped plan, the structure frames ever-widening vistas to the natural spectacle outside its walls. Light, air and open space draw my attention upward and outward, in marked contrast to the chthonic conditions of approach just experienced. The artifacts stretch progressively taller, taking ownership of the lofty realms opening overhead. The structure expresses a like verticality, with concrete columns standing erect, aggrandizing the upright figures inside and uplifting along with them.*



The primal resonance that this thoroughly modern building achieves complements its cultural function and enhances its historical focus, but the architectonic language it speaks is even more ancient than the artifacts it shelters. Erickson engages archetypal associations as a design tool: feelings of mystery and discovery, intimacy and reverence intensify the emotional impact of the museum exhibits, through the *spatial* conditions we experience them in. Form and space shape intuitive sensory perceptions, with inherent symbolic values – aligned with the intended function of the work, this archetypal language can strengthen its expressive potential. The result, as at the Museum of Anthropology, is a statement beyond words: a timeless instant of clarity. It speaks directly to the senses, with tangible authenticity: presenting an embodied truth we can participate in. Like an ancient monument, it seems to silence the world and simultaneously amplify our understanding.

*** Erickson equalizes vertical and horizontal sections on other projects, but in this case post and beam articulate their different characteristics. Viewed from outside, the spanning horizontals appear solid and heavier than the upstanding columns. Balancing rather than neutralizing the forces of gravity and resistance, this embodied action is at once dynamic and stable. From inside, however, the vertical members are emphasized beneath a lattice of concrete voids and skylight panes. This articulation of opposites – mass-void, grounding-uplifting, dark-light, inward-outward, lateral-vertical – is a simple but eloquent architectonic language, and the focus of the thesis work.**

Facing, top [0.1]; facing, bottom [0.2] and above [0.3]: UBC MUSEUM OF ANTHROPOLOGY, ARTHUR ERICKSON (VANCOUVER, BC)

1. PHILOSOPHY: UNIVERSAL STRUCTURES

CHAPTER I

INTRODUCTION: A PHILOSOPHY OF ARCHITECTURE

"Architecture is vital and enduring because it contains us; it describes space, space we move through, exist in and use."[3]

– Richard Meier

The basis of this discourse is a working philosophy of what architecture can and should do, as a vital mediator between humanity and environment. The primary interest of architecture is in relating man to his world, moderating external conditions to make habitable human places (physically, intellectually and spiritually). Considered as a medium of human experience, its importance cannot be overstated: architecture defines how we live, framing relationships to our surroundings, and therein it shapes who we are. Thus, "the ultimate meaning of any building is beyond architecture; it directs our consciousness back to the world and toward our own sense of self and being."[4]

As an inhabitable art, architecture is a powerful instrument of interaction and understanding. It speaks of identity and priorities, values and aspirations. In any age the art of building tells a story about man and his total environment, presenting an *imago mundi* – an interpretive framework, projecting structure and significance on the otherwise unknowable world. Embodied existential metaphors give a symbolic dimension to spatial experience, bringing body, building and world into meaningful dialogue. We perpetuate the image of our humanity and our experience in the midworlds we construct for ourselves, making habitable human places.

Such is the fundamental task of architecture, but in today's built world, that critical function has been lost. We make places without permanence or promises, with no intention to communicate either deeper meaning or higher significance – in short, not places at all. Without environments to identify with, to care about or belong to, full human lives cannot (if the reader will pardon the truism) *take place*: this is why architecture matters.[5] Considering contemporary environments from an existential perspective, it is evident that our buildings no longer serve to connect man and environment: where symbolic language degenerates into negative or neutral expressions, our intuitive terms of orientation and identification become instruments of alienation rather than integration.

The overarching preoccupation of this thesis is how architecture articulates those crucial conditions of relationship, by what means and to what ends. It pursues this horizon of deeper understanding because the crises in contemporary culture are inextricable from the way we live and how we interact the world.* Its ultimate aim is to cultivate greater sensitivity toward the symbolic dimension of spatial experience, reminding us of the existential impact – and ethical responsibilities – of shaping our built environment. Beautiful, brutal or banal, architecture is always a human issue.

*** Christian Norberg-Schulz maintains that present conditions continue to deteriorate because they are approached as practical issues, when they are fundamentally problems of relationship. Their resolution requires a deeper understanding of our interaction with the world, enabling participation – architecture has the potential to act in this capacity, reinforcing spatial experience to reconnect man and environment on some essential level.[6]**

COMPOSING AN APPROACH

"A building is not an end in itself; it alters our experience with reality. A building frames, articulates, structures, relates, separates and unites, facilitates and prohibits. Deep architectural images are acts instead of objects. As a consequence of this implied activity, a bodily reaction is an inseparable aspect of the experience of architecture."[7] - Juhani Pallasmaa

This discourse attempts a universalizing (and therefore necessarily general) approach to issues of place and identity, order and meaning in unambiguous vocabulary. In search of universals, we return to origins: the foundation of architectural gestures as Pallasmaa describes above, and the direct sensory essence of our own being-in-the-world. In simplest terms, the relationship between man and environment (both natural and constructed) is a tectonic one. Mass, form and spatial characteristics are the germ of architecture and the basis of bodily experience, unchanged since time immemorial – as elemental as earth and sky. Solid and void, below and above, enclosed and exposed, gravity and levity, darkness and light … everything exists in the balance between them. These are primary dichotomies, and inevitable structuring principles of human thought: our 'first language' is spatial, naturally drawing its vocabulary from these few human truths. The basic physics of being-in-the-world are invariable, and architecture is the *art* of these constants: its symbolic potential cannot be overestimated.

This thesis work explores the interrelationships of archetypes – 'first model' – and essential spatial concepts, our own first language, giving shape to architecture as the first art.* The nature of the work is exploratory, guided only by a sense of what is missing – a journey undertaken without fixed points or destination, circling systematically through key spatial concepts and constructs to infer where a lost center may be found. It proposes the few human truths of vertical and horizontal, mass and void, earth and sky as deep and enduring certainties, more critical than ever in our world of shifting surfaces and constant change.

Among all the complexities of contemporary design, I believe that we have forgotten some of the most basic, archetypal and immutable meanings inherent to this language of form and space – and in so doing we have also lost a fundamental correspondence between body, building, and world. As a tectonic language experienced through the eternal human body, architecture has the capacity to communicate on a universal level, bringing us into meaningful connections with our surroundings. I believe that we may yet hope to reconcile man and environment upon those common grounds, restoring age-old reciprocity in contemporary context.

Pursuing this essential unity, my first working hypothesis is that the human experience – on its most fundamental levels – is always and everywhere the same. Differences are essential, bestowing the tapestry of humanity with great richness and texture, but underlying similarities must hold those threads together. As Maurice Merleau-Ponty says, "all human acts and all human creations constitute a single drama, and in this sense we are all saved or lost together. Our life is essentially universal."[8] Every human being is a distinct entity, irreplicable in personal detail, but we are not entirely unique: we are ancient structures, with body, mind and spirit shaped by common senses. The world that we perceive and project is fundamentally the same. From birth, we try to orient ourselves and establish order in our environment, developing an image of our world and how we fit within it. On this level of collective experience and expression, the global intention of the work is to explore the relationship between what we build and how we understand ourselves in the world.

*** archetype: from Latin *archetypum*; from Greek *arkhetypos*: first-molded, from *arkhe*: beginning, first, original + *typos* : model, type, imprint.**

The purpose of architecture is to make that world visible, giving order and meaning to our surroundings and making places we can inhabit – showing who we are and where we belong.[9] Therein lies the other cornerstone of my philosophy: that the will to express meaning through architecture is universal to human society, creating faithful manifestations of its total environment. In it, we recognize the essential character of the age ("however much a period may try to disguise itself, whether this uses original forms of expression or attempts to copy bygone epochs"[10]). The focus, therefore, is not cultural specifics but universally relative expressions, not why they were important but how their priority continues to resonate. As the medium of this discourse, the art of building is used to bridge conceptual distances between dissociated cultures, times and places.

Buildings and typologies from different eras have thereby been drawn together to discuss a range of symbolic implications, concentrating on the first principles of architectonic form – mass, space, and metaphor – rather than surface details, style, content or culture. Examples drawn from the monumental, urban, and domestic built world are intended to operate like pieces of a hologram, each fragment presenting a complete image of its age, viewed from its own perspective. Familiar icons and specific examples are discussed for clarity, but the focus of the work is neither iconic nor specific: it is a collection of prevailing phenomenological expressions, selected for their symbolic form and intensity of feeling rather than a consistent function. Architecture is held up here as an intuitive, symbolic language, with deep roots and great potential impact, illuminating and sustaining a story about man and his world.

This thesis explores primal and ancient traditions as sources, examining how diverse societies have asserted the same eternal human truths and essential aspirations in built form. A work of architecture achieves lasting impact when it expresses a powerful, archetypal truth: this is the condition of immortality in art. Iconic works of architecture have enduring resonance on some common level of our humanity, operating through archetypal metaphors to replace the unknown with the known. Yi-Fu Tuan says "perhaps people do not fully apprehend the meaning of 'calm' unless they have seen the proportion of a Greek temple against the blue sky, or of 'robust, vital energy' without baroque façades, or even of vastness without a huge edifice"[11] – architecture is a medium to intensify our internal impressions, and a means to articulate our external expressions. As Pallasmaa (quoted below) emphasizes, I see the task of architecture as the defense of the authenticity of human experience – affirming our sense of being and belonging within the larger paradigm of a meaningful world.[12]

Terms of Engagement

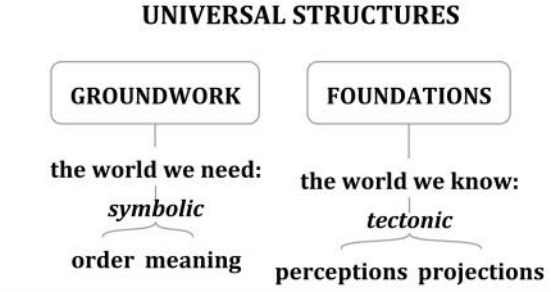
"The authenticity of architectural experience is grounded in the tectonic language of building and the comprehensibility of the act of construction to the senses. We behold ... and measure the world with our entire bodily existence, and the experiential world is organized and articulated around the center of the body."[13]

- Juhani Pallasmaa

This thesis revisits archetypal, anthropocentric spatial concepts as an intuitive symbolic language, engaging the body and enabling participation in the tectonic expressions of the built world. Projecting our corporeal knowledge onto other bodies in space, we participate in their mass, motion and substance. We identify mimetically with what an object is, or what it does. We instinctively give structure and significance to our surroundings, drawn from universal human experience and mapped onto our surroundings. The conditions of body and space, earth and sky shape stratified hierarchies, with instinctive value and enduring implications – an *a priori* tectonic vocabulary. The art of building constructs a story about man and his universe in this symbolic mass, form and space.

The focus of the work is in *"existential space* or the space which constitutes the basic relationships between man and his environment: psychic functions of ORIENTATION - knowing where we are, and IDENTIFICATION – knowing *how* we are, in a certain place."[14] Orientation and identification are essential conditions of dwelling: being 'at home' in the built environment requires meaningful exchange between body and building, building and world. Architecture presents a symbolic image of man in relationship to his universe, and the unit of this relationship is the embodied metaphor.

The interest of this thesis is a single imaginary line relating body to building, and building to world: the vertical axis, universally symbolic and eternally relevant. In human constructions, verticality is embodied in two primary, parallel metaphors: the universal *axis mundi* of early cosmic models, and the eternal figure of *homo erectus*. These overlapping realms of symbolism are inextricable from each other – both inherent to the physical structure and psychological nature of man – and reinforce each other, within the same hierarchic relationships. We orient ourselves and identify with other bodies in space according to their likeness with our experience: upright against the surface of the earth beneath the sky. Articulations of vertical form, force, feeling and function resonate with our own lived experiences, permitting orientation and identification – the *a priori* conditions of 'finding ourselves' in the world. Architecture can strengthen the verticality of our experience of the world, establishing these vital connections within a meaningful order, showing us how to relate and where to belong.



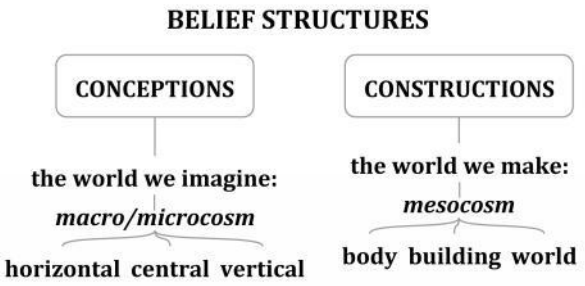
Ordering Framework

"What makes human history such an uncertain and fascinating story is that man lives in two worlds – the world within and the world without…"[15]

- Lewis Mumford

This discourse is developed on three levels. A theoretical basis must be laid in order to propose any universal level of architectural experience: Part 1 provides a set of working hypotheses, grounded in **Universal Structures** (diagrammed below left). Drawing from structural anthropology, analytical psychology, cognitive science and architectural theory, it constructs an interpretive framework for the work to follow. Its purpose is to establish architecture as a critical symbolic language and explore the tectonic dialogue between man and his environment – defining the terms for meaningful architectural experience, on a basic but powerful universal level.

Chapter I: Introduction opens the work with a philosophy of what architecture could and should do as mediator between man and his world, and proceeds to show how symbolism, archetype and metaphor are essential to express these relationships. The dominant vertical emerges as an enduring and collective spatial concept, to be explored throughout the work. *Chapter II: Groundwork* establishes the conceptual deep structures that makes it possible to speak of human ideas and expressions in these general terms, describing the archetypal language of architecture and its shifting symbolic role. *Chapter III: Foundations* explores the range of common faculties that engender common human experiences, making the world that we perceive and project fundamentally the same. Order and meaning are vital human needs, which we perceive and project via certain universal structures – orienting ourselves and identifying with the world.

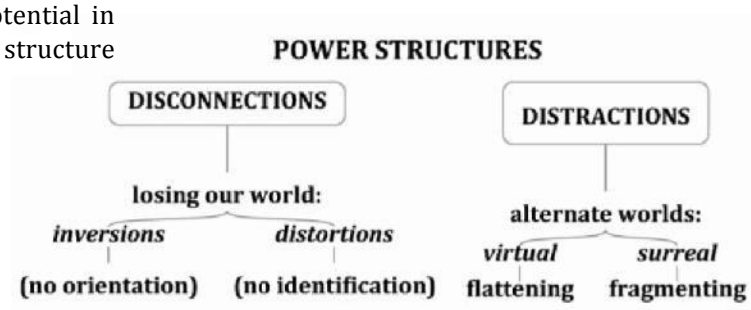


Part 2 revisits primitive and ancient **Belief Structures** throughout history, considering architectural conventions as expressions of an *imago mundi:* a story about man and his universe, which can be read regardless of time, religion or culture (as established in Part 1). Traditional works of architecture, modeled on the divine order of the body and the cosmos, manifest certain *a priori* spatial concepts with enduring symbolic resonance, as metaphors of human experience (as diagrammed above).

Chapter IV: Macrocosm surveys the spatial concepts that relate to the cosmic or global metaphor, as the basis of tectonic expression: earth and sky, cave and mountain. *Chapter V: Mesocosm* explores various approaches to building between these conditions, making architecture a medium of connection between man and environment in three dimensions. Symbols of the vertical are present in form and space, mass, motion and substance, providing manifold opportunities for symbolic expression and exchange. *Chapter VI: Microcosm* notes the importance of the body as a metaphor for traditional architecture, lending its familiar logic to a complex world. This section is intended as a phenomenology of form and space, recalling the tectonic and symbolic vocabulary that emerges intuitively in older worlds. Primary dichotomies and essential hierarchies are inherent to the human imagination, with deep expressive potential in architecture – imparting necessary structure and significance to human experience.

Breaking with history and convention, Part 3 situates us within a brave new world which we are still learning to inhabit and express. The primitive and pre-modern models of order and meaning discussed thus far are challenged by recent scientific revolutions, neutralizing spatial hierarchy and flattening the symbolic dimension. Entitling this section **Power Structures**, we acknowledge the shifting core of civilization from pre-modern societies, with power in their collective beliefs, to contemporary culture: unsure what to believe in except the power of the individual, without a sense of higher order or deeper meaning. The popular role of architecture has shifted from concretizing our lived realities to providing alternative realities – diversions and distractions – rather than authentic commentary on the world and our place within it (as diagrammed below).

Chapter VII: Revolutions reviews the manifold complexities and contradictions that face modern man, and challenge contemporary architecture. The re-invention of architecture in modern terms is explored through the problem of the house, replacing traditional metaphors of the human figure and its natural contextual frame with an abstract architecture for the machine age. *Chapter VIII: Perceptions* examines our present situation, among splintering ideologies and conflicting expressions. *Chapter IX: Architecture and Authenticity* concludes this discourse, having explored the overlapping realms of metaphor which used to give meaning to human environments: how they were formed and articulated, how they were dismantled and discarded, and how critical their reconsideration is to meaningful architectural expressions.



Objectives and Omissions

"The primary aim of the book is to give my own reasons for believing in such a synoptic view; its secondary aim is to provide a tentative version of it which will make enough sense to convince my readers that a view, of the kind I outline, is attainable. The gaps in the subject as treated here are too enormous for the book ever to be regarded as presenting my system, or even my theory. It is to be regarded rather as an interconnected group of suggestions which it is hoped will be of some practical use ... Whatever is of no practical use to anybody is expendable."[16]

- Northrop Frye

The work to follow explores the complex art of building in its simplest (even unconscious) psycho-physical terms: the fundamental spatial language that is inherent to form and space, and our deepest intuitive responses to it. While its interest is bodily intuition and response, the focus of the work is not hapticity in its usual terms (the seven senses). These essential mediators shape our interface with the world, but the archetypal language of form and space operates on deeper levels: the inner experience of our tectonic senses, and our unconscious associations to these primary conditions of being.

Architecture is many things; it is approached here as a social science, on existential levels of human desires. Material possibilities, feats of engineering and construction, cultural conventions, socio-economic and political factors are excluded from this perspective. Essential as they are to the realization of the work, these are held auxiliary to the singular, *a priori* power that shapes our built environment: the intractable human impulse to make it so. In this sense, what we build is more than what we perceive, believe, imitate or invent: it is who we are.

The parameters of this thesis are extensive, but by no means comprehensive. It is a subjective exercise, skimming only the surface of larger ideas, using architecture as a condensing lens to consider theories from various disciplines.* Within the scope of Western culture and its primary influences, primeval to present, it draws from historical precedents but cannot be considered an inclusive history. As a thematic discourse it takes an inevitably distant viewpoint, limited to general outlines in order to include a wide spectrum of ideas. I have superimposed a selective framework in order to underline essential similarities, but recognize the inherent imprecision of such broad strokes: a discussion this general can only aim to be suggestive, rather than conclusive.

Surface differences result in rich diversity, while deep structures are intrinsically basic; focusing on eternal truths and elemental principles means that this thesis cannot propose anything new or even specific, but hopes to rediscover something concentrated and constant in the essences considered herein. The work is built upon the idea of common ground, and this is the territory that it explores. Through prospective interpretations of the role and meaning of architecture – in its most basic form and recurring manifestations – this thesis aims to recall ancient concepts as a basis for contemporary design considerations.

*** Any historical consideration of human constructions is also a history of culture, and of the human mind[17]– anthropology and cultural history, psychology and science are inextricably linked to the ideas presented herein. Digressions into these overlapping realms have framed the development of this thesis, and those peripheral discussions are presented herein insofar as they are embodied in built form. I have charted my own journey through those areas, but the reader need not retrace all of my steps: I encourage them to make their own explorations within the ideas assembled here (and thereby, their own discoveries).**

FIRST PRINCIPLES: THE VITAL ROLE OF BUILDING

"We become what we do, and we do what we are."[18] – Ludwig Wittgenstein

This work considers the built environment as a form of social commentary, telling the story of its time, and a form of social imprinting that shapes the ages to come. Reconsidering what we read into our built environment, ultimately assimilating or alienating us, is a timely concern because building is literally taking over the planet: as of this decade, the majority of the world's population will live in cities. In an increasingly urban world, architecture takes on new importance – and new liability – as the principal context and container of human experience. Every building is a public building, contributing to the shape of human space.

Architects, charged with a civic act of that magnitude, have a critical role and responsibility: to present our world for what it is and for what it could be, making better places to be human in. In our complex and cynical culture this may sound naïve, but the desire to communicate something meaningful and improve our world, at whatever scale, is the natural impetus of design.[19] Quoting Juhani Pallasmaa, whose works – along with those of Joseph Campbell and Joseph Ryckwert, Vincent Scully, Christian Norberg-Schulz and Anthony Vidler – were particularly influential in the shaping of this work:

"… I see a definite moral imperative in the art of architecture. Architecture frames human existential experience and provides a horizon of understanding. As architects, we do condition others' lives; this definitively projects a decisive ethical dimension onto our work. … For me, the current course of Western culture – towards a surreal cult of materialism and consumption, temporary fashion and image – poses another moral imperative. The task of the artist and the architect is to resist these forces, to prevent the erosion of value and meaning. As Italo Calvino saw the task of literature, so too I see the task of architecture: as the defense of the authenticity of human experience."[20]

I agree that the role of architecture, as the art of human environments, is to articulate our worldly existence: to give greater depth and higher meaning to everyday experience, bringing us into closer connection with our surroundings, our senses, our ideals, ourselves. In my interpretation, Pallasmaa's mandate for the defense of the 'authenticity of human experience' in architecture is seeking the same 'intensification of being' that Alberto Perez-Gomez describes below: an embodied truth beyond words, encountered within the work, which engages the individual as a participant in that reality. I believe that this resonance of truth and clarity of purpose is lacking in many urban environments today – indeed, in much of contemporary culture.

"This intensification of being is what defines the work of art, regardless of its medium … In it, humanity recognizes its purpose."[21]

"To be modern is to find ourselves in an environment that promises adventure, power, joy, growth, transformation of ourselves and the world – and at the same time threatens to destroy everything we have, everything we know, everything we are. Modern environments and experiences cut across all boundaries of geography and ethnicity, of class and nationality, of religion and ideology; in this sense, modernity can be said to unite all mankind. But it is a paradoxical unity, a unity of disunity; it pours us all into a maelstrom of perpetual disintegration and renewal, of struggle and contradiction, of ambiguity and anguish. To be modern is to be part of a universe where, as Marx said, 'all that is solid melts into air'."[22]

"Since remote times architecture has helped man in making his existence meaningful. With the aid of architecture he has gained a foothold in space and time. Architecture is therefore concerned with something more than practical needs and economy. It is concerned with existential meanings."[23]

The beautiful certainty of the ancient world is tragic, because when convictions collapse the societies and cultures built upon those foundations must inevitably collapse with them. The tragic beauty of the modern world, inversely, is its fundamental chaos where there can be no convictions: modern society is a shape-shifting enigma, rejecting roots or foundations. Our constancy *is* change, as Berman describes (at left). That skepticism and continual re-evaluation contains the great kinetic energy that powers the modern world.

We live in perpetual motion, conceptual and physical – but we cannot live in outer chaos, without descending into inner chaos also. Our existence depends on the formation of a clear environmental image, with a structure and significance we can comprehend.[24] We have a basic need to understand and express some kind of order and meaning in our surroundings, validating our own experience, our own existence. Norberg-Schulz (quoted at left) asserts that we need a place in the world, but we have forgotten how to dwell.[25] Only when we can dwell can we build, Martin Heidegger adds;[26] have we also forgotten how to build? Does contemporary architecture show us who we are, where we belong, and what we hope for?

In older worlds, the process and product of building was a vital, symbolic means of expression. The architectural act was an essential creation ritual, perpetuating the natural order and defending against chaos, reinforcing personal and cultural identity.[27] Architecture served to make places for human individuals and groups, asserting a meaningful world order and defining a system of relationships between man and his total environment. The builders of the past constructed symbolic frames for human existential experience and provided a horizon of understanding.[28] In my view, this is what our architecture is lacking: the language remains, but we have forgotten that we can (and do) have a critical dialogue with our surrounding environment.

Affirming this, we will not endeavor to reinstate the noble savage (nor even the noble Egyptian, Greek or Roman) – we cannot regress, and yet we continue to be made up of all we have ever been.[29] The focus of this work is on remembering, not forgetting, the full scope of ourselves: the primal instincts, past memories, present sensations and future aspirations make us whole human beings. It is predicated upon a belief in universals, seeking sources of underlying unity that could restore man to meaningful and relevant connections with his world.

Restoring a communicative, comprehensible vocabulary to architecture is already underway, seeking semantic roots in our anthropological history. Patterns in all types of language, universal myths, and 'instinctive' belief structures remind us of architecture's vital symbolic function – I believe that the authenticity of architectural expression resonates from these primal origins, or 'linguistic essence'. Obscuring that essential dialogue breaks down the potential for meaningful exchange between man and environment, contributing to the crisis of meaning of own time.

This excerpt from Pallasmaa's 'The Critique of Modernism: An Architecture Without Language' encapsulates both the spirit and the approach of this thesis work:

"Critics cite the poverty of architecture's semantic content, due to the abstractness and rootlessness of the language of Modernism, as the main reason for its demise. This stereotyped architecture has lost its positive content, it is felt, and there is now a growing interest in the architectural history Modernism rejected. The search has begun for the ultimate roots of architecture and the linguistic essence of architectural expression.

Analogies borrowed from anthropological research have been used to shed light on the origin and evolution of expression – after all, until now our approach to architecture has consisted of limited samples from past and present cultures. Myths, rituals and beliefs connected with buildings have been analyzed in order to discover how the worldview of each civilization is reflected in its architecture. ... The idea of architecture as a language has gained ground among architects themselves, and conscious attention is being paid to the comprehensibility of architectural comm-unication. ... The historical motifs and symbols abandoned by Modernism have likewise begun to return to the vocabulary of architecture, although architecture has all too often fallen into cheap pandering to romantic trends in public tastes."[30]

FOCUS: ARCHITECTURE AS MEDIATOR

"One of the most prevalent ontological and metaphorical concerns in architecture is with humanity. Numerous scholars – Marcel Mauss, Susanne Langer and Mary Douglas – have noted the importance of the human metaphor. As Max Weber has pointed out for history, "Its intrinsic interest [is] in the relation of man to the 'world', its 'external' conditions and its consequences." [31]

- Suzanne Preston Blier

Architecture is a human issue: it is the art of inhabitation, shaping how we relate to the world. It moderates the external environment for our basic physical survival, but also mediates between inside and out, darkness and light, mass and void. The world we make articulates the conditions of interaction between internal man and his external surroundings, framing spaces of relationship.[32] Human experience is inextricable from environmental factors – as Heidegger emphasizes, our existence is primarily *spatial*.[33] Architecture, therefore, manipulates more than inert mass and empty space: it informs how we perceive and participate in the world around us.

The primary interest of architecture is this relationship between man and his environment, as mediator and metaphor. The interest of this thesis is what underlying spatial principles unify diverse architectonic 'characters' and metaphors, within a common symbolic language – how we read spaces experientially, respond intuitively, and 'write' our experiences into the spaces we create, through all the ages of man. Like the epic of Gilgamesh etched onto the walls of Uruk, architecture tells a story about how we exist in the world.[34] It is a manifestation of human emotions and imagination, of subconscious hopes and fears and convictions as much as conscious intentions[35] – Pallasmaa says that hope is a prerequisite for architecture, giving us vision and aspirations to be realized.[36] How we build changes throughout history, but not *why*: we build what we need but also what we desire, what gives meaning to our lives, what we what we believe in and commit to. A building is a series of wordless metaphors, each element linked to a larger class of symbolism.[37]

The work to follow explores spatial experience as a symbolic language, communicated through the tectonic senses of the body and the natural responses of the mind. It focuses on deep structures – mass, space, and metaphor – as the most basic terms of our 'being in the world'. Upright on the surface of the earth, beneath the heavens, universal human nature grants us these few human truths: upward and downward, head and foot, sky above and earth below are constants. There is an essential three-part structure to the world around us, and to our own vertical bodies, between earth and sky.

We recognize our own image in other upright bodies in space, composed like ours. We sense their state of being, whether dynamic or stable, firm on their feet or tentative. We experience their mass bearing downward and enclosing, voids uplifting and opening. Resting or standing, grounded or uplifted, falling or flying – our own being is a balance of action and reaction, gravity and resistance, motion and stasis. This is the world we know, and the world we make inevitably exists in reference (whether asserted, confused or denied) to these eternal spatial concepts. Acknowledging and articulating these experiences of the body in space, architecture can reinforce meaningful affinities between man and his environment – communicating our connection to a larger system.

CONTEXT: BROKEN CONNECTIONS

"We shape our buildings, and afterwards our buildings shape us."[38] - Winston Churchill

What we build establishes the conditions of relationship between our selves and our total environment: architecture can connect us, literally and figuratively, to the world around us. This is a critical issue because there is so much evidence today that we are not very well connected – neither to nature, society, nor even ourselves. Ecological apocalypse, identity crisis, cultural fragmentation, social dissociation, personal alienation … all of these schisms are increasing concerns in the Western world. Their coincidence with the explosion of urban culture is circumreferential, but – without entering into arguments of cause and effect – it remains inarguable that the way we live is implicated in the issues we face. Nihilism, decadence and self-destructive tendencies like the systematic devastation of the natural environment are irrefutable signs of a culture in crisis: past civilizations have manifested the same symptoms, in societies on the verge of collapse.[39] Such fundamental problems are much more scientifically and psychologically complex than this argument can address – but our built environment *is* the context, and perhaps a catalyst, of these human crises.

These critiques centre on the problem of lost connections, where fragments have replaced the whole and created a human realm where once-intuitive order and meaning are reduced to widespread incoherence and consequential meaninglessness. From the disintegration of history to the exploitation of the natural world, it is evident that modern man no longer forms part of a meaningful totality: he has become a stranger to his world and to himself. He is isolated, necessarily self-interested, and careless since he does not feel the need to cultivate a world anymore.[40] The breakdown of established order and symbolic meaning, hallmarks of traditional human societies, sets modern man adrift. Broken connections alienate him from environment, society, even himself.

The loss of place is therefore a well-established fact, says Norberg-Schulz, evolving concurrently with the alienation of man. Losing identity of place means losing character, losing demarcation and significance, and therefore losing readable symbolism or recognizable expression.[41] Human life used to be intimately integrated with places and things, participating in a qualitative totality which humanity was an integral part of. In spite of hardships and injustices, man had a sense of belonging and identity, in a world with qualities and meanings. Losing that relationship to things and places is losing the world, and losing *identity* in world: modern man is spiritually homeless, isolated in an existence without meaning or connections beyond himself.[42]

Julia Kristeva identifies the paradox of contemporary, global universality that in fact engenders expulsion and exile: we are all global citizens, but no longer feel ourselves to be part of any meaningful totality. Strangers in our own land, we are simultaneously everywhere and nowhere; as a culture we have no dwellings, no places in which to stop and rest. Place 'as foundation, as *fons,* as that which lies beneath' belongs to ritual cultures, preserving memory and permanence – the ancient rite of foundation no longer roots us to any place.[43] Primitive spatiality was built around a naturally-occurring centre, pre-modern spatiality around a re-centred core, but contemporary super-modernity is placeless produces non-places, where "people are always and never at home."[44] As Marc Augé describes, "supermodernity… naturally finds its expression in non-places."[45]

In our fractal environment the problem of space is a fundamental issue, critical to the preservation of identity and relationships to the external world. The culture of the fragment enables entirely new juxtapositions and associations, rearranging the familiar world into new possibilities, but it disables certain



[1.1] 'BERLIN', LUDWIG MEIDNER

"... the modern man has faced psychic difficulties unparalleled in the West since the breakup of Rome. ... He has become at once a tiny atom in a vast sea of humanity and an individual who recognizes himself as being utterly alone. He has therefore vacillated between a frantic desire to find something to belong to and an equally consuming passion to express his own individuality and to act on his own."[46]

"Alienation: not about a distancing from an essence or generic humanity, but the loss of feeling that there is an ability to achieve the possible, make the impossible possible."[47]

"Modern man's most urgent need is to discover the reality and value of the inner subjective world, to discover the symbolic life... The symbolic life in some form is prerequisite for psychic health."[48]

critical connections as well. A coherent worldview is vital to human nature, but fragmentation is evident in every facet of personal or collective life (figure 1.1). The potential for wholeness and harmony is generally lacking in contemporary context. This absence is evident in the way we think, act, and build: isolated, self-interested entities (Scully describes the schism of contemporary desires, at left). In our individualist, existentialist era, meaning is something we must each find for ourselves. Condemned to freedom, in the words of Jean-Paul Sartre, we find ourselves alone in an unknowable world:[49]

Western society is characterized by the cult of the individual, constant change and ambiguity. Our built environment, as a whole, is not designed to include or involve us in any larger order … perhaps our culture, as a whole, is not convinced such a unity exists. The social atomism of modern culture results in dissociation and alienation (as Lefebvre defines, below left).

Architecture is neither the source of this rift, nor its comprehensive solution. It does, however, occupy a unique position between our outer and inner worlds. Building is more than a practical art, it is a dialogue: architecture contributes to the relationship between individual ego or collective identity and the larger world.[50] By its physical being, it gives form to the interactions between man and his total environment. The purpose of this discourse is to reconsider the need for meaningful built environments with deliberate symbolic roles as a bridge to reconnect the schisms that divide, even destroy, today's world. Architecture can operate as a means of connection, because it is by nature a language and a medium of exchange. It expresses the conditions of relationship between man, society, city, the forces of nature, the immortal gods, and even man himself – even if all there is to transmit is the blank static of broken connections.

THE CONDITION OF DWELLING

"Man's relation to places and through places to spaces consists in dwelling ... Dwelling is the essential property of existence."[51]

– Martin Heidegger

The problem of place is a complex cultural, anthropological, psychological as well as physical issue.* Such expansive concepts can only be discussed in very simple terms within this work, limited to the basic bodily experience of architectonic space. This discourse addresses place and identity as spatial experiences, in the natural tectonic language of the human body. Its interest is not, therefore, the theoretical issues but the human *experience* of place, identity and architecture – our interaction with the world, as self-aware bodies in space.

Heidegger speaks in these experiential terms: dwelling is a task by which man relates to place, and through place relates to space also. In contemporary usage we speak of 'dwelling' in terms of residence but in the wider meaning of the word, dwelling is the *inhabitation* of the entire spatial domain we exist in.

"If we think of the verb to dwell in a wide and essential sense, then it denotes the way in which humans fulfill their wandering from birth to death on earth under the sky. The single houses ... the villages, the cities, are works of architecture, which in and around themselves gather the multifarious between. The buildings bring the earth as the inhabited landscape close to man and at the same time place the nearness of neighborly dwellings under the expanse of the sky."[52]

The ground beneath our feet and the heavens overhead define a middle space of human existence; architecture shapes that space into inhabitable places. Architecture, therefore, is the art of spaces *between* – of human places, defined between earth and sky. Heidegger describes the role of our built environment as a mediator: he calls for a qualitative dwelling, situating man between earth and the gods.[53] The elements of architecture are floor, walls and roof, moderating the forces of the environment, but the elements of dwelling are earth and sky, mediating the forces of the universe to make a meaningful human domain. Shelter is prerequisite for human survival, satisfying our physical needs, but the human spirit needs a place in the world to feel at home.

Can the built world teach us how to dwell, restoring man to these essential relationships with his world, knowing his own places between? Upright against the surface of the earth, beneath the sky, architecture forms an image that we can recognize and identify with, body to body. It shapes the space that we exist in, whether around it or within it: the building acts upon us, in conditions of space, and also *through* us in terms of embodied mass. Earth and sky are not only the external context of architecture, but also its primary elements, in mass and void. In defining the terms of contact between them, giving form to space and relating the form to earth and sky, architecture presents a powerfully symbolic image of what we are and who we are in the world.

*** 'Place' is used herein simply to denote meaningful space: a recognizable physical entity, existing in space but distinct from it. If place is a space with identity, 'identity' refers to those qualities of form and space which we can identify with, on some common level.**



"Architectural form is the point of contact between mass and space. Where the philosophical interrelationship between these two elements is unclear, so will the form be unclear. By defining the point of juncture between mass and space, the architect is making a statement about the interrelationship of man and his universe."[54]

Architecture stands between man and the infinity of space, shaping a human domain (figure 1.2). Creating that interface is an inexorably existential expression, manipulating the eternally symbolic relationships of mass, form and space. We assimilate its messages, through body and mind, conscious or not. As Frye asserts, the potent correlation between symbols is as important as the symbol itself, creating a narrative out of forms and spaces – "the testimony of critics from Aristotle on seems fairly unanimous that this unit of relationship is the metaphor."[55]

[1.2] 'BRAMME', RICHARD SERRA (SCHURENBACH-HALDE, ESSEN)

A building? A body? This 15-meter tall upright figure speaks to both, standing alone above the ground and against the sky – the form fixes a focal point in this expanse of landscape, inhabiting this place.

CONCRETE METAPHORS

"The timeless task of architecture is to create embodied existential metaphors that concretize and structure man's being in the world. Images of architecture reflect and externalize ideas and images of life; architecture materializes our images of ideal life. Buildings and towns enable us to structure, understand, and remember the shapeless flow of reality and, ultimately, to recognize and remember who we are. Architecture enables us to place ourselves in the continuum of culture."[56]

- Juhani Pallasmaa

Powerful architecture has the capacity to deepen our perception of space, enabling us to identify and connect with larger and larger systems – progressing, metaphorically, from earth toward universe. Man's utmost aesthetic pleasure is to experience a sense of connection with a system greater than himself; the larger the external system he can situate himself in, the greater his internal satisfaction.[57] Throughout history, architecture has acted as conciliator between body and building, building and world. It operates as a mesocosm; we experience our world through the frame it provides (now more than ever, in our urban era). This is its vital role, as the art of human places: defining spaces, framing the human experience and bringing the world into focus. Fixed in space, between earth and sky, architecture immortalizes a state of being – in tangible, tectonic qualities, that we recognize and react to as like bodies in space.

Like all ancient and archaic cultural constructions, traditional building was a means of connecting the human experience to higher order and deeper meaning. The cosmos and the body – in form, function, feeling and forces – are architecture's first models, reinforcing the natural order through imitation, bringing their hierarchy and harmony to the work. Conceived as a microcosm, by the divine order of the human figure, or a macrocosm honoring the structure of the cosmos, the building shares in the deep-seated symbolic resonance of these familiar forms. The body metaphor and the cosmic or global metaphor are systems of relationship, each allying the building, as its mimetic likeness, with a meaningful order – and making man a participant in that larger totality. Both are fundamentally human metaphors: whether the built work embodies human characteristics, or represents a human environment, it is based on human experience:

"Architecture, like history, is invariably anthropocentric. Architecture is integrally identified with human activity, experience, and expression, for, in ordering space, architecture also orders human action. Architecture is concerned with not only different aspects of human life but also with the variant categories of human thought and expression. In this respect architecture takes human activity to another plane, offering concrete parallels to pre-established patterns and perspectives. When architectural design draws imagery from the cosmos, it obliges people to become active participants within this larger paradigm. So, too, when architecture borrows its imagery from the human experience, it encourages those who move within it to reaffirm essential features of human identity and activity."[58]

The Upright Figure: Body, Building, World

"Metaphor is generally understood as a figure of speech limited to two terms only: this is like that. But the metaphor with which I have been concerned is more extended – a double one – in that it involves three terms: a body is like a building and the building in turn is like the world. That metaphor returns in a more global similitude: the whole world is itself understood as a kind of body."[59]

- Joseph Ryckwert

Ryckwert proposes architecture as a mesocosm between the microcosm that is man and the macrocosm of the universe, mediating between body, building and world. He describes the dawn of consciousness in terms of forms in space: "having abstracted my body from nature and thereby isolated it as an object of attention, I have also established it in a context for its metaphoric interpretation."[60] Identifying the human figure as a vertical form in space, any similarly upright body becomes a symbolic representation – a human metaphor.

"Recognition, together with the separation that it entailed – the primary estrangement – is the condition of knowing the world outside myself at all, which I can only grasp, only comprehend (if you will pardon the truism) out of my body, since that is what I am and that is also all I have for a map or model of my exterior experience."[61]

Below:
[1.3] ABORIGINAL MEMORIAL, NATIONAL GALLERY OF AUSTRALIA

Facing, left:
[1.4] YOLNGU BOY, painted for burial rites

Facing, right:
[1.5] FUNERARY LOGS, various clan designs



As our medium of interpreting and structuring the world, Ryckwert suggests that the metaphoric value of the body is our primary human inheritance.[62] Reconciling body and world requires a mediator. The theme of separation and reconciliation dominates human cultural products, most apparent in ritual and myth,[63] but Ryckwert (like Pallasmaa[64]) insists that architecture is the physical art of reconciliation between man and the world. As he describes, "the condition for a person 'finding himself' in the man-made world must therefore be that buildings should be like bodies in the first place, and in the second, like whole worlds - far-fetched though this may sound."[65] Relating body to building and building to world combines two powerful metaphors, fusing our realms of inner and outer experience into an all-encompassing whole – concretizing a human place.

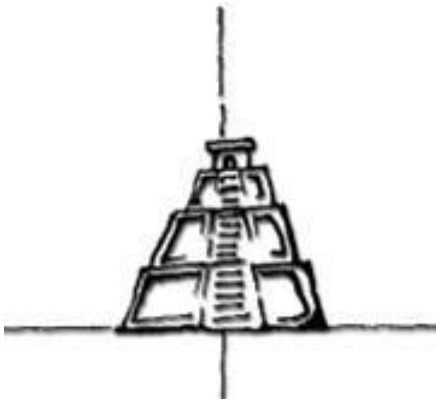
Abstracting the Body: the Primal Post

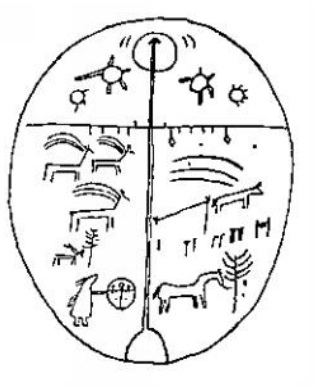
We exist as upright bodies in space: the primitive identification of a tree or post with the upright human form is a projection of this awareness, mapping the body onto the world. Erecting a representative body in space thereby becomes "a primal gesture – the ability to orientate ourselves, to know the orthogonality of our body to the ground, is a condition of our being."[67] Isolating an upright post as analogue of body, all architecture becomes a body: from primitive origins, the act of building has been imbued with anthropomorphic associations. The Aboriginal Memorial pictured here (figure 1.3) provides an example of this archaic idea in contemporary practice: log coffins painted to match the deceased (figure 1.4 & 5) represent the upright body as enduring monuments.*



*** The Aboriginal Memorial at the National Gallery of Australia (at left) is an installation of 200 hollow log coffins (detail above), distributed along a represented riverbed. Their designs are the same as those painted on the body during burial rites (shown above) – these standing logs represent the deceased person. Many of these have a small aperture towards the top: the Yolngu people believe that this provides the soul of the deceased with a viewing hole to look through and survey the land.**

***"The planting of a post, let alone a row of them has therefore always been seen as a metaphoric act and a type of building in general. It is also an act of taking possession of the ground: every such post implies a circle around itself..."*[66]**





In Search of a Symbol: The Vertical Cosmos

"The vertical axis is an imaginary line, conceived in order to establish relationships between parts and their center line. Articulation of the vertical has endured throughout history, regardless of architectural style. Nor is the primacy of the vertical limited to architecture: relationships to the dominant axis are also explored in art, geometry, symmetry, science. Even the 1910 'optical revolution' denying the laws of perspective did not shake the supremacy of the z axis, since it is not altered by perspective: the vertical is the only angle which always remains unchanged, regardless of position of the viewer."[68]
- Sigfried Gideon

The armature of this discourse is an imaginary line. Searching for some enduring frame of reference that gives order and meaning to human environments (in hopes of transferring some of that intuition into contemporary context), the *axis mundi* emerges as a compact image with immense ramifications, linking spatial and conceptual concepts. This ubiquitous symbol has various conceptions – world axis, cosmic axis, world pillar, center of the world, navel of the world – and associated forms, always marking a vertical line of intersection with the horizontal plane, bringing earth and sky into contact. It is a connection between polarities, between different realms of experience and significance – this axis does not, cannot exist in neutral space. It creates a hierarchy, organizing the cosmos according to a natural, tangible three-part structure. It defines a center, giving priority of horizontal place.

What makes an imaginary, vertical line an *axis mundi* is the order and meaning it maps onto our world, in each dimension. The *axis mundi* notion is ubiquitous, evident around the world and across time, from distant Neolithic origins to every major city today (figures 1.6, 7, 8). It transcends culture, social structure and religion, appearing in spiritual or secular context, individual or collective. Its multiplicities of form, but consistent meaning, suggest some archetypal value. Topological point in nature mark exceptions to the horizontal: thus we find the first signs of human religion in sacred caves, and a world mountain in every mythology.* Works of architecture replicate these sacred forms, imitating the cave or mountain, pillar of the earth or dome of the sky. The human figure itself is like a column between heaven and earth; the house partakes of the same symbolism.

*** The Latin word *religio*, in the interpretation made prominent by St. Augustine, is usually accepted to derive from *re-ligare*, or 'to reconnect.' Another translation of *religare* is 'to bind', in the sense of 'a bond between humans and gods.'**

For all it evident verticality, the *axis mundi* is not always expressed in terms of height – it is a line of connection and therefore of motion. It can be inferred negatively as a central void, implicitly in the visual 'motion' of a rising or sinking mass, and physically in ascending or descending movement. The dimension of action and distinction is vertical, an exception to horizontal extension and rest. Downward is necessarily inward, enclosing and condensing, sheltering like the earth; upward is also outward, expanding and opening to the sky. It is at once the zenith of the sun and the line of gravity to the earth's core. Heights and depths, earth and sky symbols are all part of this metaphor, whether embodied in concave or convex forms, or represented in their associated symbolism: mass and void, dark and light, weight and flight (figure 1.9). Our relationships to these few human truths are archetypal: we interact with these conditions, imitate and embody them, recall and represent them. This is our basic spatial – and therefore conceptual – vocabulary; apparent in the way we build, think, speak, and dream.

The articulation of the vertical makes a statement in any language, spoken and unspoken. The eternal relationships of horizontal and vertical, downward and upward, foot and head, earth and sky, are deep-seated dichotomies, defining a natural hierarchy that extends to non-spatial realms like society and knowledge, freedom and power, consciousness and mortality, morality and emotion –

"In the psychological world we commonly describe our moods with reference to space. "I'm feeling down," "I'm feeling up," … "She's feeling open," or 'He's always closed down." We have an innate sense of ourselves as the "center" and use symbolic ideas about place to help us describe our moods. We have established, through descriptions of psychological space, experiences that we bring to the built world."[70]



Facing, from left: [1.6] MAYAN TEMPLE DIAGRAM, as axis mundi site; [1.7 & 8] LAPLAND SHAMANIC DRUM, illustrating the stratified cosmos

Above: [1.9] KIVA LADDER

"Although an analogy between body and world has become increasingly improbable, the other one, between body and building, has remained entrenched in everyday speech – and therefore in thinking. … Wittgenstein, so attentive to language's layering, remarked once, "Our speech is an incarnation of ancient myths. And the rites of ancient myth were a language."[69]



The importance of verticality and its associated hierarchy, centrality, *priority*, is expressed in all of our symbolic languages and cultural constructions (figure 1.10). Through its many manifestations – universal, cross-cultural, seemingly eternal – this axis-symbolism emerges as a dominant framework, imposing a hierarchy of values.* As a line of connection and a point of intensified contact, the axis gives meaning to horizontal place and makes vertical space symbolic – value-neutral space, conversely, is a homogeneous continuum in all dimensions, with no possibility of places. These spatial concepts are critical to architecture, informing how we perceive, classify, shape and inhabit space. Building breaks abstract space into absolute values of vertical and horizontal, forging a symbolic relationship to each (deliberately or otherwise). Architecture can fix a center and focal point, domesticating the infinity of space to shape habitable places: places to dwell, to confront the cosmos and feel at home in the world.[71]

Contemporary culture lacks this sense of connection, coherent structure and global significance; the contemporary built environment lacks meaningful order and fundamental symbolic expressions. What we need is not a renewed interest in the spiritual hierarchy of the world, but a reminder of how innate these spatial concepts are, how instinctively we experience space, and how counter-intuitive our environments have become: faithful likenesses of a culture without a center, without a dominant model, without a sense of place or spatial value. Great works of architecture amplify human experience by giving resonance to our spatial concepts, grounding us in a world we know and reinforcing our relationships to it. Their language speaks to us in basic, tectonic terms we can understand intuitively. Ignoring or distorting the symbolic value of space creates contradictory buildings, environments we cannot relate to, and disconnection between man and environment.

The task of architecture, then, is to strengthen the verticality of our experience,[72] like an *axis mundi* – restoring meaning to space in order to make places that connect us, physically and conceptually, to our world. The core of this discourse is that single, imaginary line, structuring our very imagination: everything else is tangential to it.

[1.10] TOTEM POLE (VICTORIA, BC)

*** The dominant vertical is a natural, potentially universal human invention, enduring from the primitive Neolithic to complex modern times. Whether its symbolic associations originate in the linear force of gravity, the zenith of the sun, the human figure (as an image of divine order), or simply the super-positioning of earth and sky – and likely a combination of all these parallel facts – the vertical emerges as prevailing axis. As Sigfried Gideon states: *"Verticality as a coordinating principle is not confined to the early high civilizations. It had its roots in the antecedent Neolithic world. Somehow this organizing principle must be tied up with the evolutionary process of the human spirit. It occurs over the whole world, even when no direct contact is traceable between different cultures."*[73]**

The Symbolic Dimension

"Our attitude toward the vertical has become automatic and anchored in the unconscious. From a limitless range of directions and angles, one was chosen and became the standard to which all others must be compared and to which all must bear some relation." [74]

- Sigfried Gideon

The symbolic dimension is simultaneously spatial and conceptual. In spatial terms, it represents the axis of our being and our world: a vertical line from earth to sky, organizing the universe into a meaningful system. It establishes a center of gravity, providing a focal point against the endless continuum of horizontal space.[75] Consciously or not, the engagement and expression of the vertical axis in architecture is always symbolic.

Conceptually, the symbolic dimension is a level of meaning, above or below or beyond the everyday empirical facts of things. It is our means of communicating and forming connections, recognizing objects and events for more than what they are outside ourselves, and internalizing them as part of our own reality. The symbolic world is subtle and suggestive, enriching our experience with multiple meanings within a larger system.[76] It is a language of archetypes, common to our humanity, which gives meaning to forms and spaces. The value-charged spatial concepts shared by primitive and ancient cultures fuse the physical and symbolic into a single image, seeing the world as a system of distinct and heterogeneous places with inherent and immutable values. Historical architectures articulate these world views, asserting the cosmic order and the human experience through the building, as a metaphor.*

Pallasmaa speaks of a flattening of reality in the individualist modern world, neutralizing natural hierarchy. The z-axis cannot be physically eliminated, but its paramount significance – making every act of building a meaningful human expression – is less prevalent in contemporary thought, and less apparent in contemporary design. A primary task of architecture is to assert the verticality of our world, engaging that symbolic axis – hierarchy, centrality, directionality and gravity are integral to the symbolic vertical. If architecture is to make meaningful human places, resonating at a universal level, then we must re-instate and reinforce this symbolic dimension.

*** The hierarchy of the cosmic world-axis metaphor and upright-body metaphor are complementary concepts, inextricable from each other: as the Book of the Hopi tells, "The living body of man and the living body of the earth were constructed in the same way. Through each ran an axis ... along this axis were several vibratory centers ..."[77] Vertical hierarchy is intrinsic to our humanity, in body and in mind – its importance is imprinted in the human imagination. It embodies our upright orientation, and represents the order of the world as we know it: our physical posture and composition give inherent meaning to space. Horizontal and vertical have fundamentally different tectonic and symbolic values, with immutable associations. Our relationships to these few human truths are archetypal: we aspire to the vertical while constrained to the horizontal, our 'human line of tenure on this earth'.[78]**

CHAPTER II

GROUNDWORK: UNIVERSAL STRUCTURES

"The human substance and structure hardly change: nothing is more stable than the curve of a heel, the position of a tendon, or the form of a toe." [79]

- Marguerite Yourcenar

In a globalized culture advocating diversity, we can forget how much singular human beings are collectively the same. We hold so much in common, our bodies and senses, thoughts and feelings. Our perceptions of the world – and actions within it – are more consistent than various: human experience is, at its core, a universal one. Humanity is a constant – "what we regard as human civilization has developed without any change in human nature."[80] The basic unit of relationship between human cultures in distant places and times is man himself. There is a deep-seated synchrony within our species, sharing the same form, shaped in response to the same essential environment. Psychologically, the underlying unity of a collective unconscious could explain some of our universal perceptions. But there is a more corporeal, equally subliminal, accord between all the ages of humanity: physiologically, we are all fundamentally one body.

The structure of our bodies and minds unite us in ways which our individualist culture rarely acknowledges. Humanity throughout the ages shares the common experience of constant physical form, emotional responses and mental capacities. We share the same life events, the same instincts, the same reactions, even the same emotions.[81] For all the differences and diversity that give human culture its rich complexity, being human in these elemental capacities is everywhere and always the same. Standing beneath the sky on the surface of the earth, surveying the horizon and questioning the ways of the universe, creating relationships and rituals that impart meaning on life experiences, making a place for ourselves and ordering our environment: this is a universal human life.

These commonalities form the foundation for certain universal human experiences: common physical and mental structures inform our impressions of the world, and our expressions also. Architecture and design assume the regular form and consistent faculties of the universal human user, but our collective *experience* - interacting with form and space, seeking a recognizable order and meaning to their arrangement - is too rarely considered. The architectural experience arises, for the most part, from our unconscious reactions:[82] the subtle, haptic, tectonic experiences of the body and their subliminal associations in the mind shape our experience of the built world, and how we feel in relation to it.

We are inexorably in space, framed by form, identifying with the larger world as our environment allows. We experience space through the same body, giving symbolic value to the same familiar qualities. We share natural means of perception but also innate predispositions. Studies suggest that universal spatial biases are so integral to the shape of our bodies that they are imprinted in the mind, even before birth. The systems of order and meaning that we naturally perceive and project are influenced by these innate spatial concepts – seven coordinates seem embedded in our imagination, ordering the world around a center. We have an innate predisposition for verticality, hierarchy, centrality, frontality and directional axiality. Essential human similarities translate into a universal language, based on the common ground beneath our diversities: our very selves.

A COMMON LANGUAGE

"It is as if I am being manipulated by some subliminal code, not to be translated into words ... stirring intimations of meaning with vivid spatial experiences as though they were one thing. It is my belief that the code acts so directly and vividly upon us because it is strangely familiar; it is in fact the first language we ever learned, long before words, and which is now recalled to us through art, which alone holds the key to revive it ..."[83]
- Colin St John Wilson

Iconic works of architecture are monuments to their respective cultures, but their lasting significance surpasses historical status alone. Le Corbusier asserts that architecture a phenomenon of the emotions: true icons continue to move us. They are testaments to the deeply held human convictions and desires that motivated their creation – emotions that still engage us, that we can share in even out of their social or religious context. They embody resolutions to eternal human questions: we can recognize them and identify, though the answers they provide are not our own. How can inanimate bricks and stones incarnate such poignant feeling? Even in ruins, their human drama remains intact. They cannot speak to us through the surface structures of their own era – culture, religion, and social order change and fade over time. Still they communicate, each telling a story we can interpret and identify with, on some underlying level. Somehow they continue to transmit meaning, striking an inexplicable yet powerfully familiar chord.

Wilson calls this our own first language: the continuous dialogue between body and surrounding space, learned through our first interactions with the world, and revived through art: an intensification of being.[84] It is unfiltered and unrefined, communicating directly through the sensations of the body. It is unsophisticated, but by no means inarticulate: its terms are the simple truths of our being in the world, needing no further interpretation than our own human nature. Integral to elemental human experience, its terms are necessarily (and immutably) archetypal. It is a basic but universal language: the signs of architecture are "a common language of form which we can immediately understand, regardless of individual or culture."[85]

The concept of architecture as a language, combining meaningful symbols to communicate a certain feeling, is not foreign to us: the classical language remains a part of our vocabulary. A chorus of voices speaks clearly to us, across hundreds and thousands of years: as sculptors of mass and space, should we not acknowledge the immemorial language of forms and learn its discourse, mastering the essence of our medium? Instead, the new world distrusts and discards tradition, ignoring this ancient knowledge or relegating it to history, with no relevance in our time. The neurosis of originality – coupled with a declared disinterest in history – has led other artists into the illusion of inventing new forms, or the hubris of proclaiming new meanings for ancient ones (such was the autonomy which was to garner later critiques for the Modernists, ignoring traditional layers of meaning in an asymbolic aspiration to clarity). Confusion necessarily results, when deep structures and basic principles are varnished over with new pretenses: an architecture of splintering ideologies, affirming its own identity crisis.

This work explores the instinctive and archaic language of architecture, its manifestations in a system of symbolic forms and spatial archetypes, and its essential lack of consistent representation in the modern world. Seeking patterns of unifying architectonic elements (as Frye does for literature) its focus is consistency, not originality.[86] It explores the enduring validity of archetypes, as an architectural language of absolute values which continues to speak to us, as human beings, and *through* us as designers and builders – recalling our attention to the deep resonance of our tectonic experiences, in the simple terms of mass, form and space.

The Dialogue of Form and Space

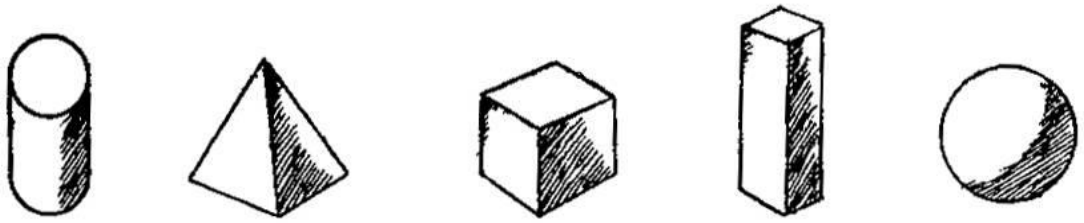
"Architectural forms are a language confined to the joining of a few ideographs of immense ramification."[87] - Adrian Stokes

Forms and spaces are like words, each with inherent associations, but expression originates in their selection and arrangement within a functional archetype. In *Archetypes and Architecture* Thomas Thiis-Evensen states that the intentions of the work, deliberate or otherwise, are always evident in the form they take: volumetric archetypes represent "a general solution to the problem of form regardless of time, place, or function."[88] This is not to suggest that the history of architecture is an endless repetition of fixed typologies – the spatial archetype naturally precedes the type. They are not a limit to creativity, no more than the vocabulary of any other language limits its expressive potential. Like the words of a poem, they are always a means of communication but never the message itself (as Pallasmaa describes at right). Stories cannot exist in isolated words, but like any language, mastering the usage and subtleties of each term is essential to meaningful expression.[89]

***"Both poetry and architecture convey, or give rise to, certain states of mind with their own systems of signs and symbols, each consisting of conscious and unconscious meanings, mental images, feelings, associations, flashbacks, sensory images, and psychological tensions. Language is a medium for storing and transmitting the message of poetry; material forms and the immaterial spaces determined by the forms, and their mutual relationships, are the means of architectural communication. However, just as words as such do not constitute poetry, so the forms of architecture cannot be identified with the architectural experience."*[90]

The meaning, therefore, is not the form as an object but the way we interact with it, not the space itself but how it shapes a human experience. Our interest here is the architectural encounter: within this work, mass, form and space are not considered in clinical isolation, but as properties shaping the holistic responses of the body, mind and emotions. Architecture is a concrete phenomenon, but Norberg-Schulz emphasizes that it cannot be understood as pure geometric form: it ought to be understood as part of the history of existential meanings translated into the physical world, expressing human experiences in meaningful symbolic forms.[92] Scully asserts that form and meaning cannot be separated from each other: meaning can be conveyed in different ways, whether through the recognition of signs which are meaningful to us, or through the empathetic responses of the body, but we are hard-wired to apprehend and interpret the language of space.[93]

***"Open, outdoor space, without limiting contours of hills or shore lines, is many times larger than the hugest edifice, yet the sense of vastness is more likely to beset one upon entering a building; and there it is clearly an effect of pure forms."*[91]**



[2.1] ESSENTIAL GEOMETRIES from LE CORBUSIER, *TOWARDS A NEW ARCHITECTURE*

Key Definitions

Architecture is a subtle and archetypal language of mass, form and space. It operates in three dimensions, sculpting the shape of our bodily intuition and understanding (rather than reading its message on surfaces). As the art of inhabitation it communicates *through* human experience, in present perception, spatial memory and symbolic associations.

In this light, the elements of architecture are more than Platonic geometries: these are the terms of our spatial vocabulary (figure 2.1). Form and space are symbolic expressions, inherent to our experience in the world: their arrangement is always meaningful. Mass is the basic material of architecture and form is the first principle, before surface, even before structure. Surfaces and materials enable the infinite diversity of architectural expressions, but the qualities of mass, form and space are essentially archetypal. Norberg-Schulz calls these primary elements, Pallasmaa calls them essences: in this discourse 'form' describes that germ of architecture. Form is the embodiment of an idea, necessarily generic, from which the final creation takes shape. Space is its negative, a continuum sculpted by surrounding form – this is our domain.

All of architecture is a combination of these few necessary conditions, exterior or interior, open or enclosed, widening or narrowing, ascending or descending: their functions differ across cultures, creating different characters of space, but as a language its terms are universal.[94] Deep structure constants can be found within the multiplicity of architectural forms, and across the ages: the archetype is the simplest unit of architecture.[95]

The Secret Language of Archetypes

As recurring patterns, evoking consistent responses, archetypes are rooted in the basic unity that Norberg-Schulz describes (at right): inhabiting a common form, subject to the same forces in the world. These primordial images are innate 'activated points'[96] making up our *a priori* intuitive readings of things. In body or in space, in nature or in art, archetypal language speaks to all ages.[97] Its eternal nature is not in a fixed meaning but in its capacity to activate these eternal resonances. The archaic response is an echo, (as Bachelard explains at right): it does not generate the image, but it resounds in recognition.

***"Form and content are mutually dependent aspects of the same total experience; the fundamental correspondence between them is a necessary property of the world. The archetype, thus, is a pre-existent reality: universal images are observable in the nature of the world, without psychoanalysis or collective unconscious."*[98]**

***"Later, when I shall have occasion to mention the relation of a new poetic image to an archetype lying dormant in the depths of the unconscious, I shall have to make it understood that this relation is not, properly speaking, a causal one. The poetic image is not subject to an inner thrust. It is not an echo of the past. On the contrary: through the brilliance of an image, the distant past resounds with echoes, and it is hard to know at what depth these echoes will reverberate and die away."*[99]**

The same archetypal figures and structures reappear in different civilizations and different times, from primitive mythology to modern dreams. The most self-evident archetypal image is our own: universal symbols refer to the experience of the body internally and in the world, the cycle of life events and the rhythms of the broader universe. The archetypal image takes root in this common ground. These underlying commonalities, rooted in our universal experiences, are reflected in the worlds we make for ourselves: the society we organize, the culture we create, and the architecture we build.

Joseph Campbell notes that our stories are all the same stories, with the same characters. In literature, Frye (quoted at right) shows that the structures of our stories are always the same structures. In linguistics, Noam Chomsky demonstrates that all languages share the same foundations, supporting the surface structures that make each distinct. A comparative methodology for the language of architecture, we could assume, would reveal that deep archetypal structures are equally fundamental to the reading and writing of our built environments – a narrative of space, telling the story of man in his world.

***"If archetypes are communicable symbols, and there is a center of archetypes, we should expect to find, at that center, a group of universal symbols. I do not mean by this phrase that there is any archetypal code book which has been memorized by all human societies without exception. I mean that some symbols are images of things common to all men, and therefore have a communicable power which is potentially unlimited."*[100]**

[2.2] 'RECLINING FIGURE ARCH LEG', HENRY MOORE

"In Moore's sculpture we hear the voice of the geological past of nature and of the archaeological past of man."[101]



Deep Structures

"The body knows and remembers. Architectural meaning derives from archaic responses and reactions remembered by the body and the senses. Architecture has to respond to traits of primordial behavior preserved and passed down by the genes. Architecture does not only respond to the functional and conscious intellectual and social needs of today's city-dweller; it must also remember the primordial hunter and farmer concealed in the body."[104]

- Juhani Pallasmaa

*** Our deepest experience of a building is no longer as an external but an internal reality: common reactions are rooted in our mutual, fundamental humanity.[102] All of our interactions have surface structures and deep structures: socially or individually, we encounter a building as an external reality. Individual experience or social convention can provoke very different subjective impressions: conscious reactions are variable, but un-thought reactions – our direct, instinctive bodily experience – can be universal. Great buildings can be collectively recognized as icons because they resonate on this common level.[103]**

Adopting a structuralist view permits the simultaneous study of diversity *and* universality: individual and cultural identity are not precluded, but recognized as different levels of perception and intention.[105] Chomsky's theory of 'universal grammar' states that all human languages must share some common, intuitive basis: conscious intent and cultural context are acquired surface structures, built up on these inborn foundations.* Chomsky also shows that we have a natural ability to *generate* surface structures and deep structures, and to shift between them.[106] His studies show the universal 'background' of spoken languages; unspoken languages share the same faculties. Extending these theories to the symbol-system that is architecture, we could suppose that surface structures and deep structures are similarly inherent to the built environment. These are the two languages of architecture:

"They derive from the simple fact that as human beings we have both physical and intellectual memory. From these two kinds of memory we may derive two kinds of expression in architecture: one that stems from an analogy with the physical memory of the effects of natural forces on the body and one derived from an analogy with the intellectual memory of places and events."[107]

THE SYMBOLIC WORLD

"An abstract language of symbols and signs is unique to the species. With it human beings have constructed mental worlds to mediate between themselves and external reality. The artificial environment they have built is an outcome of mental processes – similarly, myths, legends, taxonomies, and science. All these achievements may be seen as cocoons that humans have woven in order to feel at home in nature. We are well aware that peoples in different times and places have structured their worlds very differently; the multiplicity of cultures is a persistent theme ... Here our purpose is to focus … on the underlying similarities."[111]

– Yi-Fu Tuan

From time immemorial man has built up interpretive frameworks to structure external reality, giving order to an infinite and overwhelming environment.[108] Chaos must be transformed into cosmos, replacing a meaningless reality with an illusion of meaning; symbolic languages and systems serve this purpose.[109] Symbols are the medium of meaning, adding another facet to our experience of objects and events. Projecting a symbolic dimension, personally and collectively, we apply a framework to create a meaningful model of order:

"Man is a symbol-forming organism. He has constant need of a meaningful inner formulation of self and world in which his own actions, and even his impulses, have some kind of 'fit' with the 'outside' as he perceives it."[110]

Order and meaning are the themes of this discourse, as first principles of the worlds that we create to mediate between ourselves and outside reality. These are the hallmarks of human space: the twin piers upon which every human world is constructed, whether physical or conceptual.*

We are naturally and inescapably driven to understand our total environment and ourselves within it: we have a vital need to relate our internal experience with the external world, connecting to a continuum outside ourselves. This sense of exchange may be our primary existential need. Our existence depends on a coherent image of the world, and where we fit into it – we need a network of meaningful relationships, with other beings (mortal and immortal) but also with our physical world, in spaces and places, and with intangible realms beyond our immediate experience. We construct symbolic worlds to mediate these vital relationships, through spoken or unspoken languages, reconciling internal and external reality into a coherent whole.

Architecture is one of these languages, belonging to the earliest phase of symbolism, before words.[113] It is a 'middle place' we have built for ourselves – literal and also conceptual – to help us feel at home in the world. The quest for basic order and harmony in the world is rooted deep in immutable human nature – the resolution itself is not universal, but the *need* to resolve it is.[114]

*** Beyond survival, human actions in the environment are driven by existential needs: social (the need for communication and solidarity), symbolic (the need for meaning in experience), spatial (the need for an ordered environment), and creative (the need to make inner experience or idea manifest in the world, often – though not always – through aesthetics). Exchange is essential: we need to communicate, seeking meaning in objects and events around us and expressing what we've understood.[112]**

CONVERGENCE: THE SYMBOLIC MIDWORLD OF LANGUAGE

"In thinking or speaking about architecture we must never lose sight of the fact that architecture and architectural expression are a part of what the philosophers Ernst Cassirer and Susanne Langer call the symbolic midworld of language. The midworld of language, which includes mathematics, music, art, as well as the written word, mediates between the subject, you and I, and the otherwise unknowable objective world."[119]

- Royston Daley

The making of architecture is so pervasive that it seems inherent to the nature of man: from earliest origins, the human race has exhibited a collective and constant impetus to build. Throughout history and across the globe, humanity has been perpetually at work to moderate the external world and create a human environment.[115] The origins of architecture are like an extension of clothing, protecting man from the elements – security and shelter are the first principles of building, at any scale.[116] Architecture mediates between man and his physical environment, but it exceeds these survival requirements to respond to our social and spatial needs, making a human place and creating a frame for human activities.[117] Ryckwert says "man has the capacity to imagine an environment other than the existing; architecture is an imitation of this idea."[118]

It is apparent that man has always built, and that the motivation to build surpasses the requirements of basic shelter: it shapes a human space to meet his existential needs also. "Man's interest in space has existential roots. It stems from a need to grasp vital relations in his environment, to bring meaning and order into a world of events and objects."[120] Architecture serves to domesticate space, creating the ordered human environment that we vitally need. Norberg-Schulz continues from above: "When we say 'give order to our environment', this implies that architecture … participates in creating a 'milieu', that is, a meaningful frame for the activities of man."[121]

Architecture organizes and controls the human environment, enabling interaction, in three fundamental ways: it provides physical control, making an artificial climate; it creates a functional frame, connecting and filtering interactions; and it shapes a social milieu. The social purpose of a building is beyond its physical functions, but equally crucial: the planned milieu guides and instructs, creates expectations, satisfies or disappoints.[122] A social milieu provides a hierarchy of meaningful expressions, defining possibilities for social life, giving form to social and cultural ideas and ideals.[123] As such, it can also incorporate our symbolic and creative needs, expressing a particular world view. The art of building is a synthesis of these vital human needs and desires, making values and aspirations manifest.

Symbol-systems, such as art and architecture, have this vital task: to assert aspects of reality.[124] Architecture, therefore, is more than an outer skin to moderate the elements, an enclosure to take possession of space, or a purely aesthetic expression. Architecture is a symbolic midworld, conditioning the relationships that connect humanity to a meaningful order. This discourse considers the symbolic dimension, constructed in the symbolic language of mass, form and space.

These are the first principles of architecture – the physical shape of its deep structures, beneath surface details and diversity. As an outward manifestation of our internal impressions, the essential form it takes and the space it shapes are existential expressions. Frank Lloyd Wright (quoted at right) refers to the act of building as 'life itself taking form': whether individual or collective, architectural acts physically and symbolically define our being in the world. The forms chosen vary with time, taste and technology, but always express an intimation of how we understand the world beyond us, and how we wish to fit within that larger system. The final meaning of a work of architecture is as a metaphor for the need it serves: an image of human order, and a concretized desire for connection – physical and metaphysical – between man and world.

"Architecture makes social life articulate, tells its meaning, and is a chief fruit of culture. Mere building records the necessities of existence, but architecture is creative. It is itself a flux. It is the flow of human life cut by civilization in the rock face of earth."[127]

Space is one of the structures to express our being in the world: when it becomes a system of meaningful places it comes alive for us, shaping our own small universe.[125] Man cannot be a citizen of the world, if he does not belong to a place – the architect's task is to give form to these places, enabling us to dwell in the world.[126] The conditions of dwelling, in Norberg-Schulz's definition, are orientation, identification and expression – we need an environment with order and meaning, to understand our place in the world and make it manifest in built form. As an inhabited, symbolic language, architecture has the potential to provide these conditions.

"If we desire architecture to have an emancipating or healing role, instead of reinforcing the erosion of existential meaning, we must reflect on the multitude of secret ways in which the art of architecture is tied to the cultural and mental reality of its time."[128]



BACKGROUND: BUILDING CONNECTIONS

"As a human product of a pronounced practical character, architecture has a particular ability to show how our values, how our cultural traditions determine our daily life. Only through cultural symbolization can architecture show that daily life has a meaning which transcends the immediate situation, that it forms part of a cultural and historical continuity. The other arts are not able to fulfill this task in the same way, because they do not so directly participate in our daily existence. This is probably the reason why architecture is considered the 'mother of the arts'."[129]

– Christian Norberg-Schulz

Arthur Schopenhauer says "architecture has this distinction from plastic art and poetry: it does not give us a copy but the thing itself."[130] Empirical science can teach us more, about the pragmatic nature of man and the world, than architecture can embody. Art can provide more perspectives on man and the world than architecture can represent, but our relationship with architecture is more immediate, more intimate – it is a human product, serving human activities.[131] As the principal container and context of human experience, we are in constant contact with architecture. The built environment has a powerful effect, both consciously and unconsciously, on how we act and react: even one influential space can shape our impressions and outlook. Art, architecture, and design in general are vital processes, reflecting what we are and shaping what we become.

Art is a means of communicating values, to make them common;[132] as the most abstract of the arts, architecture is most adept at communicating deep values (even in crisis).[133] Architecture can intensify the way we think, feel, assess and understand the world; architectural icons of the past have achieved this revolution, in powerful symbolic forms and spaces. Cultural symbolization, to use Norberg-Schulz's term, connects our everyday experience to deeper realms of meaning and higher aspirations.[134] Some iconic works of architecture come to represent an entire culture, like the characteristic forms of a Babylonian ziggurat, Egyptian pyramid, or Greek temple. A particular building type, even a singular structure like the Parthenon or Roman Pantheon, can condense the conditions of its age into a tangible artifact: an act of living culture.[135] They represent a moment in the history of human ideas and ideals, shaping human feeling into monumental forms like the Romanesque basilica or the Gothic cathedral. Saturated with meaning, these icons express the most deeply held convictions, highest aspirations and central authority of their age (figure 2.3). Giving form to a collective vision, societies of the past have made their ideals manifest as tangible realities.*

Aspirations in Stone

"The building which, long after the fashionable idioms of its time have degenerated into clichés, still continues to contribute some memorable quality to human life is the building which draws its communicative force from the unchanging emotional associations in the architectural language, those which are most deeply rooted in the common sensory experience of humanity."[136]

- Sinclair Gauldie

The world man makes for himself bears his imprint: every built work, collective or individual, concretizes the conditions of its creation. Architecture captures the spirit of its age, not as a derivative of culture, but as vessel of our realities and our imagination: what Susanne Langer calls "the total environment made visible".[137] Who we are inevitably shows through in how we build: Lewis Mumford says man is maker of himself, and that architecture makes that ideal self visible to later generations.[138] Great works of architecture can express what gives meaning to our lives, in whatever its creators most fervently believed. Personal, social or cultural, sacred or profane, architecture is an assertion of identity and an expression of fundamental values – deliberate or otherwise. However individually it is conceived, the environment we collectively form frames what we are and shapes what we will become. Architecture tells the story of how we live, think and dream: how we see ourselves in the world.

In the primitive and ancient world, the fervent wish for an environment in harmony with humanity and the universe is evident in built form. Our natural need for connection is expressed in these examples, relating man and environment, physically and metaphysically. Great works of architecture grant us an image – whether in embodied figure, or representative frame – of fundamental relationships between man and environment. These are architectural answers to the eternal questions of '*knowing man'* – an upright body wandering the earth beneath the sky, seeking order and meaning and a place in the world. Each in their own way, they strive for unity with forces beyond human understanding, seeking some resolution of the human condition. They maintain iconic status, long after cultural contexts and religious beliefs have faded, because they express these powerful human truths.

Historically, architectural icons usually had religious purposes, but even today – in our individual worlds of fragments and instants – there is enlightenment in these ancient places. The pyramid still speaks of grounding eternity, the Parthenon of radiating harmony, the Pantheon of powerfully condensing unity. Beyond the belief system that motivated these works, there is still safe haven in the Romanesque basilica and soaring heaven in the Gothic cathedral. Religion is a surface structure, like culture or social conventions, but these iconic works continue to move us even out of context. Speaking some common language, directly to our humanity, their deepest expressions are essentially universal.

*** These emblems also communicate a different range of technologies and practices, but these material realities should not be confused with the underlying motivation of the work. Structural innovations enabled new forms, but did not initiate their creation – no more than the invention of the airplane created the desire to fly. Architecture, like any cultural artifact, provides more than a technical record of what a past culture *could* do: it is a testament not only to the world they lived in, but what kind of world they wished for. Every built work is a manifestation of the priorities that shaped it, translating the parameters and the possibilities of its creation into a concrete image.**

Facing: [2.3] CHURCHES OF SALZBURG

A CHANGING ROLE

"In our century, architecture, as with so many activities, has changed from a symbolic language bound to our cultural heritage, into an isolated image whose value is in its novelty, not in adaptability to surroundings or its continuation of the cultural heritage."[139]

- Juhani Pallasmaa

Throughout human history, from primitive spiritual societies to ancient cultures, the architectural process and product were essential 'anchors' of human life. The primitive imagination conceived architecture as a missive of culture and defense against chaos – a stronghold of humanity itself. The act of building, as a means of making places and communicating values, was an essential part of primitive and ancient traditions.[140] Architecture could provide a sure reference, an index of cosmic order, in the immutable shape of the human figure and the eternal divisions of the stratified cosmos.[141] Functioning as connective tissue between man and the world, the gods, even the forces of nature, its role was paramount. The symbolic value of the vertical axis was literal and absolute, and articulating that line of communication between humanity and the powers of the universe was a critical task – architecture served (adapting Merleau-Ponty's phrase) as the physical form of man's intentions.[142]

Over time, however, other media came to replace physical symbols as primary texts. We naturally think in symbolic images, but the development of abstract sign-languages – like the phonetic alphabet – shifts our attention from visual to verbal (and finally virtual) symbols. Written words rendered communication more transferable and flexible, detaching subject from its tangible object.[143] In the shift from absolute material symbols toward abstract verbal signs, culminating with the printed book, architecture necessarily lost status as primary media for cultural communication.[144] As Victor Hugo's postscript *ceci tuera cela* premonitions, more accessible verbal symbols rendered ancient material ones obsolete:

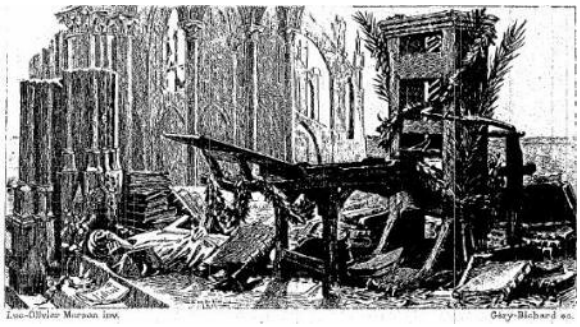
"The statement revealed a premonition that in changing shape the human idea would also change its form of expression, that the leading idea of each generation would no longer be recorded with the same substance and in the same form, that the firm and lasting book of stone would give way to an even firmer and more lasting printed book."[145]

Literate society is less dependent on objects of communication: material symbols have been all but outmoded, in the transition from physical to verbal communication (figure 2.4). Text and image are so intrinsic to our culture that we do not wonder at the phenomenon of flattening symbols, flattening communication and *meaning,* from three dimensions to two.[146] We look for signs, scanning surfaces for meaning. Three-dimensional forms and objects remain, of course, but – removed from a critical, representative role – their communicative potential has slowly faded from attention. What De Sola-Morales (quoted below) and others call the 'fitting silence of today's architecture' is this architecture of absence, with neither individual nor collective voice:

"With the disappearance of the gods, of myths, of hopes, and of dreams, architecture has also emptied itself of individualism and subjectivity. Clearly there is no collective voice to take its place."[147]

As the mystical and spiritual dimensions of Western culture were systematically dissembled, symbols in general lost most of their former impact and gave way to signs. Architecture necessarily lost significance as a symbol of social priority and cultural identity, discharged from the responsibility of primary social text.[148] As secular society became increasingly individualized, released from controlling authorities, collective aspirations and their assertion through architecture became similarly divided and diluted. This social evolution created the contemporary world, in all its freedom of mobility and change and self-actualization – but architecture is fundamentally an art of place and permanence, embodying the aspirations and conditions of its age in symbolic form, as a collective act. The proclaimed 'death of architecture' is based on this incompatibility of purpose between the original art and the new world, where "things fall apart; the center cannot hold / mere anarchy is loosed upon the world."[149]

The dominant, traditional models of meaningful order – the spiritual structure of the universe and the divine creation of the human figure – no longer apply in modern architecture. Material manifestations of eternity, hierarchy, verticality or centrality seem to have nowhere to connect us to today: communing with the mysterious forces of the universe is no longer critical to our survival, as a culture, and belief structures are increasingly private, not public, expressions. The power of verticality, once conceived as a direct connection to the gods, degenerated to increasingly vague and indiscriminate representations of status. Post-Gutenberg, architectural hierarchy still indicated religious magnitude, monarchic or political importance – but with the passage of centuries, the essential meaning of centrality and verticality has been obscured.[150]



[2.4] from *NOTRE-DAME DE PARIS*

Surfaces and Depths

"For if the political and social history of civilizations were calibrated with the history of visual expression, of writing, it became evident that at a certain moment architecture, which from the earliest times had served to memorialize and teach by means of signs and symbols, had lost its primary place as the social 'book', only to be usurped by the book, now rendered ubiquitous by the technique of printing. From the time of Gutenberg, architecture had suffered a progressive loss of cultural power and significant form…"[153] - Anthony Vidler

The spiritual and conceptual collapse of the symbolic dimension inevitably translates into spatial concepts as well: value-neutral, abstract space equalized place, like a democracy, freed from the antagonism of hierarchy. Money and meaning seem to be interchangeable in architectural symbolism today: primacy of spatial position is strategic, more than symbolic, as a personal or corporate manifestation of power – with no deeper meaning or higher aspirations.

In contemporary context, full of complexity and contradictions, architecture is rarely charged with the task of representing cultural values (although it embodies their absence all the same). Our built environment is no longer intended as an inhabitable text, encoding established rules and traditional knowledge, passing on a worldview and way of life to future generations.[151] Building is no longer experienced as collective participation in a larger order, nor as a symbolic ritual critical to survival, as it was in older worlds. As a medium of meaning, conveying a way of life and making it tangible in the world, building is no longer an exclusive channel.[152] Other media – cheaper, faster, more adaptable and less permanent – have outstripped the communicative function of architecture.

The verbal aspect of human communication has become so predominant that we forget we have other means. Our society depends on visual or even virtual messages, rather than material: two-dimensional surfaces and screens transmit our world to us. The third dimension of meaning, in corporeal space and substance, is rarely considered let alone engaged. We live between two-dimensional planes, creating the illusion of three dimensions – like a virtual model – but lacking depth. As a culture, we are consumers of surfaces; we can expect no more from our buildings than a faithful mirror of our civilization, as it is. The authenticity of the object and the image is challenged in contemporary culture, as De Sola-Morales describes:

"Ours is a media culture where distances are reduced to the point of being virtually instantaneous, and where the reproduction of images my mechanisms of every kind has meant than an image is no longer linked to any one place but instead floats unattached across the length and breadth of the planet."[154]

SUMMARY: A FORGOTTEN DIMENSION

"Symbols themselves have lost have lost most of their power to reverberate in the mind since this power depends on the existence of a coherent world. Without such a world symbols tend to become indistinguishable from [signage]."[158] - Yi-Fu Tuan

Historically, the built environment has been a tool of identification and socialization, but it can become of tool of alienation between man and nature, man and fellow man, man and himself.[155] We forget that the built world is inexorably a symbolic world, where everything speaks meaning to us. Even a century ago, its appearances were clearer: we knew church from home from city hall by symbolic visual indications, rather than signs.[156] Freed from the constraints of conveying a consistent meaning, the material symbol is open to interpretation. Once-symbolic objects have been reconsidered and liberally redefined. The language of architecture is liberated too, from the prescriptive relationship between function and typology of form – but no new language has emerged to take its place. The confusion of our current surroundings speaks to this breakdown of symbolic language into a Babel of forms.

Space has likewise been relieved of symbolic meaning, abstracting what was a richly diverse symbolic landscape into a homogeneous continuum. Pallasmaa notes how forms are deployed in space as if they were themselves abstractions, without dominant orientation or order – with no inherent significance of their own.[157] Alienation from such an environment is inevitable: comprehensible order precludes any aspirations to meaning. According to Norberg-Schulz, our neglect of the non-verbal dimension results in 'vulgar-functionalism': buildings that operate tolerably at best, fulfilling only the most banal needs.[159] Our vital need for comprehensible order in the world, situating ourselves within a meaningful continuum, goes unsatisfied. We forget that we are in constant, wordless conversations with our environment – that form and space give shape to the human experience.[160] As our physical environment becomes increasingly architectural, addressing its effects is a timely issue.

In contemporary culture, there is no collective expectation for architecture to deliver a coherent, unified and meaningful environment. Buildings may be seen as decorative in surface detail, or functional in structural logic, but there is little awareness of the meaning implicit in form, or the effects of space on our tectonic senses. The population at large is numb to these impacts; even architects seem to forget that every act of building is significant in shaping human experience. Architecture is a mediator between man and environment: literally and figuratively, it defines human relationships to external realities.

The arrangement of forms and spaces creates an image of our environment as we know it, and as we wish it to be: the built work is always a metaphor. With so many other concerns to be addressed, the focus of architecture has been diverted from first principles: form is more than functional, and space is far more than residual. These are inherently symbolic considerations, integral to human interactions and impressions. Basic form and the space it shapes – consciously or not, deliberately or otherwise – compose the intuitive language of architecture. We interpret it through another universal structure: the eternal human body, in all its interactions and exchanges with our environment. The built world remains far more pervasive an influence than any verbal symbol-system: we can switch words on and off at will, but architecture is our permanent milieu.[161] Mass, form and space are tangible realities, simple enough to escape consideration today, but all the more meaningful in our digital, virtual world. The tectonic experience of architecture, engaging the body and the imagination in its expression, is the 'intensification of being' that this discourse seeks – the universal, bodily experience of an environment that speaks meaning to us.

CHAPTER III

FOUNDATIONS: THE WORLD OF LIFE

' ... the concrete and heterogeneous space of the world of life is replaced with a three-dimensional system of coordinates, in which all the points have precisely the same value. Our everyday experience, on the other hand, tells us that the earth is flat and the sky is a dome, spangled with stars. A statement of this sort does not imply a regression to ancient beliefs; rather it is meant as a way of restoring to the mind an idea of the concrete nature of the world of life. Of course, we do not mean to say that the scientific abstractions are wrong, but it is necessary to recognize that, with their unilateral approach, they do not help us to understand everyday experience. Recently, there has been a growing trend in this direction: the qualitative world with all its immediacy has fallen victim to quantification, which estranges us from the deeper meanings of our everyday experiences."[162]

- Christian Norberg-Schulz

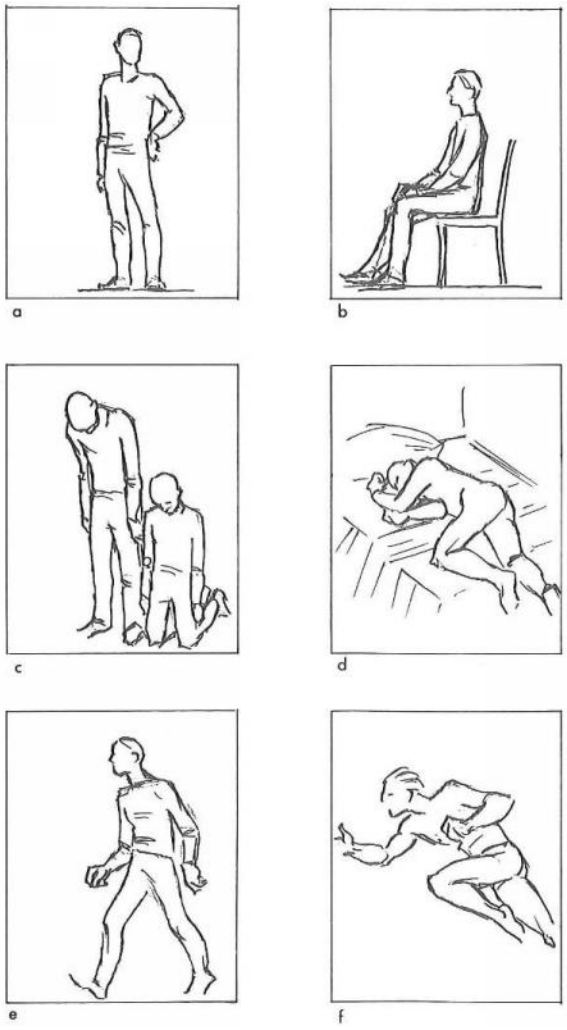
The symbolic values of mass, form and space – and their consistent associations – are inherent to the nature of our experience in the world, through the universal human body. Our spatial concepts are shaped in the body's natural exchange with its environment, giving meaning to the outside world based on our internal realities. Norberg-Schulz (quoted above) notes that the qualitative aspects of space – our bodily understanding of our world – have little to do with quantitative ones. Scientifically we may know that our earth is a cosmically insignificant dot in an infinite universe, governed by uncertainty and relativity; that the space we ourselves inhabit is likewise an inconsequential co-ordinate, in a constantly changing world – but we don't experience the world that way. We ourselves cannot exist in value-neutral space: the body perceives and projects order and meaning, relating to space in subtle but powerful ways.

As Aristotle observed, up/down, front/back are not equal and opposite in the way we *live* them. All human activities are directed forward and upward, distance traveled and things overcome are behind; our aspirations share the same co-ordinates, striving forward or drawing back. Verticality is always symbolic, because this is our plane of action – physically, conceptually, emotionally, socially. The sacredness of verticality and centrality renders existential space very different, in terms of value, from empirical space. The human metaphor relates our realities, like the stability and unity of the body, to the architectural object: the architectonic experience exists within this symbolic space; the architectonic event is a resonance between the external object and our internal spatial concepts. Recalling how we interact with space, in qualitative – albeit primitive, and intuitive – ways, is a pursuit of the deeper meaning in everyday experiences, in hopes of translating our world of life into a more meaningful built environment.[163]

PERCEPTION AND PROJECTION

"We grasp external space through our bodily situation … Our body is not in space like things; it inhabits or haunts space. It applies itself to space like a hand to an instrument … through it we have direct access to space. For us the body is much more than an instrument or a means; it is our expression in the world, the visible form of our intentions."[164]

- Maurice Merleau-Ponty



[3.1] from THIIS-EVENSEN,
ARCHETYPES IN ARCHITECTURE

The universal body is our interface with the world, the locus of perception and reaction. It is also our center of thought, and the medium of our understanding. Basic modes of human perception are essentially universal; our means of interaction with the world we perceive are likewise held in common. Merleau-Ponty (quoted above) asserts that perception is our participation in the world: our physical presence enables us to relate to other presences. Participating with the world around us, the body acquires a spatial and sensory vocabulary. We learn the world through our body, and in turn, we learn the body through our world: "the body image… is informed fundamentally from haptic and orienting experiences early in life."[165]

The body applies itself to space, with an intuitive understanding of horizontal and vertical, gravity, mass and void. From personal experience, we project the same tectonic realities onto other forms in space: "we interpret the whole outside world according to the expressive system with which we have become familiar from our own bodies."[166] Cultural factors may eventually inhibit or enhance how the body is used and interpreted, but the basic tectonic experiences of *being* – standing, resting, stretching, reaching – are essentially universal (figure 3.1).

*** Charles Olson draws attention to the body's innate sense of proprioception, "the *depth* implicit in physical being".[167] Even deprived of the other senses, the body knows its angle of relationship to the core of the earth. The body has its own intrinsic knowledge of space, governing our postures and actions, and our position in the world. Perpendicular or parallel, we are constantly aware of its linear forces.**

Orientation

"At the very beginning of our individual lives we measure and order the world out from our own bodies: the world opens up in front of us and closes behind. Front thus becomes quite different from back, and we give an attention to our fronts, as we face the world, which is quite different from the care we give to our backs and what lies behind us. We struggle, as soon as we are able, to stand upright, with our heads atop our spines, in a way different from any other creatures in the world, and up derives a set of connotations (including moral ones) opposite from down."[168]

- Kent Bloomer & Charles Moore

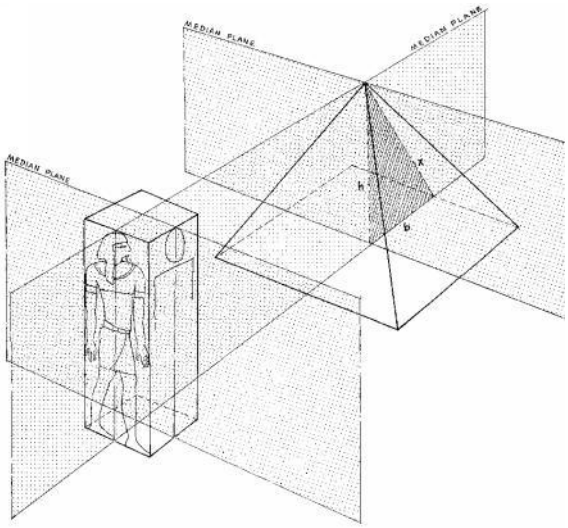
The primacy we attribute to the vertical dimension is inherent to our own biology; we identify with its manifestations through our own experience of space. From the moment we enter the world, we try to claim a vertical posture: "up/down, our most basic orientation, is the most unstable and yet the most splendid. Its origin as a heroic dimension is as elementary as a child's struggle to stand up and walk and the desire to grow up."[169] Infants labor toward upright posture, claiming our primary position in the world. Weakness renders us horizontal; regained strength draws us up again. To sleep, we surrender the body to a prone position and the mind to its unconscious state. Consciousness reclaims us upon waking, pulling us upright – like Socrates standing to think all night, verticality implies action, in body as in thought. We rise each day that we are able, until death returns us definitively to the horizontal … a final 'defeat' that is countered, in many religions, by the promise of an eventual rise to paradise or descent into the abyss.

From this upright position, the perpendicular horizon line defines the surface of the earth (or sea) and the division of earth and sky, above and below. Receding with our movement, the horizon is at once a lateral extension and a bounded circle, centering on the body. The horizon generates a structure of space or situation, in reference to the vertical, while verticality gives to situations their human qualities.[170]"With upright posture counteracting gravity, the vertical, pointing away from the center of gravity, becomes a natural determinant." [171]The constant force of gravity is an essential condition of these relationships: our tangible experience of space is always in relationship to the earth.*

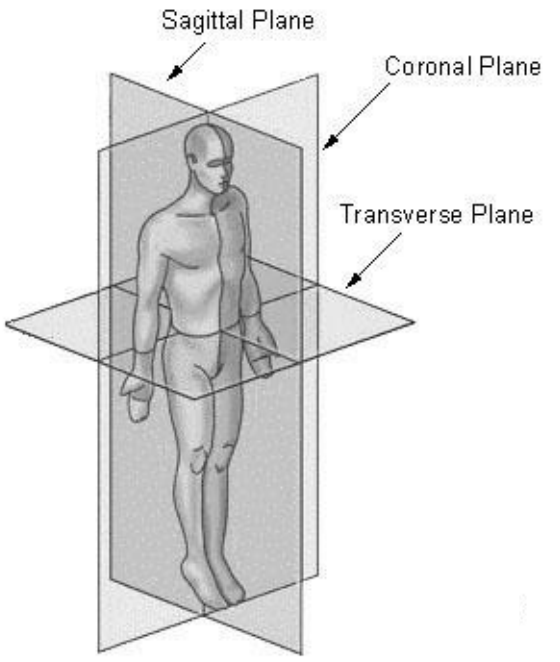
Gravity, weight, resistance and rest are universal constants. Their symbolic connotations are likewise absolute, intrinsic to being a body in space: vertical and horizontal have tectonic, animate, tangible values to us. In the same way, every building, in every time and every place, must contend with gravity. Fixing a relationship to this constant force is 'the eternal principle which underlies great architecture at all times and in all places: the expression of gravitational thrust.'[172]

These ideas are so basic it seems unnecessary to describe them, but contemporary architecture denies these universal human truths. We recognize the horizontal as angle of repose, static and stable; vertical is the dynamic angle of action, resisting gravity and inertia. The symbolic implications of horizontal and vertical are inherent to these physical principles – our own postures of motion and rest reflect these tectonic realities,[173] and we invest their expressions outside ourselves with the same essential attributes. The meanings we ascribe to horizontal and vertical are inherent to what we are, in the world we know:

"The direction upward, against gravity, inscribes into space world-regions to which we attach values, such as those expressed by high and low, rise and decline, climbing and falling, superior and inferior, elevated and downcast, looking up to and despising."[174]



[3.2] MEDIAN PLANES OF THE BODY, organizing principle for Egyptian sculpture as for the pyramids



[3.3] ANATOMICAL REFERENCE PLANES OF THE BODY

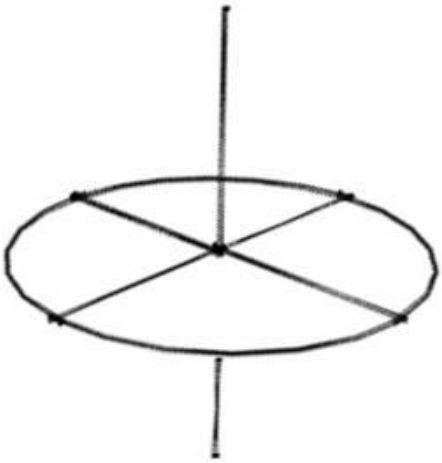
Mapping the Body onto the World

"Upright, man is ready to act. Space opens out before him and is immediately differentiable into front-back and right-left axes in conformity with the structure of his body… In deep sleep man continues to be influenced by his environment but loses his world; he is a body occupying space. Awake and upright he regains his world, and space is articulated in accordance with his corporeal schema. What does it mean to be in command of space, to feel at home in it? It means that the objective reference points in space, such as landmarks and the cardinal positions, conform with the intention and the coordinates of the human body."[175]

- Yi-Fu Tuan

Our existence requires a coherent image of the world around us, with a structure and significance we can understand – we project order and meaning onto surrounding space. The natural hierarchy of the human figure is an intuitive ordering system, in its horizontal relationship to surrounding space and vertical relationship to the earth underfoot and sky overhead. Early man gained a foothold in his environment by structuring the world into domains, by 'natural' directions: oriented to some higher order, he was no longer lost (figure 3.2).[176]

The symbolic values we give to horizontal and vertical are rooted in the basic conditions of being in the world, but the composition of the human figure also gives meaning to space. The position of the body divides horizontal space into front and back, side to side – the intersection point of these planes is subjective, fixed upon the body itself. The upright figure defines a third axis, dividing the world into above and below – the vertical is absolute. Organized around the body, as a center point (centrism is a universal human trait), these seven orientations map the order of the body onto the world (figure 3.3).



[3.4] EXISTENTIAL SPACE as per Norberg-Schulz:

"The simplest model of man's existential space is, therefore, a horizontal plane pierced by a vertical axis."[177]

Projecting corporeal logic onto the world and describing space in its terms, all objects in space must bear some relationship to it. This intuitive process is metaphorical, projecting both order and meaning.[178] It transfers powerful symbolic associations from the body into the spatial realm. Each direction is automatically meaningful, in relation to an upright human figure: the dichotomies of up/down or front/back become unequal in value. Frontality is subjective, but its significance is fixed: front is universally favored, since face and eyes and natural motion unanimously orient the body forward.[179] Verticality is universal and objective, evident in the organization of the human figure as well as the natural order of our world (figure 3.4).

Symbolic space is therefore associated to both formal principles of what the body *is,* and tectonic principles of what the body *does.* Value-neutral space is an abstract principle, alien to our experiential reality: the space we inhabit is anthropocentric and hierarchic, based on the physical shape and the sensory experience of the universal human body.

Balance and Bearing

"To a human being every laterally symmetrical, upright form expresses the feeling of balance he maintains in his own body when he stands erect; every asymmetry suggests falling, being pushed out of the vertical. It is perfectly possible for us to 'see' a center of gravity..."[180]

- Susanne Langer

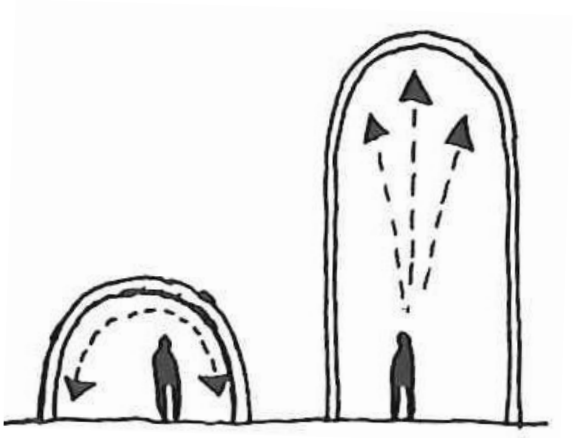
From earliest childhood, we develop familiarity with the tectonics of being and building: we learn equilibrium through bodily experience, and use this understanding in interaction with objects. We become acquainted with the basic principles of architecture – post and beam, leaning and support, bearing and borne – through our own actions, and apply this knowledge to the external world. We have a natural ability to project and perceive bodily awareness outside ourselves. This simple capacity to understand poise and counterpoise in other bodies forms the basis for monumental achievements in building: man is uniquely capable of perceiving and constructing physical order in his environment. Susanne Langer describes this fundamental faculty, "so familiar, so common to all people on earth that we are simply unconscious of it as a special possession: our ability to project our own bodily feelings of balance or imbalance into other physical objects, real or even only apparent ... "[181]

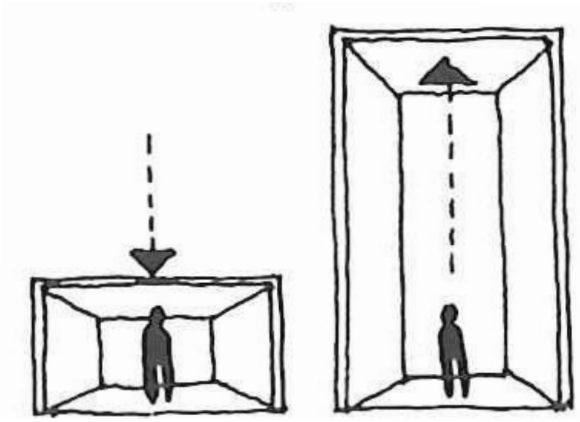
As an upright form, every building is in direct tectonic correspondence with the vertical body. Its lateral symmetry or asymmetry is equated to the balance or imbalance of our own position, standing - as if on two legs - with the same stability of the body, or imminently falling. The vertical speaks of bearing, the horizontal resting, but both communicate the stability we know as our own positions in space. Diagonal lines, in turn, express the nervous energy of imbalance. Asymmetry in building expresses the same latent movement: being out of vertical alignment is inherently tenuous, dynamic and destabilizing.

IMITATION AND ABSTRACTION: THE MIMESIS PRINCIPLE

"... the instinct of imitation is implanted in man from childhood, one difference between him and other animals being that he is the most imitative of living creatures, and through imitation learns his earliest lessons; and no less universal is the pleasure felt in things imitated.."[182]

- Aristotle



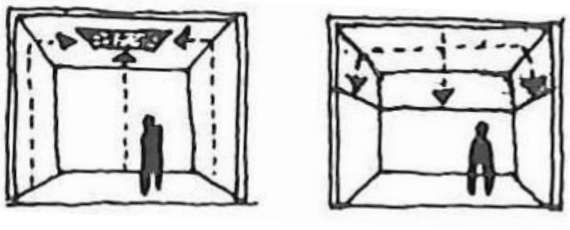


Above [3.5] and Facing [3.6] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE*

The desire to understand is human nature, as Aristotle describes, and mimesis is our primary mode of learning the world. From earliest childhood, we instinctively assimilate to our environment. The mimetic capacity of the body is a mysterious endowment: our senses receive and respond to the tangible world outside ourselves, but the body also interprets and imitates the 'sensations' of our environment. The Latin *imitatio* is, Perez-Gomez notes, an unfortunate translation. Mimesis is more than an echo of the world around us, it our means of engagement in that world: "not imitation but rather the expression of feelings and the manifestation of experiences."[183]

We have a natural, pre-rational predilection to empathize, internalizing the state of other people, other living things, even inanimate objects like buildings. Empathy is synonymous with understanding: mimesis involves us in another reality, via shared sensations. Like children playing 'pretend', interacting with our surroundings – quite unconsciously – breaks down the boundary between self and other: physical being brings us closer to the 'real' than abstract thinking can. When we relate bodily with the world around us, an external reality enters our own – imitation is a means of identification (figures 3.5).

*** Aristotle comments on our ability to suspend the sensations we might feel in reality, when we face an accurate reproduction. Recognizing artifice is a condition of experiencing art, enabling a kind of abstract (and thus more absolute) identification: we empathize not with the literal, physical being on the stage for example, but with the figurative being they represent. The most iconic characters of ancient or modern mythology, classical theatre or contemporary cinema are significant because they are representations of archetypal human realities – they would have no enduring meaning if we could not identify with their fate.[184]**



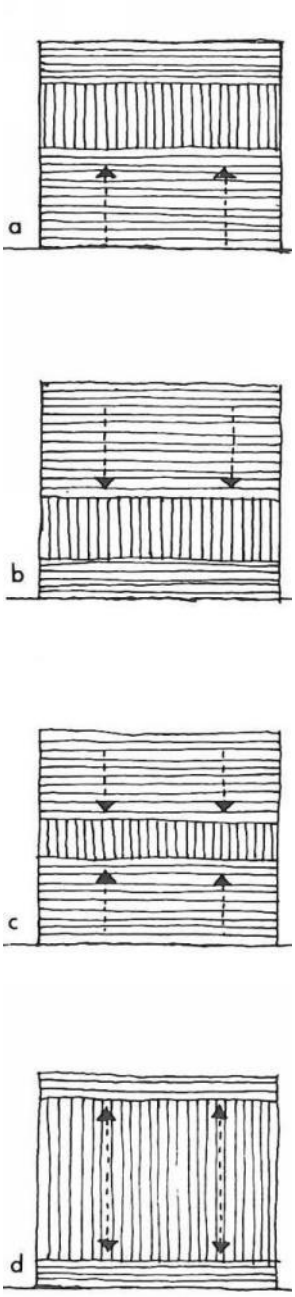
Mimesis is an embodiment of praxis: by imitating action, we identify physically with the world. Participating in an outside reality is an intimate, internal engagement, but our mimetic nature means that we also take pleasure in external representations. The reproduction operates at the opposite end of the spectrum: it gives us the viewpoint of an observer, looking at an image. Recognizing an imitation – knowing that it isn't real – allows us to see more objectively: the product of imitation is an abstraction. Instinctively, we are direct physical participants in what we perceive, but intellectually we can distance ourselves to become spectators. We relate to the world as simultaneously thinking and feeling beings – engaging the imagination is another form of identification. The value of the abstraction is not whether it seems real – we know that the mediation itself is a fiction – but what windows it can open on reality.

Representation renders experience more accessible, even more beautiful, whether or not its subject would be pleasing to us in its genuine state.* Distancing ourselves from physical reality – from the compulsion to act upon what we perceive – allows us to disengage our basic, bodily instincts and react to our experience on objective levels. We can rationalize and aestheticize experience to see things, including ourselves, in a fundamentally different way. Dividing content from context enables a different way of thinking: the imitation becomes a metaphor, connecting a representative object or act to a wider range of meaning.

In Aristotle's description, these are our diametric means of relating to the world: instinctively, and intellectually. By the act of imitation we empathize reflexively with the world, via the body's innate mimetic capacity. In the process of recognition, however, we can apprehend the representation, which is abstracted from nature and thereby distanced from those instinctive reactions. Engaging the intellect permits a conscious and objective reading, rendering the experience more aesthetic, and more universal: the metaphor is necessarily generic. In cultural constructions, embodiment engages the instincts and reactions of the body, while representation is an appeal to the intellect, recognizing symbolic and metaphorical associations. We identify with our environment, natural and constructed, by these mimetic mechanisms (figure 3.6). The return to a conception of mimesis as a fundamental human property is most evident in the writings of Walter Benjamin, who postulates that the 'mimetic heritage of mankind' is critically dependent on empathetic representation and expression:

"Nature creates similarities. One need only think of mimicry. The highest capacity for producing similarities, however, is man's. His gift of seeing resemblances is nothing other than a rudiment of the powerful compulsion in former times to become and behave like something else. Perhaps there is none of his higher functions in which his mimetic faculty does not play a decisive role."[185]

The repression of the mimetic relation to the world, to the individual, and to others leads to a loss of 'sensuous similarity' - what Pallasmaa calls an exchange of emotions, connecting the individual to others and to the total environment. Both intimate the need for engagement between our internal and external worlds; Benjamin also emphasizes the need to express that understanding and project our impressions back into the world. Mimesis is our primary means of forming relationships: repressing our ability to empathize, deliberately or reflexively, isolates us from everything else.



[3.7] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE:*

a) rising motion
b) sinking
c) split
d) opening

Identification and Expression

"Understanding architectural scale implies the unconscious measuring of the object or the building with one's own body, and of projecting one's body scheme into the space in question. We feel pleasure and protection when the body discovers its resonance in space."[186]

- Juhani Pallasmaa

Identification is our means of interpreting an object or environment through the body, whether for what it *is* (in a symbolic reflection of form) or for what it *does* (in a physical embodiment of forces). We are mimetic beings, participating empathetically in the world and reading it for meaningful symbols, relating our internal experience to our external environment to understand its order and meaning. Pallasmaa describes the context and content of our own self-image as one and the same: the built environment is more than background, it is the frame through which we see ourselves in the world. When we can perceive a recognizable structure in our environment, analogous with our own inherent sense of natural order, we can be at home within it.

Knowing ourselves as upright figures, we naturally identify with other upright bodies. Seeking resemblances, we appreciate the basic articulation of bottom, middle and top, corresponding with our own structure. We understand the different functions of each part and values of each part automatically, assigning them the functions of our own feet, trunk and head in an instinctive hierarchy. Similar orientation, proportion, scale and composition reflect our own familiar order – we measure the world against our own bodies. The built world is like a mirror: we look for our own realities reflected in it, and when we can recognize an image we relate to, we are naturally reassured.

We identify with forms, as like bodies, but we also recognize our own sensations of being. We know the sensation of our verticality, our interaction with gravity, our own acceleration and equilibrium. Our tectonic senses – beyond the five tactile ones – remember how we *feel* in space, just as our muscles preserve the knowledge of how we move in space. This kinesthetic familiarity is fundamental to how we experience the world.* The body seeks its resonance in space: being bilaterally symmetrical, erect and oriented forward, we measure other forms in terms of axiality, verticality and frontality, as well as our own natural hierarchy (figure 3.7). The order of the body is our natural model of order, the basis of our spatial concepts: a center point ordering the horizontal, and a vertical axis between earth and sky.

*** In *Image of the City*, Kevin Lynch describes the components of an environmental image: identity (being recognized as a separate entity from other things), structure (the spatial relation of object to observer), and meaning (the practical or emotional relation of object to observer).**[187]

SUMMARY: SPACES OF RELATIONSHIP

"Identification therefore comprises a rapport between man's own body and the bodily form of the object. The twofold nature of dwelling thus appears: first the faculty of understanding the given things (natural or man made), and second the making of works which keep and 'explain' what has been understood."[192]

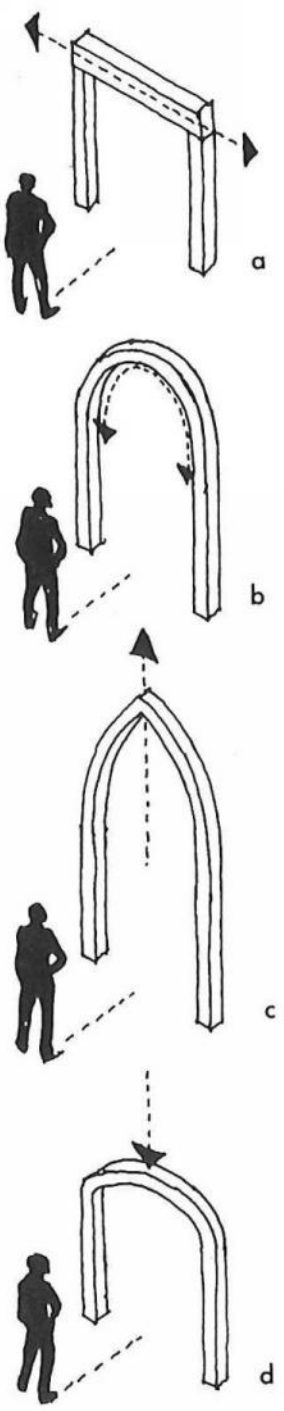
– Christian Norberg-Schulz

The body is form and function, but also feeling and animate forces: we know motion and mass, balance and stasis, weight and gravity through our own tectonic experiences, and project our knowledge onto the world. Resting or standing, grounded or uplifted, falling or flying – our own being is a balance of action and reaction, gravity and resistance. We recognize our own image in other upright bodies in space, structured like ours. We sense their state of being, balanced or imbalanced, dynamic or stable. We feel their mass bearing downward and enclosing, voids uplifting and opening. Architecture translates basic realities into built form –

"In other words, the existential expression of an architectural form, which is based on the form's motion, weight and substance, is recognized on the basis of our common experiences with natural phenomena."[188]

Architecture is an art of human action, not an end in itself but a medium for identification and expression. As Norberg-Schulz explains, "works of architecture are objects of human identification because they embody existential meanings, making the world stand forth as it is."[189] We automatically engage in a building's expression, relating bodily to form and space because we are likewise bodies in space: we cannot exist in any other way. Verbs describe this encounter, rather than nouns. Do mass and void combine to ground us, or uplift us? Stabilize or destabilize us? Enclose us, or leave us exposed? Our interactions with the built environment can be intimidating, empowering, awe-inspiring, depressing – the essential qualities of architectonic form shape more than our physical space. We are always involved with our surroundings, consciously or otherwise. Identifying with external realities through the body, our instinctive reactions, emotions and imagination participate in the existential expression of a work. Great buildings resonate on this fundamental level.[190] Thiis-Evensen diagrams these relationships (figure 3.8) and describes them this way:

"It is because we 'participate' in these things that we are uplifted under an expanding dome and borne down upon under the nearness of a cellar vault. We bear the load of the roof with the walls, and with them we protect in order to survive the world."[191]



[3.8] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE:*

a) restricted motion
b) penetrating
c) rising
d) closing

The tectonic senses of our own bodies in the world, and our ability to identify with those realities in other objects, shape our impression of the built environment. This is the origin of our intuitive, bodily identification with architecture, and the foundation of deep architectural expression (figures 3.9 & 10). Empathetic imagination and spatial vocabulary are integral to each other: we learn bearing and balance, and sharing these sensations we identify with the built world. We interpret what we perceive in the outside world mimetically, according to what we know from internal experience.[193] Mapping our experience onto our surroundings, we give 'natural order' and significance to the world. There is meaning in form, based on our own composition and the world we know, just as there is a natural dichotomy between vertical and horizontal. There is a three-part hierarchy in our own structure, as in the natural world, and we interpret our environment on these grounds.

Enclosed or released, protected or exposed, vulnerable or powerful – our environment is always a combination of mass and void, subject to the sheltering earth or open to the limitless sky. Vertical and horizontal, in all their physical and symbolic associations, are eternal conditions: upright on the surface of the earth, beneath the heavens, our fundamental nature grants us these few universal truths.

Pallasmaa speaks of the exchange of our own emotions for the 'aura' of a work, whether its structure is expressed in music, in painting or in building, we can participate in what a work does.[194] "When experiencing a structure, we unconsciously mimic its configuration with our bones and muscles ... Unknowingly, we perform the task of the column or the vault with our body."[195] Form can assert or deny balance, center, symmetry, even weight and gravity – these are existential expressions, reflecting a state of being, and a state of mind. We participate in them tectonically, through our natural instinct of imitation, and through this faculty we identify (or don't) with the built world. This is our spatial vocabulary, describing a relationship to the world, as Norberg-Schulz surmises:

"In summary, we can state that the existential expression has a fundamental effect on our architectural experiences, not as a quality separate from the symbolic meaning, but as in integrated part thereof."[196]



[3.9] TETRIS HOUSE, PLASMASTUDIO (SAN CANDIDO, ITALY)



[3.10] AGRICULTURAL BUNKER (UKRAINE)

SYNOPSIS: THE WORLD WE KNOW

"Great works of architecture, as all art, are saturated with images and inducements that direct our attention away from them as physical objects towards the metaphysical dimensions of human experience."[197]

– Juhani Pallasmaa

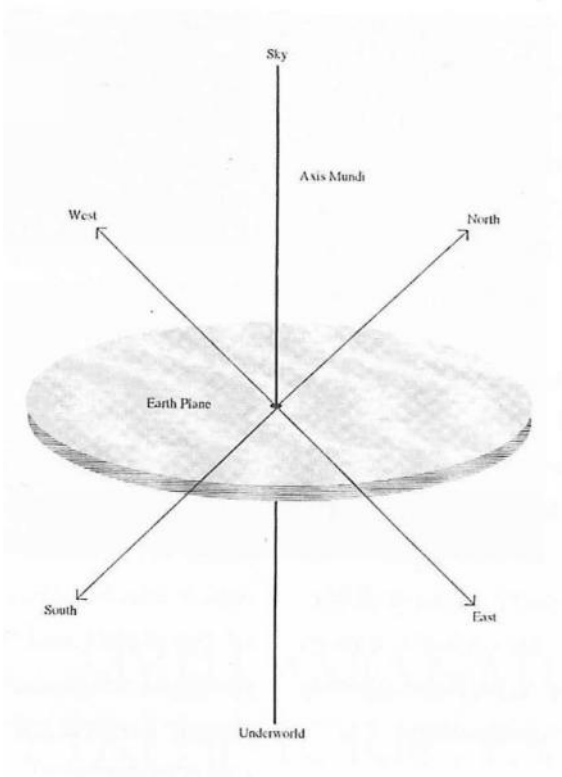
This symbolic dimension of architectural experience has been obscured, in recent centuries, but the expression of symbolic identity in our built environment is an *a priori* condition of identification between our inner and outer worlds. Deep physical and psychological structures unite these symbolic and spatial needs, simple but vital human requirements underlying all the ages of man. We relate to forms and spaces, both physically and conceptually, through mimetic imitation or exchange: we learn the world through the body, and discover the body through the world.

Participation with events and objects outside ourselves assimilates us in those conditions, sharing in the tectonic sensations and spatial gestures of the work, as an existential expression. As such, architecture is a natural medium of symbolic communication: more than a physical object, it is an inhabitable story about man in his universe. Norberg-Schulz says that the role of architecture is to create this expressive space, concretizing environmental images to represent our realities:[198] an *imago mundi* to 'make visible how the world touches us', in the words of Paul Cezanne, and how we see the world.[199] Man orients himself to external things to achieve equilibrium between himself and his environment;[200] the archetypal language of architecture can speak to us on that fundamental level, in the same basic tectonic vocabulary by which we know the world.

We have a vital need for connections, reaching beyond the everyday and the transient to situate ourselves in relationships to our total environment – participating in some kind of continuum, outside ourselves, validating our internal experience. Dwelling requires a rapport between our inner and outer spheres, our bodies and our surroundings, grasping a meaningful order in the larger universe and manifesting that understanding in our own constructs. Orientation, identification and expression are the essential conditions of dwelling: the symbolic worlds we make for ourselves – conceptual and physical – are founded on these innate spatial concepts, perceiving similarities between our internal and external worlds and projecting our own bodily sensations, seeking our own resonance in space. Our own verticality ascribes value to the world around us, and its representation gives external situations their human qualities:

"The direction upward, against gravity, inscribes into space world-regions to which we attach values, such as those expressed by high and low, rise and decline, climbing and falling, superior and inferior, elevated and downcast, looking up to and despising."[201]

The human metaphor is therefore a device of dwelling, creating existential expressions that concretize the world we know and our place within it – this is the task of architecture. Architecture communicates in terms of mass and void, form and space. It is a universal symbolic language, inherent to our own tangible experience, with archetypal resonance. Its ultimate meaning is not as an isolated object, but as a mediator between man and his world.



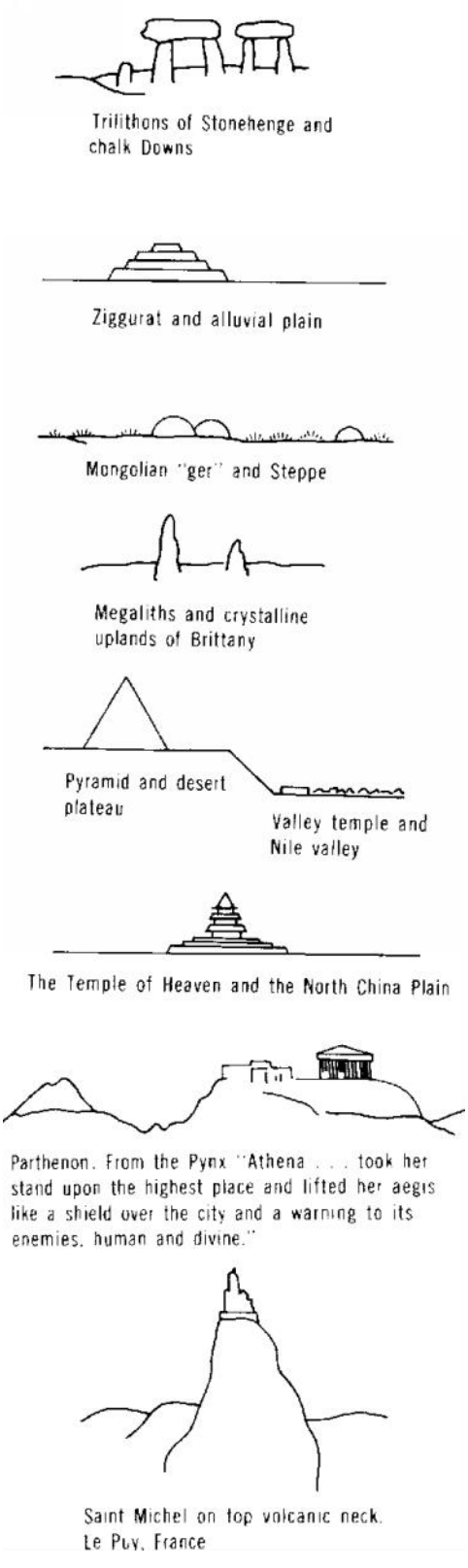
CHAPTER IV

MACROCOSM: THE COSMIC METAPHOR

"From remote times man has not only acted in space, perceived space, existed in space and thought about space, but he has also created space to express the structure of his world as a real imago mundi."[1]

- Christian Norberg-Schulz

We perceive the world through the body, projecting our own experience onto surrounding space and seeking a familiar order, as grounds for identification – part of the conditions of dwelling. We cannot exist in chaos; a coherent world is, in turn, an *a priori* condition of orientation. From time immemorial, the human imagination has conceived frameworks to create order out of the chaos of his surroundings, structuring a cosmic model to comprehend his otherwise unknowable universe.[2] Common characteristics can be traced through a range of primal world views: a stratified hierarchy of underworld, earth and sky, linked by a vertical *axis mundi* marking the spiritual centre of the universe.[3] Conceiving a sacred order in the world makes our environment a symbolic space. An *axis mundi* gives value to place, and therefore to proximity and movement, asserting the primacy of verticality, hierarchy, centrality, and axiality – eternal spatial concepts rooted in our common humanity. Extending beyond the world as we experience it, this cosmic model anchors the human domain between earth and sky. The vertical axis is a path of transcendence, toward a luminous world above: even in ancient cultures that worship in underground sanctuaries, the moment of psychic enlightenment is the physical return to light.[4] Verticality thereby becomes a spiritual status symbol, physical or implied – a symbolic dimension.



Previous page: [4.1] COSMIC DIAGRAM from BARLOW-ROGERS, *LANDSCAPE DESIGN*
Above: [4.2] OPEN LANDSCAPES & VERTICAL ASPIRATIONS from TUAN, *TOPOPHILIA*

FROM CHAOS TO COSMOS

"Myth, religion, philosophy and science are all rooted in cosmogony, the attempt to explain the creation of the cosmos out of chaos – the transformation of primal disorder and confusion into a universe that is systematically arranged, harmonious, whole. By these means, human beings of all times and all places have sought to confer meaning and perceive structure within the natural world."[5]

– Elizabeth Barlow-Rogers

In pre-modern societies the global or cosmic metaphor had vast symbolic meaning, as an all-encompassing physical and spiritual order (figure 4.1). Perceiving the world as a natural hierarchy of underworld, middle earth and upperworld, heights and depths take on polarized values: natural sites delving into the earth or rising into the sky are seen as divine, more than topological, exceptions. Mountain and cave typologies are understood to be distinct from the plane of the earth (although in matter they may be identical), making them spiritually significant. Their interpretation is archetypal: the cave is descent into earth toward origin and underworld, womb and tomb within the universal archetype of the earth mother – frequently the site of mystic and renewal sanctuaries. The mountain or plateau is a meeting of earth and sky, rising closer to the gods and therefore more sacred than the earthly plane: as such, a literal or implicit rise is often the chosen site of a temple (figure 4.2).

In less topographically distinct environments, the same fundamental principles emerge: the horizon line of contact between earth and sky defines the disc of the earth; the movement of the sun intersects this horizontal, as a vertical, meaningful exception. The dome of the sky and the pillar – literal or conceptual – joining it to earth are essential symbols; thus, the nomadic tent participates in the order of the cosmos. From time immemorial, vertical and horizontal have served as a vital framework, inherent to the structure of human thought. Their latent symbolism is rooted in natural spatial concepts: cave and mountain, circle and dome, horizontal center at crossed axes, three-part vertical hierarchy.

These are the ordering principles we live by, in every shelter and settlement: our artificial environment either asserts or ignores these natural, eternal truths. We identify and interact with external reality on these terms, because the nature of our bodies and our worlds are all part of the same underlying, unifying experience.

"So firmly fixed is this [tripartite] cosmological model in the human consciousness", says Barlow-Rogers, "that it appears not only in widely different parts of the world, but also in many eras, being appropriated through religious syncretism by people of different cultures… Its vertical dimension is an axis mundi, which acts like a center pole uniting heaven, Earth and the underworld."[6] This is the most obvious symbol joining cosmos to earth, and the natural line of movement: up to the sky, down to the earth – and into the earth – like the pull of gravity and the sun's rays. The connection between the earthly realm and the worlds above and below is articulated in different ways, but is always a vertical relationship. Wherever man dwells beneath the dome of the heavens, his world is oriented skyward – an upward bias seems to be unanimous human nature.

In spiritual societies, therefore, "the idea which regards the sky as the abode of the Supreme Being, or as identical with him, is as universal among mankind as any religious belief can be."[7] The vertical has always been considered the sacred dimension of space, as a path to higher and lower reality, while the horizontal represents man's concrete world of action: all horizontal directions are equal, on a plane of infinite extension.[8] An *axis mundi* marks a specific point of intersection, ordering the horizontal around it. Ritual alignment with these coordinates centers the individual, the building, and the village in the sacred order of the world.[9]

Connecting human space to cosmos, the built world defines man's place and participation in a larger order with meaning far beyond himself: a relationship to his total environment.

Architecture, like mythology or cosmology, is a means of giving order and balance to our environment – and translating those concepts into tangible form. In its most literal embodiment, the cosmic metaphor is manifest in re-creations of nature's sacred qualities, like the topography of mountain and cave; more sophisticated representations re-create the entire cosmic sphere, in its geometric order. Throughout history, architectural and urban forms have given shape to cosmic models and metaphors, allying man with the forces of his universe – reiterating Blier's essential statement, "when architectural design draws imagery from the cosmos, it obliges people to become active participants within this larger paradigm."[10] Certain universal images emerge in these symbolic structures; Campbell reminds us that all our stories are the same stories. "The comparative study of the mythologies of the world compels us to view the cultural history of mankind as a unit"[11] – in our spatial mythologies, likewise,

"we can find enough parallels among disparate world cultures to support the notion of the universality of certain myths and religious practices. Such transcultural beliefs include the divinity ascribed to the sun, the importance of real and artificial mountains as sky platforms to bring a people in closer contact with their gods, particularly those associated with rain and fertility; the cave as the womb of the Earth Mother and a shrine in nature…"[12]

Revisiting the Concept of Cosmos

In contemporary a-spiritual culture, the natural conditions inherent to the earth-sky dichotomy are understood as simply that: opposing parameters. We no longer see the world as inherently meaningful; the symbolic dimension of our physical environment has faded from conscious view. When the earth comes to be considered as inanimate dust, and the sky as infinite emptiness, the religious connotations that made them meaningful fade – and so does the primacy of the vertical relationship between them. What validity does the cosmic metaphor have, in contemporary context? Its conditions are archetypal – our root experiences of the world remains constant, from primitive to present – but our collective reality does not include any cosmic model of our belief structure or orientation to a higher order. Our universe is an infinite one, expanding in all directions. Our conception of space is similarly abstract, with no absolute vertical or central reference points. Our cultural constructions do not reinforce intangible connections; our architecture does not generally represent any spiritual reality. Cosmic metaphors may no longer be meaningful to us, but the *global* symbolism underlying these spiritual structures, relating man and his environment, is still vital.

Considering these 'cosmic' associations reminds us that other human beings, widely separated in place and time, found universal meaning in earth and sky, cave and mountain, descending and ascending. The tectonics of mass and space are still grounding and uplifting, enclosing and opening, beyond any religious associations. All of these are implicit to the relationship of earth and sky – all of our spaces exist in the balance between them.

To revisit their primal symbolism is to recall the 'first words' of our own spatial vocabulary: remembering the physical, psychological and emotional impacts of these tectonic truths. Mass-void, enclosure-exposure, dark-light, horizontal-vertical, underworld-upperworld, sinking-rising, weight-flight are essential and eternal polarities, conditioning the way we perceive and construct our world. Their consistent spiritual associations show that they belong to a level of symbolism deeper than spirituality itself: they are physical, tectonic truths.* The primitive symbolism of earth and sky has enduring validity, at least in spatial terms, even in a secular world.

***Religion is a highly symbolic construction: a means of explaining the natural order of things, relating human experience to some larger realm of significance and consequence. Given the close similarities of cosmic models in widely separated societies and very different religions, we must presume that this structure is rooted in human nature itself – that spiritual meaning reinforces pre-existent perceptions, just as all cultural constructions create a lens through which we can read the world. Religion itself is acquired, but basic spatial biases are innate. It could be argued that the universal hierophany attributed to heights and depths proves that they *are* divine, but this is not our concern. Our focus is the common nature of spatial experiences: a similar 'intensification of being'[13] (which could be a numinous encounter) underlying dissociated belief structures. The interest here is a nameless, universal spirituality – the deep structures of human experience, in purely physical orientation. Examples drawn from world religions provide insight into how primitive and ancient cultures gave order and meaning to their environment, and demonstrate the universality of certain spatial principles.**

A WORLD OF ARCHETYPES

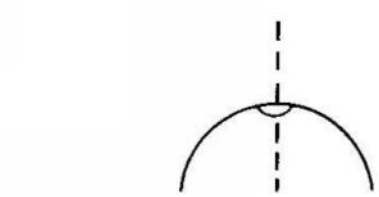
"Darkness, then, and weight, the pull of gravity and the dark interior of the earth … must for millenniums have constituted a firm syndrome of human experience, in contrast to the luminous flight of the world-awakening solar sphere into and through immeasurable heights. Hence a polarity of light and dark, above and below, guidance and loss of bearings, confidence and fears (a polarity that we all know from our own tradition of thought and feeling and can find matched in many parts of the world) must be reckoned as inevitable in the way of a structuring principle of human thought."[14]

– Joseph Campbell

The polarized experience Campbell describes above is an eternal condition, structuring our world into primary dichotomies.* Dark and light, weight and flight, earth and sky define the human sphere, not only physically but also mentally and emotionally: our entire domain is within the shifting balance between them. Earth is mass, the solidity and security of enclosure; sky is volume, lightness and openness, air. We are creatures of opposites: our own universal perceptions and reactions to the world divide it into earthly and ethereal, the liminal conditions of our experience, and degrees between. All of our environments are composed of these two primary elements, in their various interactions: mass becomes form, domesticating space. The articulation of surfaces can give space its character, but it is the interplay of solid and void that shapes our places in the world.

Considered as archetypal experiences, the qualities of earth and sky personified can represent the poles of human experience. The earth is matter, the tangible 'real world': it changes according to temporal cycles, with all living things. The sky is immaterial and immutable, an eternal world of gods and ideas. Earth is deep and mysterious, the instinctive realm of the natural body and senses and emotions. Sky is transcendent, transparent like pure reason in its great open heights. The earth is the source of primeval forces, like fire – the light of the earth, coming up from below – and water. The forces of the sky are the elements, like wind, sunlight and weather coming down from above. The earth keeps the rhythm of the seasons, while the sky marks the tempo of the cosmos. Earth is gravity, mass and weight; sky is ethereal flight. Reviewing the archaic emotions and spiritual impressions evoked by the experience of the earth and sky, for primitive imaginations, can remind us what the intuitive language of these spaces is – an awareness we can apply to design in any era, recalling these natural associations to shape more meaningful, intuitive environments.

***This primary set of dichotomies underlies every other: it is the same argument as nature versus civilization, instinct versus intellect, emotion versus reason, Dionysus versus Apollo.[15] The earth defines our origins, our history, our physical and mortal condition. We are bound to the earth, unable to leave it of own powers: the forces and cycles of nature are inevitable. Longing for escape from this cycle is yearning for the timeless freedom of the sky, which never dies. The sky defines our aspirations and spiritual ideals: it is the horizon of future possibilities, beyond our mortal limitations.**



[4.3] BOWL OF THE SKY / TENT DIAGRAM

*** The nomads of Siberia and Central Asia inhabit a flat open landscape with broad horizons. Individual tribal versions of cosmography vary in character, but consistently describe the cosmos as three basic layers along a vertical axis (sometimes further divided into as many as 12 hemispheres). Experiencing the full expanse of the sky overhead, these tribes describe the shape of the heavens in concrete ways: among the Yakuts the sky is held to be made of tightly stretched skins, among the Buriats it is an overturned cauldron, while among the Turko-Tartars the sky is a tent or roof. All of these volumetric similes are imagined to cover the earth, while the light outside the sky shines in through holes – the stars are not bodies in dark space beyond the earth, but pinholes letting light in from outside. The roof of the heavens is universally held to be supported by a pillar, but not fixed in place: the pillar of the sky is its axis of rotation, around the polar star (figure 4.3).**

The shelters build by these tribes are microcosms: the round tent or yurt represents the sky, held upright with a stake as the pillar of the world holds up the roof of the heavens. The smoke hole opening in the roof leads to Polaris. The Mongols believe that this world axis intersects their round tent. The Altaians believe that the central axis of the world, marked by the polar star, passes through 'sky holes' in the layers of heaven and physically through the centre of the shaman's tent on earth, and on into the underworld. This is the axis of ascent or descent for the shamans, the gods, and the spirits of the dead.[16]

All of our experiences are divided into these two realms, mass and void, permanence and transience, stability and freedom. Francesco Careri points out that the human race itself, at earliest origins, is divided into cultures of motion and stasis – our most basic conditions of being, indelibly imprinted on the human imagination. Each has different strategies of dwelling, but both share the same essential spatial concepts: a stratified cosmos, ordered by the dominant vertical axis. The line of movement and fixed centre it infers makes the world inhabitable, anchoring sky to earth and releasing earth to sky.

"The two great families into which the human race is divided have two different spatial experiences: that of the cave and the plough, excavating space from the body of the earth, and that of the tent that moves across the earth's surface without leaving any lasting traces. These two ways of dwelling on the Earth corresponds to two conceptions of architecture itself: an architecture seen as physical construction of space and form, as opposed to an architecture seen as perception and symbolic construction of space."[17]

Cultivating the earth and inhabiting its body, agricultural man is of the race, as Careri describes, of the cave and the plough: a culture of staying. The cave and the mountain are his first sacred places, and first acts of symbolic architecture: earthbound, he creates an architecture of mass dominating space, either within or around it. Structuring the mass of the earth, he creates fixed points that project meaning onto space. Nomadic man, conversely, exists in a culture of going, passing over the earth, essentially inhabiting the void. The nomad approaches the problem of place, therefore, by structuring *space* to make the earth where they rest meaningful.*

Our world is made of mass and form, physically shaping space, and also of perceptive and symbolic constructions that shape our idea of space. Fixing an *axis mundi* defines the relationship of earth and sky, and describes a human space between them. In mass and void, form and space, vertical hierarchy and horizontal centrality give order and meaning to external reality. Drawing imagery from these cosmic relationships, architecture can reinforce the verticality of our world and make us participants in the earth, the axis and sky.

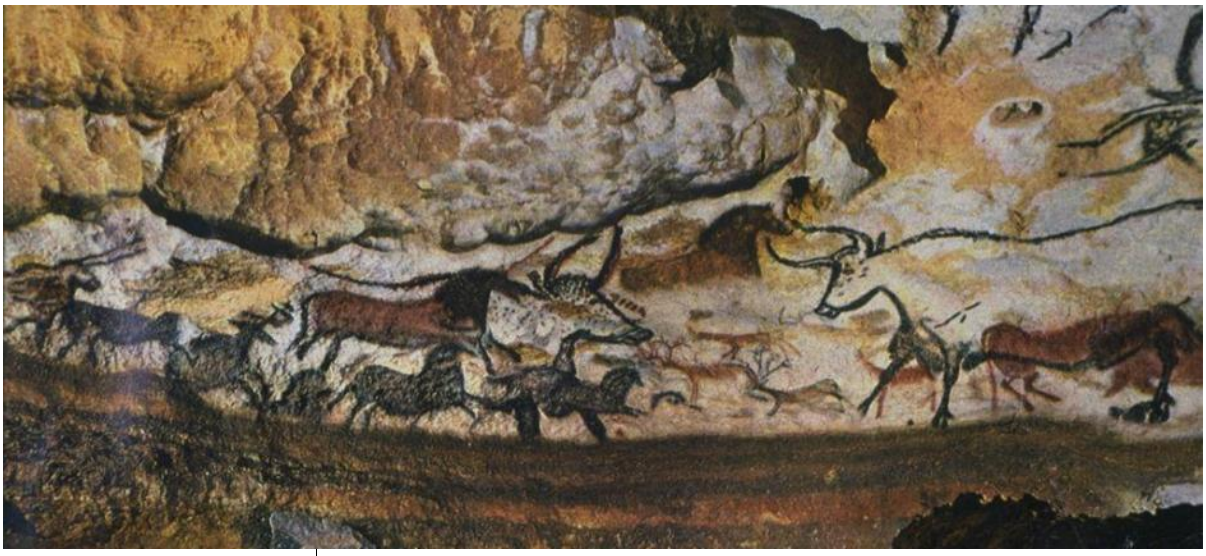
This cosmic concept emerges particularly in landscapes where the sky dominates, like the nomad's desert plains: the embodied axis and the dome of the sky define their domain, like a cosmic tent. Their fixed points are the path of the sun, meeting the line of the horizon; the will to stabilize that relationship of vertical to horizontal takes shape in the menhir, which some propose as the first act of permanent architecture, pointing stone fingers to the sky (figure 4.4). Just as mimetic building imitates and formalizes the topographies of mountain and cave, the bowl of the sky and the pillar of the sun or post of the universe are natural and powerful symbols.**



[4.4] GLACIAL MENHIR (CARNAC) from CARERI, *WALKSCAPES*

Universalis Columnis Quasi Sustinens Omnia

**** The notion of a pillar supporting the sky is a primitive concept, but very pervasive. The same cosmological image is recorded in Horace's Rome and ancient India, as well as among the Canary Islanders, the Kwakiutl natives of Canada's west coast, and the Nad'a tribe of Flores Island, Indonesia. Within more recent Western culture, Celts and Germans still worshipped sacred pillars until their conversion to Christianity: records note Charlemagne's destruction of the town of Eresburg's temple and 'sacred wood' in battle against the Saxons in 772. The Milky Way is sometimes interpreted as the shaft of this column from earth to sky.[18] The nomadic Achilpa tribe of Australia provides an example of how essential this connection can be: theirs is a contemporary but elementary culture, where the vertical axis remains a tangible – and vital – symbol. In their creation story, divine Numbukala climbed a sacred pole into the sky to cosmicize their territory and make it habitable: through contact with the sky, it becomes a world. The Achilpa carry a sacred pole everywhere, planting it wherever they rest. The breaking of this pole signals utter catastrophe: losing that tangible contact is the end of their world, and so the tribespeople lay down to die.[19]**



Above:
[4.5] HALL OF THE BULLS at LASCAUX

Facing:
[4.6] CAVE OF THE SIBYL at CUMA

ENTERING THE EARTH

"What a coincidence of nature and mind these caves reveal! … Here, therefore, nature supplied the catalyst, a literal, actual presentation of the void."[20] - Joseph Campbell

Any cleft in the earth shifts the balance between earth and sky, concentrating the phenomena of the ground. In nature, the experience of the earth – and all its associations – is strongest in the cave. Only the occasional shaft of light penetrates the darkness, shaded from the sun and sheltered from the elements. It is an enclosing realm, inherently private, obscure and secretive.[21] It can be a comfort, like retreating into a personal world … or it can be uncomfortably ominous, whether too close or too deep with unknowable crevices (and contents). Being enveloped is elementally soothing, but too much 'earth' – in its broadest, elemental sense – is imprisonment, even entombment. Enclosure is isolation and protection from the outside world. The cave archetype is interior to the extreme: a bounded volume, subject to a surrounding mass. Re-creating these conditions in building is always symbolic.

The cave was the first human space: shelter, home, and sanctuary.[22] In the age before architecture, before agriculture, before the earliest human technology, nature provided the cave and the cave was home.* The archetypal cave is inevitably an encounter with our own deeper, more primitive selves: the realities of the body, our instincts, our mortality. Primitive man was sheltered by the ground and nourished by the fruits of the earth, immediately subject to the forces of the natural world for his survival.

Earth and the Sacred



Earth worship and the sanctity of the cave predate even the vertical principle. Geometry, mathematics, axes, or the rhythms of the heavens meant nothing yet to Paleolithic man: he held all directions as equal, without any principal orientation.[23] The forces of the earth dominated the human imagination; entry into the earth had deeply symbolic connotations, as Stone Age caverns record (figure 4.5). Honored in hollow spaces, the great earth mother – goddess of the procreative forces of universe – was the paramount spiritual power in primitive culture.

Cave worship is the most archaic of religious rites, associated with cultic mystery, primitive rituals and hierogamous creation – initiation caves often combine the typologies of cave and pillar.[24] Descending into the ground to commune with the primordial forces of life, as in the Roman mithraeum, is palpably associated with death as well. The instinct to give the deceased body over to the earth is as ancient as humanity itself. In the Greek pantheon of divinities, by Aeschylus' *Oresteia*, the primitive (and bloodthirsty) ancient goddesses live deep underground while the younger gods – like Athena, embodying intelligence – inhabit lofty Mount Olympus. The Roman grotto re-creates the natural cave as a place of psychological encounter with the prehistoric world, communing with earth goddesses and subterranean nature spirits.[25] The underground is primal, unknowable and inherently mysterious. Every dark and confined space, natural or constructed, automatically echoes the symbolic encounter with our own darker depths (like the existential crisis recounted in Dostoyevsky's *Notes from Underground*[26]).

Openings in the earth's surface, including lakes and wells, were traditionally considered portals to the underworld. The cave is unique among these, providing human access to a non-human realm – and to its secrets from the living, as mythologies recount. Oracles of Apollo lived in dark caves, emerging to speak their cryptic prophesies like wild creatures possessed. Cave and netherworld are powerful archetypes in mythology.[27] Virgil narrates Aeneas' heroic journey into the forbidden territory of the underworld guided by the Sibyl of Cuma (figure 4.6), and the ancient knowledge he acquired therein: the creation of the world, tied up in the ordained future of Rome, and the meaning of immortality.[28] Dante's *Inferno* is another epic account of the nature and structure of the underworld, the understanding gained therein and on the last page, the return to light.[29] Enclosing caves contain things, sacred and secret, good and evil: they are places apart from the everyday, with distinct symbolic associations.

**** "When the primate ancestors of man moved out of the forest to the plains they sought the physical and (one might guess) emotional security of the cave. … The earliest constricted dwellings were often semisubterranean: the digging of the hollow minimized the need for superstructure, and at the same time brought the inhabitants into closer contact with the earth."[30]***

Primitive Earthworks

"Whereas the giant stone rings were symbolic expressions of the surrounding topography, now they become fused and join in union to become a central point, an axis mundi, of the physical and cultural world."[31] - Colin Richards

In primitive cultures, shaping the earth is always a symbolic act. Mounds of earth have been used to mark gravesites as places apart since the Paleolithic era, emerging as dolmen tombs in the Neolithic. The function of earthworks like the Hopewell mounds remains mysterious, but their reference to a cosmic order is clear: they represent astronomical calculations. Stone circles – Stonehenge being the best known – likewise served to articulate the patterns of the cosmos. Like the Nazca lines, readable only from above, shaping and marking the ground plane represents a connection to the earth but also to the sky (figure 4.7).[32]

In architecture, the dark confines of crypts and tombs re-create the symbolism of the cave, meeting the netherworld to give meaning to the world above.[33] Natural and artificial caves have long been used as burial places. Excavated into the ground like a catacomb, enclosed within a representative mass like the pharaoh's tomb within the pyramid, or enclosed only by solid walls representing the underground, constructed caves faithfully re-create the functional archetype. The tectonized cave maintains the life-cycle connotations of its natural model – even freed from the earth there is a natural correlation between cave-like spaces and death, just as emerging from the earth is associated to renewed life. Every birth is this move from dark to light.[34]

Below:
[4.7] NAZCA LINES (PERU), as seen from NASA Earth Observatory

Facing:
[4.8] HOPI KIVA



Emergence

The cave is associated to womb and to tomb: it represents death and burial, but also birth and life. *The Mythology of North America* recounts how emergence imitates the growth from seed to plant, in a vertical progression from darkness into light. Horticultural tribes interpret the human life cycle like the plants that sustain them, born from mother earth: native tribes of the American southwest – including the Navaho, the Hopi, and others – believe that they came into the world from underground. In the Zuñi emergence story, all living creatures originally lived in the underworld, until they were summoned up to the surface by the sun and the moon through *siapapu* to settle the world. All holes and depressions in earth's surface are therefore considered sacred *siapapu*, or birth places.[35]

The pueblo ('human place') provides an example of these cosmological beliefs, in terms of architecture and urban design. It is organized cosmologically, around an open plaza, with the *nansipu* marking its centre: an axis mundi represented by a small hole. It infers the vertical, but the Hopi religious structure is beneath this sacred centre: the circular *kiva,* a man-made cave space shaped to symbolize the cosmos.[36] The Hopi ladder is not a stairway to ethereal heaven, in this case, but the vehicle of spiritual rebirth into the human world (figure 4.8). This spiritual microcosm makes a human space between the symbolized earth and sky: "Above all, the purpose of the *kiva* and the plaza above it is to provide a space in which humans can acknowledge and participate in the cosmic connection between the bowl-imaged earth and the basket-symbolized sky..."[37] The sacred rituals conducted in the Pueblo *kiva* (also called wombs) are a symbolic process of descending and re-emerging, imitating the primordial emergence.[38]



Transcendence

"Life is not possible without an opening toward the transcendent; in other words, human beings cannot live in chaos."[39]

– Mircea Eliade

If emerging from the earth evokes the symbolism of birth, and descending into the earth shares in the symbolism of death, rising above the earth's surface – above these natural cycles – is the ultimate symbol of transcendence. These primitive associations are archetypal in the most literal sense: their symbolic meaning needs no explanation, because they are integral to shared human experience. Legendary Icarus immortalizes our universal desire for spatial freedom in his ascent to the heavens; flying and falling are powerful primary images.[40]

Our mortal bodies cannot escape the hold of the ground, but the ascent and descent of the eye can create an impression of flight – we experience our environment visually before using it physically.[41] The sight of a mountain peak inspires certain emotions, inspiring and uplifting. However distant, the mountain peak dominates the landscape and captures the imagination: even without experiencing its summit, the mountain raises the spirit up along with it. Its symbolic value is universal.



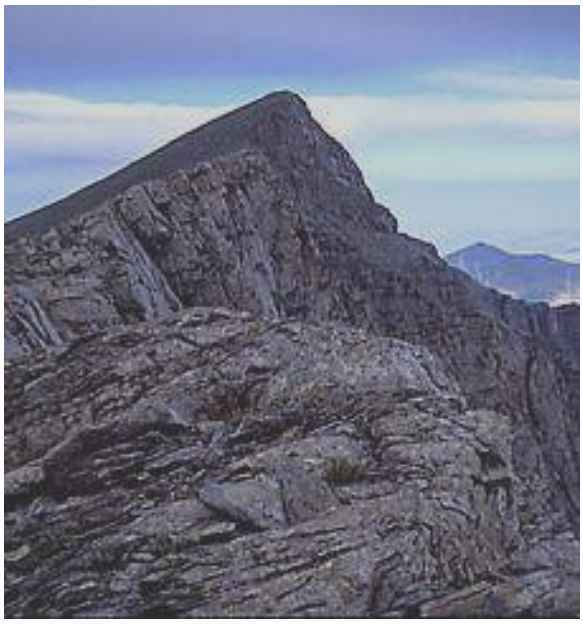
Above:
[4.9] MOUNTAIN PEAK (CANMORE, AB)

"Emotionally the three layers of the cosmos do not make up a balanced whole. Despite the belief that the earth occupies the middle position at which the opposing forces are balanced, human aspirations do not rest there in quietude, but are usually directed to the beneficent influences coming from heaven."[42]

"Man is more than a child of the earth; he is a child of the universe to the extent that his body responds to cosmic rhythms and his mind finds enchantment and assurance in the stars."[43]

ENCOUNTERING THE SKY

The experience of the sky is eternally awe-inspiring, a 'spiritual' encounter regardless of religion. Our fascination with the firmament is simply human nature, just as an affinity to the earth is a part of what we are (see Tuan, cited at left). The desire to understand the cosmos is likewise human nature – the mysteries of the earth are obscure, but the skies are open to infinite discovery. Attributing divinity to the firmament is common from archaic faiths to more sophisticated, even modern, religious systems. Cataloguing many examples from ancient religious pantheons, Eliade affirms that "many of the supreme gods of primitive peoples are called by names designating height, meteorological phenomena, or simply Owner of the Sky or Sky Dweller."[44] Early man was in awe of the mountain: many cultures associate height with the sacred, making mountains sites of mysticism, danger and divine revelation (figure 4.9).[45] The attraction of a mountain peak is akin to our fascination with the sky, but high points are rarely the site of human inhabitations except to escape from attack – both summit and the sky beyond are considered to be the lofty home of the gods, in various religions.[46]



[4.10] MT OLYMPUS (GREECE)

*** In the Greek pantheon, highest and most powerful Zeus's temples are built on mountaintops, dominating the landscape: Mount Olympus (figure 4.10) was considered his embodiment. The more central the mountain, the higher and more decisive its cone, the better it represented Zeus (such as Mount Oros). At Mount Hymettos, Zeus' sanctuary is sited in a depression at the summit, placed within the space of a complete globe: the bowl of the earth, under the dome of the sky. Other Zeus sites, as at Dodona, are likewise positioned within this powerful experience of the all-encompassing sky, revealing the expanse of Zeus' landscape and linking it to the human experience of that divine power and calm, within "the wholeness of things known where the sky and earth are one."[47]**

Spiritual Heights

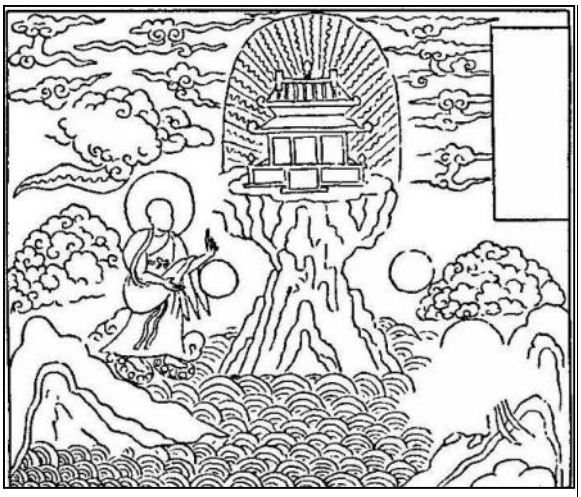
"The metaphor of a man standing aloof on a mountain peak appears in many sources ... 'He who attains perfect self-knowledge has reached the top of the mountain... The ascent of the mountain belongs to self knowledge; the things done upon the mountain tend to the knowledge of God."[49]

- Michael Moore

The perceived divinity of lofty heights, as Moore explains above, is a ubiquitous spatial concept.* The complex symbolism of high places is also associated to morality, self-transcendence and superiority, just as depths are related to dark secrets and deeper meaning, but also lower and inferior, less-sophisticated passions. Both extremes have spiritual implications, positive and negative, although language reflects a common bias toward heights.[50]** Our natural orientation skyward precludes any spiritual associations: assuming an elevated viewpoint, like gods on high, is inherently empowering. Achieving – quite literally – greater perspective, one can distance the human domain as a subject of contemplation and even judgment (such as Jean-Paul Sartre's Erostratus describes, at right).

**** In many languages the adjective high is generally associated with positive qualities - good, clean, beautiful - while low is associated with negative ones (children also tend to learn the words 'up' and 'upstairs' before 'down' or 'downstairs').**

***"You have to prop up moral superiorities with material symbols or else they'll tumble. But exactly what is my superiority over men? Superiority of position, nothing more: I have placed myself above the human within me and I study it. That's why I always liked the towers of Notre-Dame, the platforms of the Eiffel Tower, the Sacré-Coeur, my seventh floor on the Rue Delambre. These are excellent symbols."*[48]**



"Every mythology has its sacred mountain, some more or less famous variation on the Greek Olympus. All sky gods have certain high places set apart for their worship. The symbolic and religious significance of mountains is endless. Mountains are often looked on as the place where sky and earth meet, a 'central point' therefore, the point through which the axis mundi goes, a region impregnated with the sacred, a spot where one can pass from one cosmic zone to another."[51]

Above:
[4.11] CAVE SANCTUARY DRAWING, showing Mt. Meru as world mountain

Facing, left:
[4.12] MAYAN 'EL CASTILLO' at CHICHEN ITZA (MEXICO)

Facing, right:
[4.13] BABYLONIAN ZIGGURAT of UR

***The ziggurat of Ur represents the vertically stratified cosmos, in seven stages: the lowest levels were black, for the underworld. The tiers above were painted red, for the earth. Just as the Greeks would later build temples to honour their highest god on mountain peaks, the Mesopotamians built a temple at the summit of the ziggurat. The temple shrine was of blue tiles to represent the heavens, topped by a golden dome like the sun.[52]**

World Mountain

As the home of the gods, touching the sky far above the mortal horizontal plane, the peak of the sacred mountain was considered an axis mundi. This notion of a cosmic mountain carries through many – Eliade says *all* – mythologies (see citation at left). Palestine for the Hebrews, Golgotha for the early Christians and ka'aba for the Islamics were each believed to be the highest and therefore most sacred earthly place, within their respective religions. The Indian Mount Meru is considered the centre of the world, situated under the polar star (figure 4.11). Mount Olympus is the site of the counsel of the gods, according to Greek mythology. Mount Fuji is the Japanese centre of the world, as is the Israelites' Mount Tabor and the Iranian Haraberazaiti.[53] Real or mythical, the mountain connecting heaven and earth is a spiritual power-centre like Mesopotamia's 'Mount of the Lands' or Palestine's Gerizim – this last is also called the 'navel of the earth', as is the rock of Jerusalem.[54]

Where no such natural symbol presented itself, like in the undifferentiated expanse of the desert, topographical forms were built up to articulate a vertical break in the horizontal plane and mark a sacred place. Like the natural forms they imitate, but now sited according to human desires, architectonic plateaus and peaks served to define the human domain and assert its authority, connected to the sky. Barlow-Rogers comments on the higher purpose of these monumental gestures:

"Often, cultural groups expended enormous human resources constructing a mountain-mimicking pyramid, ziggurat, or temple in order to establish an axis mundi that would firmly relate it to a cosmic deity."[55]



MAKING MOUNTAINS

"The grandest expressions of this urge to place enormous volume in space are the ziggurat and the pyramid. Their massive construction attained dimensions previously unknown. They are both the manifestation of a dominant ruling power and the expression and symbol of contact established – as far as was humanly possible – with the superhuman forces."[56]

– Sigfried Gideon

The megalithic artificial mountain is a defining form of early high civilizations – as Wittkower notes, "such a situation could only arise in a highly developed and complex social structure, in town civilizations based on a strictly organized hierarchy."[57] Scully calls the mountain-mimicking form a universal human phenomenon, whether as a priestly platform for communication with sky-dwelling gods or as a funerary monument.[58] The Mayan pyramids are best known, but Aztec, Teotihuacano and other South American civilizations also constructed monumental mountain forms (figure 4.12). Architectural mountains also appear in Asia (the Indian temple-pyramid is an eminent Eastern example) and Mesoamerica. Building these cosmic mountains into the sky fixed an enduring connection between their earthly domains and the immortal heavens: "Both ziggurat and pyramid derive their existence from man's awakened urge toward the vertical as a symbol of contact with the deity, contact with the sky."[59]



The Ziggurat of Ur

"The ziggurat had multiple symbolic meanings. It was the solid rock that emerged out of chaos; the mountain which represented the center of the universe; the earthly throne of the gods; the monumental site for the offering of sacrifices, and the ladder to heaven."[60] - Yi-Fu Tuan

The ziggurat represents the Babylonian model of the universe as an urban artifact. It re-creates the mythological mountain where gods and men were born into the world (figure 4.13).* The hierarchy of heaven and earth, the centre of the world and the origins of life are combined in a single iconic image. The solid mass of the ziggurat fixes that image as a permanent reality, an act of nature itself.

Vertical monuments serve to represent the transcendental nature of the Neo-Babylonian city: the ziggurat was one of these, the palace sometimes another. Marking an axis between heaven and earth, the ziggurat was the most important building in the Sumerian city. Visible from great distances across the desert, the ziggurat – like the pyramid to follow – operates as a focal point against the horizontal landscape, a centre of gravity to anchor its civilization topologically and spiritually. Called by names such as 'House of the Mountain' or 'Bond between Heaven and Earth,' the purpose of the ziggurat is clear: to achieve harmony between the forces of nature and the living city.



The Great Pyramid

"With his own hands, man made his work stand erect and confront the limitlessness of cosmic space. Throughout its symbolic impact the pyramid, man-made, merges and even competes with eternity. Only a few perforated Gothic spires – those shrieks in stone from man to sky – express a similar intense demand for penetration of the eternal by man's temporal existence… [61]

- Sigfried Gideon

The Egyptians fused the spiritual typologies of mountain and cave in the design of the pyramid, as the site of the pharaoh's tomb and his ascent to immortal unification with the Sun God. The pyramid form is an assertion of royal authority and power, broadcast across the desert landscape (figure 4.14). The pyramids at Giza break through the flatness of the desert like a mountain range, each coming forth as an immutable element: "the Egyptian pyramid stands as the consummate expression of a form which emerges from the earth as a dominant mass. It is a statement of unchangeable absolutes."[62] The pyramid translates the human desire for permanence into an indomitable mass with definitive stability, to stand for all eternity. For almost four millennia the Cheops pyramid stood as the tallest man-made structure in the world – Gideon dubs it our first skyscraper, still the greatest singular mass ever constructed by human efforts.[63] Here, the supremacy of the vertical prioritizes rectilinear profiles, avoiding curved or circular forms (reserved for chthonic underground spaces, like the interior burial chamber).



*** The natural conception of planes through the body is evident in Egyptian art (figure 4.15) as well as architecture: frontal and lateral views intersect along the vertical axis of the upright figure, with the median plane as organizing principle. The starting point of all Egyptian measurement was the standing human body – proportions had paramount importance in ancient Egypt, since numbers held symbolic meaning. The pyramid imitates a topographical form, but it is also a human embodiment in mass and statures, as Gideon describes below: a reflection of human proportion and scale.**

"Thus Egyptian architecture is a projection of the proportions of the human body and limbs transposed into a larger – but still human – scale. This is especially true of the great temples. Man and man's artifacts were closely interlocked."[64]



Facing, top:
[4.14] PYRAMIDS at GIZA

Facing, bottom:
[4.15] RAMSES STATUE

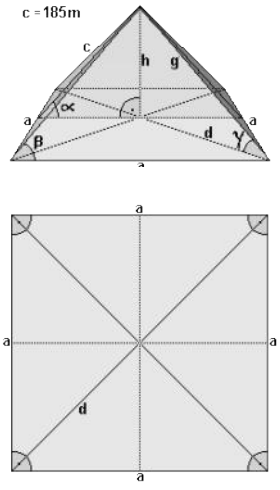
Left:
[4.16] STEPPED PYRAMID of ZOSER

Below:
[4.17] GREAT PYRAMID GEOMETRIES

From the *mastaba* tomb, to the stepped pyramid made for ascension (figure 4.16), to the apotheosis of pure form - never reached again after the Fourth Dynasty - the pyramid's precise geometry expresses the Egyptian longing for eternity. Squared to the cardinal points, its relation to the cosmos is clear.* In this flat landscape, where the meeting point of earth and sky is largely undifferentiated (unlike Greek topography, for example), the points where the sun meets the horizon line take on divine meaning.[65]

"From ancient times we can follow man's attempts to make the forms of 'his' landscape more precise, or transform them to fit his general environmental image. The Egyptian pyramids thus constitute an artificial row of mountains defining the boundary of the 'civilized' space along the Nile."[66]

Solidly grounded, the pyramid articulates a perfectly moderated ascent at a monumental scale, appropriate to its solemn purpose of leading the pharaoh up from Egypt to his immortal kingdom. Its edges form an even slope, along the same angle – equidistant to zenith and nadir – as the sun's rays were believed to descend to earth. The powers of vertical and the horizontal unite in the pyramid, shaping a uniform orthogonal space. At its summit, the pyramidion focuses the massive prism below to a single point: no platform caps the pyramid's ascent. It is a pure and precise geometry, fusing the square of the earth with the axis of the sun (figure 4.17). The Great Pyramid is planted against the earth like a mountain, more perfect than nature ever made, joining earth and sky in a precise and permanent geometric relationship – "its balanced form, appearing as a synthesis of vertical and horizontal forces, and its incomparably massive and solid construction seem to embody a constant, eternal order."[67]







Right: [4.18] DESERT AND MOUNTAINS (GIZA)

Above: [4.19] EGYPTIAN OBELISK (ROME)

*** After the Old Kingdom age of building pyramids had passed, the obelisk emerged as sun-symbol in the New Kingdom (figure 4.19). Like a petrified shaft of sunlight - in Pliny's description - "the obelisk, with its extreme reduction of verticality, is the supreme manifestation of the vertical."[68] The symbolic connection it draws between the sovereign sun and a ruling human authority was adopted by the Romans conquering Egypt, and by Napoleon conquering Rome – the obelisk is another self-evident symbol of the powerful vertical dimension.**

The absolute tectonic values embodied in the pyramid immortalize its message, speaking essential truths to all ages of man. Monumental mass and weight make the pyramid an embodied permanence – the geometric balance of its stance is unmistakable. For all the mysteries of its history, the basic pyramid form is self-explanatory: its primitive power still strikes a familiar chord, echoing our own first knowledge of gravity and stasis. The perfected pyramid form is an architectonic certainty, charging the space around it with elemental resonance.*

Time seems powerless against these architectural mountains, the only surviving wonders of the ancient world.[69] To 'discover' the pyramids at Giza is no longer surprising today, but deeply and fundamentally satisfying: transcending religious beliefs, the pyramids speak undeniable *truth*. They present a tangible resolution of the eternal human problem of permanence, as a man-made artifact at the scale of the natural world (figure 4.18). The individual ages of mortals pass, but the mountain endures. Shaping the environment around it like a natural mountain, it is a corporeal, rather than aesthetic or intellectual experience. Long after their culture has subsided, the pyramids maintain a singular authority: their "elementary megalithic power and eternal stereometry still conveys a human message of archetypal significance."[70]

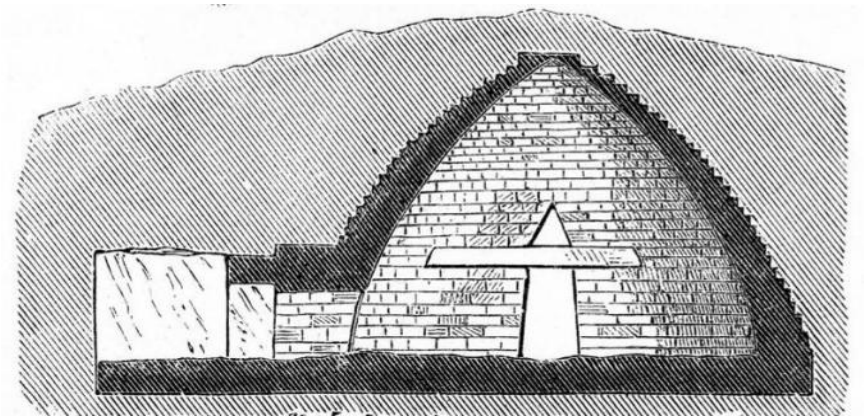
"Ancient Egypt and Mesopotamia have enlarged mankind's consciousness of space, heightened people's awareness of the vertical and the horizontal, of mass and volume, by constructing their examplars in the towering shapes of pyramids, ziggurats and temples. We have inherited this knowledge. Modern architects design with these dimensions in mind."[71]

SUMMARY: THE SYMBOLIC LANDSCAPE

Early civilizations, from simple to sophisticated cultures, built connections to the earth and the sky to ally themselves with these elemental forces. They invoked the powers of the universe by making sacred places in landscape terms, according to the symbolic models found in nature: mass and void, mound and hollow, axial centre and enclosing circle. The cave is the first place, with the most primitive and animal associations. The raised plateau or peak transcends the corporeal; sky orientation is a natural human trait, physically and spiritually. These basic forms concentrate the symbolism of the stratified cosmos, horizontally layered, centered on the vertical *axis mundi*: the birthplace of the world.

The cosmic metaphor associates spiritual value to breaks in the ground plane, whether sinking to primal depths or rising to lofty heights. Both conditions bring the human realm closer to the forces of their universe, epitomized in the liminal extremes of the cave and the mountain – both sacred in the human imagination, as recounted in creation myths from many cultures.[72] Artificial mountains and caves, common to many early human civilizations, are the first known works exceeding any basic purposes like shelter – they are always spiritually significant, tangibly separate from the plane of the everyday.[73] These topological works reinforce the global metaphor, in physical and spiritual contact with upperworld and underworld, consistent with the purposes of the work: cave symbolism to commune with the mysterious forces of life and earth; mountain symbolism to encounter the immortal heavens. These symbolic landscapes imitate forms in nature to establish an alliance, tangible and unmistakable, between the human and the natural.

"Architecture is essentially an extension of nature into the man-made realm, providing the ground for perception and the horizon of experiencing and understanding the world. It is not an isolated and self-sufficient artifact; it directs our attention and existential experience to wider horizons."[74]



[4.20] THOLOS TOMB at MYCENAE

"Paleolithic cave paintings, Neolithic stone circles, Mesopotamian ziggurats, Egyptian pyramids and obelisks, Hindu temples, Cretan nature sanctuaries, Mycenaean citadels, and the pyramids, mounds, and effigy earthworks of pre-Spanish-conquest Americans – these were all expressions of a partnership between human beings and unseen spiritual forces. The creators of these forms, who also invested their landscape settings with symbological meaning and design intent, invoked the magical powers of spirits – those of the beasts whose flesh sustained them and of the gods and goddesses who controlled the cosmos … In a highly uncertain world, these creative people watched the skies … In the process, they created the first complex human societies, constructed important ceremonial centres, and evolved the world's earliest cities."[75]

The spiritual landscapes of early human civilizations shaped the earth to make significant landforms, marking physical points of communication with other worlds (figure 4.21). Primal pillars, caves and mountains were re-created in architectural form, as recognizable embodiments of nature. These forms and spaces are literal, topographically distinctive places – the pyramid *is* a mountain, just as the kiva *is* a cave – whether natural or constructed. Mimetic architectures modified the landscape to fit a cosmic image, in tangible relationship to the universe. In doing so, they shaped more meaningful spatial experiences, fixing their world view in geographic absolutes. The hierarchy of the landscape operates as a cosmic metaphor, from the outside inwards: framing humanity within a 'cosmicized' worldly environment, marking man's points of escape from the horizontal into spiritually intensified places. Giving meaningful form to mass, thereby shaping space, these landforms represent familiar experiences in our external world – invoking powers beyond the human world, and relating man firmly to them.

[4.21] STONEHENGE (UK)



CHAPTER V

MESOCOSM: BUILDING BETWEEN

"Metaphor is a way of knowing. ... It is, at its simplest, a way of proceeding from the known to the unknown. ... Metaphor is our means of effecting instantaneous infusion of two separated realms of experience into one illuminating iconic, encapsulating image."[76]

- Robert Nisbet

Constructed as a cosmic metaphor, works of architecture operate to replace the unknown with the known: conceiving a model of the cosmos and giving it physical form, the built environment becomes an affirmation of that order, perpetuating and reinforcing the relationships it asserts. From primitive origins to our own recent history, societies have built according to the order and structure of the cosmos as they interpret it. These expressions evolve in tandem with a society's cosmological image: just as theories about the universe have developed, collapsed, and given way to new theories,[77] architectural expressions of the cosmos have varied over time. Certain principles, however, seem to have universal significance: the spatial concepts of the dominant vertical, and its associated hierarchy, centrality and axiality, are evident in the way human beings imagine and structure their world throughout the ages. Symbols of the vertical, whether inferred or constructed, serve to define human places and connect them to a larger order. Built in its image, the artificial environment makes that unknown knowable: "a planned city, a monument, or even a simple dwelling can be a symbol of the cosmos. In the absence of books or formal instruction, architecture is a key to comprehending reality."[78]

Our sense of connection – or belief that such a thing is possible – has broken down, denying these assurances that were so vital to former societies. In secular, individualist society there is no collectively symbolic centre to order the external world. Our inner worlds may maintain a focal point, like Odysseus' Ithaca[79] – home is always a personal 'center of the world' – but no larger model relates our internal and external worlds. Like cultures before us, we design our buildings in telling relationships to earth and sky (in our case, no particular connection) and plan our cities according to our conception of the cosmos: a homogenous grid, extending uniformly in all directions. Is priority of place an obsolete concept, in rationalized abstract space? Or have we lost the ancient conviction that hierarchy and centrality *can* make the built environment meaningful, imparting a system of order onto an otherwise unknowable world? The cosmic models of ages past have been proven scientifically invalid, but experientially, our world is still the same – older cultures demonstrate how simple but vital, eternal spatial concepts can give shape to a meaningful human environment, making distinct human places.

FROM EARTH TO SKY

"*Symbols of the vertical take different forms. Pointed structures like the obelisk, the spire, and the dome stress one direction. The circle is a two-dimensional translation of heaven to earth. The dome is a three-dimensional symbol of heaven."*[80]
- Yi-Fu Tuan

Every built work expresses a relationship between earth and sky simply by existing in three dimensions, but certain structures reinforce their verticality in specific gestures. Accepting, denying, ignoring or embracing the conditions of mass and void surrounding it, a building makes some essential statements – deliberately or otherwise. In architectonic vocabulary, every form and space has specific implications of mass and motion – upwards and downwards, inwards and outwards – each with its own symbolic impact. The articulation and arrangement of these archetypal terms can reinforce, neutralize or contradict each other, but they always define an orientation.

Sky orientation is human nature, but how that affinity is articulated changes with different perceptions and projections of what the nature of the universe is. Eliade asserts that in traditional society man could only live in upward-opening space, symbolically assured of access to the upper world. Every ancient mythology had its world axis and cosmic mountain, because spiritually man cannot live without an opening to the transcendent – in order to participate in the meaningful order of any larger system, our existence cannot be limited to the worldly horizontal plane. In nature, architecture or the symbolic conception of space, fixed vertical axes of communication are vital symbols.[81]



The cave or mountain infer a vertical, in their expression of motion; embodiments of the vertical axis are also dominant symbols, whether a sacred tree or erected post ordering the world around it: in the Kwakiutl ceremonial house, initiates chant "I am at the Center of the World ... I am at the Post of the World ..."[82] The axis of the world can be conceived like a tent pole of the universe, holding up the bowl of the sky overhead and fixing its rotation. A centralizing geometry, mass or space can infer a vertical axis, but the embodied axis is the most common (and most obvious) marker for a constructed center of the world. From primitive roland poles to church spires, sacred trees to towers, physical manifestations of the vertical create a focal point and center (figure 5.1).

Man settled the earth through these acts of centering, defining the intermediary human domain between the spirits in darkness, and the spirits in light.[83] Tuan emphasizes that early villages and cities originated around sky-oriented ritual places, not economic centers.[84] Religious man always sought to live as close as possible to what he perceived as the center of the world, oriented to the cardinal directions, in order to relate himself to the larger cosmos: ritual alignment with these coordinates centers the individual, the building, and the village in the sacred order of the world (figure 5.2).[85]

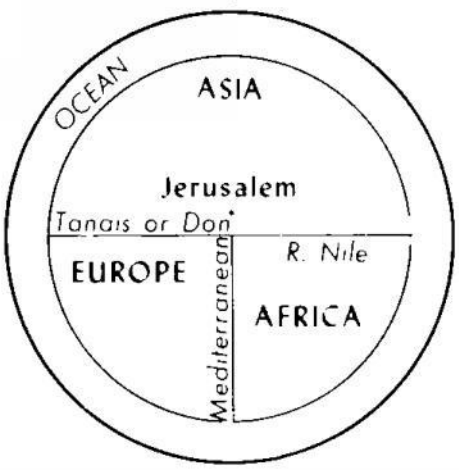
COSMOS: MYTH AND MODEL

In early human societies, intimate participation in the natural world required ritual confirmation of its order, to ally man with the forces that dominated his universe. Ancient rites used to confer great importance on the act of building, re-enacting the creation of the world out of chaos, and mimetic constructions served to affirm the sacredness of natural forms.[88] Mountain and cave are the earliest natural models for architectural form, but the cosmic metaphor extends far beyond the physical encounter with earth and sky – embodiments of sacred topographies assert a stratified cosmos, but later constructions came to represent the universe itself, at the scale of a building, complex or entire city. At any scale, declaring that skyward orientation made a statement about the built world, participating in that larger order: "an architectural index of the vertical such as the ziggurat, the pillar, and the dome also serves to highlight the city's transcendental significance."[89] From the city's very conception, construction rituals reinforce its cosmic significance.

"The city symbolized the majesty and the predictability of the cosmos. The ritual center, and later the city, expanded man's horizons beyond the immediate, the local, and the fleeting to the stabilities of the universe."[90]

At right, Ryckwert posits the process of settlement, conforming with the order of the cosmos. Symbolic architectural and urban forms were thereby created *as* cosmic models, representing its structures and ritualizing its construction, to ally the human realm with the larger universe. Both process and product serve to create order out of chaos – in plan, section or elevation, and sometimes all of these, building according to an *imago mundi* is a powerfully symbolic practice.

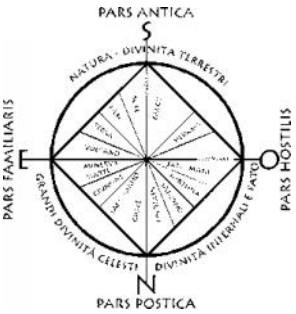
Facing: [5.1] CHURCH STEEPLES (CAMBRIDGE, ON)
Every steeple is an invocation of axis mundi symbolism, creating a horizontal center and vertical focus.



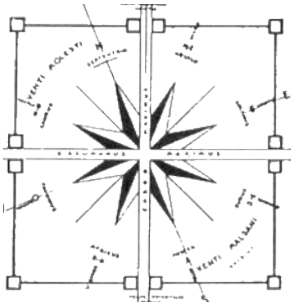
Above: [5.2] MEDEIVAL T-O MAP from *TUAN, TOPOPHILIA*

"Creation myths deal with the evolution of cosmos out of chaos. Implicit in this is the act of giving form and place to objects in space. The positioning of the Earth in the center of the universe and the centering of human societies within the world are fundamental constructs within many early cosmologies. Cosmic centering involves awareness of three vertical strata: above, below, and a terrestrial middle plane. It also involves cardinal directionality – the location of four principal axes along a 360º horizon line in accordance with the movement of the sun and various stars and planets."[86]

"(1) the acting out, at the founding of any settlement (or temple maybe, even a mere house) of a dramatic show of the creation of the world; (2) the incarnation of that drama into the plan of the settlement, as well as in its social and religious institution; (3) the achieving of this second aim by the alignment of its axes with those of the universe; and finally (4) the rehearsal of the foundation cosmogony in regularly recurrent festivals, and its commemorative embodiment in the monuments of the settlement."[87]







THE CENTER OF THE WORLD

"No-one cared that there were many groups and multiple axes mundi; what mattered was a representation of the cosmic archetype … Thus centered symbolically in space, more than one city could imagine its cosmically-connected, temple-crowned, human-made mountain as the navel of the earth."[91]
- Yi-Fu Tuan

The cosmic model emphasizes the vertical, but also orders the horizontal around a powerful center point. Humans settled the earth, as Tuan describes, through acts of centering; the concept of center structures the surrounding environment, giving order and meaning to an overwhelming world.[92] Organizing space according to center and periphery pervades every known human culture – a culturally-defined 'center of the world' is common to all ancient societies,[93] often articulated in myth as the birthplace of man and gods, even of the world itself. Where space is understood to be heterogeneous in value – as it was until recent centuries, in Western culture – the instinct to associate human settlements to these powerful reference points is seemingly universal.

At the Urban Scale: City and Cosmos

"The Romans were not alone among ancient peoples in practicing a form of rectilineal city planning and organization. All the great civilizations practice it, all have mythical accounts of its origins, and rituals which guide the planner and the builder.[94]*… Clearly, this deep-rooted and immemorial hoary notion is not only associated with the Roman system of colonization; nor can it be taken as mere evidence for European or eastern Mediterranean influence. The whole matter is too ingrained in human experience to be reduced to a simple matter of cultural diffusion.'*[95]
- Joseph Ryckwert

Traditional settlements were ordered according to cosmic models – Barlow-Rogers says this is an instinctive human practice.[96] Primitive villages in many cultures are laid out in a specific relationship to a sacred vertical intersection with the worldly horizontal plane, marking a spiritual center (figures 5.3 & 4). The plan re-creates the cosmos in two dimensions; the third dimension, its link to heaven, is forged in symbols of the vertical: a centralizing mass, space or vertical structure. The spiritual imagination necessarily situates his country at the midpoint of the earth, his city is the navel of the universe, and his city's temple or palace marks as the sacred epicenter of this power structure.[97] The destruction of the temple, palace or entire city was therefore a spiritual regression into chaos, deprived of a symbolic center and its vertical connection to the heavens.[98]

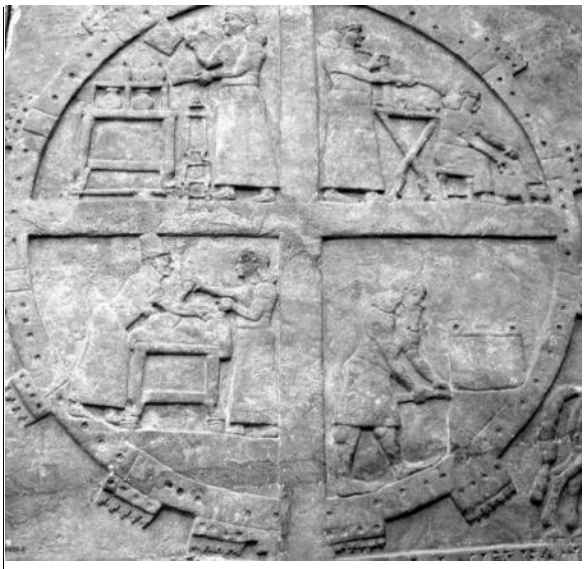
Above, from top:
[5.3] ETRUSCAN TEMPLUM
[5.4] EGYPTIAN HIEROGLYPH for 'TOWN';
[5.5] CARDO & DECUMANUS

Facing:
[5.6] MANDALA of ASSURBANIPAL'S CAMP (BABYLON)

The manifestation of crossed axes and centralizing geometries – like the archetypal circle of heaven and square of the earth – reinforce this notion of a center point, defining and extending its domain.* Squaring the circle is a symbolic joining of the universe with the built world[99] – Charles Moore calls Hadrian's Villa 'a whole world in a circle and a square'.[100] Like the three-part order of the vertical dimension, drawn from the order of the body and the natural world, the quartered body and cardinal axes provide a natural model dividing the horizontal into four quadrants. Thereby, as Tuan summarizes, "the circle divided into four sectors by two axes symbolizes heaven. The quadripartite circular city, an Etruscan ideal, was the celestial *templum* transcribed to earth…"[101] – the order of the universe could be found reflected from the skies to the body to the built world, mediating between.

Marked with a mass, a space, a building or simply these crossed axes, the center invokes the symbolism of the vertical: a fixed point against the expanse of the horizontal, it gathers the world around it and radiates order onto surrounding space. Such is the power of the Parthenon, extending as far as it can be seen, from the Acropolis of Athens.[102] Instead of defining and ordering a human place within it, it radiates outward to order all the space around it – defining the *entire city* as a human place. Norberg-Schulz says,

"The isolation of the Acropolis in Athens from the profane domain around it not only enhances its sacredness but makes it an organizing center for the whole local world."[103]



*** Ryckwert notes the potential universality of this sign for a town, both in the form of the city and the shape of the ancient hieroglyphs used to describe it.[104] Roma *quadrata*, with *cardo* and *decumanus* intersecting at the forum, provides a pervasive example of this urban typology according to cosmic order (figures 5.5 & 6).**

"It is difficult to imagine a situation where the formal order of the universe could be reduced to a diagram of two intersecting co-ordinates in one plane. Yet that is exactly what did happen in antiquity: the Roman who walked along the cardo knew that his walk was the axis round which the sun turned, and that if he followed the decumanus, he was following the sun's course. The whole universe and its meaning could be spelt out of his civic institutions – so he was at home in it."[105]

Order was the hallmark of Roman urbanism, but the diffuseness of this spatial concept cannot be attributed to the extent of Roman influence alone. The many reincarnations of the Indian mandala as another example, of Eastern origins: this is an archetypal geometry. Whatever its origins, the quartered plan is a dominant cosmic model and urban form, enduring from primitive to present. The center point of these horizontal alignments is always a concentration, separate from the expanse of the everyday.



Raising a mass or sinking a space implies a vertical axis: Norberg-Schulz notes that, throughout history, we find this tendency to mark a place with a large mass (like the world mountain), but to make a space – separate from its surroundings – with a defined enclosure, like the primal cave.[106] Clustering urban mass around a vertical focal point, like the Athenian Acropolis (figure 5.7), achieves the same purpose of making the center distinct: "in general, the mass is a symbolic or ideal center, rather than a real place of activity. It puts a stop to the horizontal extension of man's environment, and makes his need for fixed points visible."[107] The municipal tower, castle or cathedral serves this purpose in the medieval city, asserting different dominant authorities in identical terms: invoking the vertical, the heavens, the center, these structures anchor the city in place as an 'ordained' cosmic fact. From medieval prototypes to Manhattan, our cities are zoned horizontally but declare their position vertically – participating in an order much larger than the city itself (figure 5.8).



Above:
[5.7] ACROPOLIS (ATHENS)

Right:
[5.8] BASILICA & CAMPANILE (URBINO)

Facing:
[5.9] EIFFEL TOWER, ACROSS PARIS



THE EMBODIED AXIS

"... beyond its strictly Parisian statement, [the Eiffel tower] touches the most general human image-repertoire: its simple, primary shape confers upon it the vocation of an infinite cipher: in turn and according to the appeals of our imagination, the symbol of Paris, of modernity, of communication ... confronting the great itineraries of our dreams, it is the inevitable sign ... reduced to that simple line whose sole mythic function is to join, as the poet says, base and summit, or again, earth and heaven. This pure -virtually empty- sign is ineluctable, because it means everything."[108]

- Roland Barthes

Symbols of the vertical take many forms, the most obvious being its actual embodiment. From primal posts or roland poles erected to center early human settlements – declaring order and defending against chaos – to the superstructures of today, the tower has unmistakably powerful associations (figure 5.9). The simple fact that it can see and be seen over great distances is certainly a valid aspect of its role in declaring identity, but this practical purpose alone cannot justify the pervasiveness of towers, even in our mythologies and dreams (just as the argument of economic efficiency cannot rationalize our profusion of skyscrapers, particularly in their early years). The practical function of a tower cannot supersede its purely symbolic value, as Barthes describes above: in its very emptiness, its absence of function, it becomes a pure – and immensely influential – manifestation of our universal skyward desires.[109] The embodied vertical is probably architecture's most potent symbol, like the pillar of the earth or the human figure itself.

In primitive societies, simple verticals like posts, ladders and trees sufficed to invoke a connection to the heavens; as architecture became more complex and increased in scale, more and more dramatic vertical embodiments emerged. Pointed stones turned upwards were an early manifestation of the vertical axis, concretizing a line between earth and sky. The tent pole or central post of the ancestral house was conceived as an axis mundi. More complex, the totem pole is a vertical storyline. The tower or pillar is always an expression of *action*, gravity and resistance, grounding and uplifting at once: like the conceptual axis mundi, it is a line of visual or physical motion.



MOTION AND METAPHOR

"Of all metaphors, metaphors of flight, elevation, depth, sinking, and fall are the axiomatic metaphors par excellence. Nothing explains them, and they explain everything."[110]

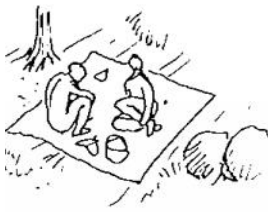
– Gaston Bachelard

Ascent and descent have different meanings, each distinct from the horizontal status quo – our usual plane of action, safely within our usual range of reactions and responses. Breaking the ground plane of this comfort zone can take us, literally and figuratively, to different levels of experience. Works of architecture can employ visual symbols of motion, shaping downward- or upward-oriented spaces to imply grounding or uplifting. A sunken or raised mass likewise activates the symbolism of verticality and gravity, weight and flight, in image alone. We engage with our environment psychologically before we use it physically, says Thiis-Evensen, participating in the visual or even imagined implications of mass, motion and substance in our surroundings (figure 5.10).[111] A mountainous form like the stepped pyramid or a cavernous *tholos* tomb space embodies the archetypal ascent into sky or descent into earth, as literal topographies, but much smaller, subtler physical gestures can partake in the same paradigm – such is the power of a symbol.

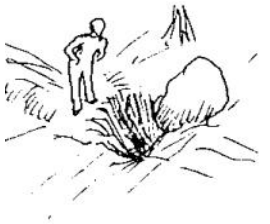
Physical ascent and descent intimately engage us in vertical and horizontal, strengthening our impression of space, and therefore the expression of the built work. Signals, like a step up or down, activate the symbolic value of its larger realm of experience. The few steps elevating the floor of the temple or church above the ground plane create a symbolic plateau, separate from the everyday, in closer communion with the gods.[112] The common cellar has no cosmic intentions, but it maintains the mysterious nature of a mythological descent, encountering dark places and hidden secrets – "in our civilization, which has the same light everywhere, and puts electricity in its cellars, we no longer go to the cellar carrying a candle. But the unconscious cannot be civilized. It takes a candle when it goes to the cellar."[113] Every descent is towards Hades, while every ascent is towards the heavens: "even those who have long ceased to believe in heaven and hell cannot interchange the worlds 'above' and 'below'."[114]

Above [5.10] & Facing [5.11] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE*

Grounding and Uplifting



There is natural 'motion' to mass and void, in their various interactions – whether physical, visual or implied, all activate the same symbolic associations. The space we inhabit rises and falls, enlarges and contracts, shifting the balance between 'earth' and 'sky' in their larger realms of significance. The draw of the earth is naturally downward and inward, closing off all other directions to enter a solid mass.[115] In archetypal terms, going into the earth is a return to basic needs and comforts: inward spaces are protective, confined enclosures. Upward is the opposite motion, expanding our sphere into the infinite void. Rising to survey the world from on high is empowering, an act of independence and even superiority: the world literally at our feet. Reaching for the sky is an aspiration for higher truth, higher power, higher vision – like the view from a mountaintop, heights are an opening to discovery (figure 5.11).





In historic examples, how a building meets the ground is a deeply symbolic expression: the Pyramid emerges directly from the earth as an indomitable mass, while the Greek temple base steps serenely above the ground plane to a level of its own.[116] Power wells up beneath the convex floor of the Roman Pantheon, recreating the curvature of the earth (as Michelangelo would, in his design for the Campidoglio).[117] We participate in these dynamics of the forms and spaces surrounding us, both visually and physically. Part of the subtle potential of architecture is to embody these qualities of earth or sky, closing downward or opening upward on different planes.*





How a building encounters the sky is just as important as how it rises from the earth, in determining its experiential qualities. Traditionally, great attention has been paid to the point where a building 'touches' the sky. Point or peak, cap or crown, the roofline of a building expresses not only the terminus of its rise but also its relation to space beyond. The roof shape, says Bachelard, is a rational form – it expresses a type of relationship.[118] A tectonic shift upward or downward involves the physical body in the expression of the building, meeting the earth or the sky, with powerful associations at different ends of the spectrum.



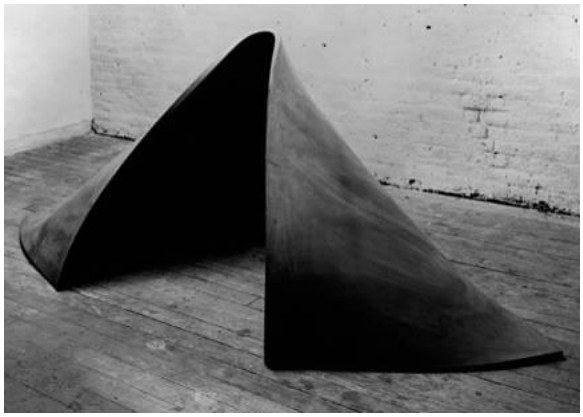
*** Ascending into the enclosure of the pharaoh Cheops' tomb is an example, combining the metaphorical supremacy of heights and upward orientation of immortality with the symbolic depths of the cave, giving the body over to the mysterious depths and cycles of life.**



The Egyptian pyramidion or the triangular pediment of a Greek temple, the Roman dome with its open oculus, the medieval turret or the Gothic spire, the Renaissance cupola or the Baroque volute (figure 5.12) – all establish a distinct orientation skyward, each in a particular way. From ancient to present, these edges have singular characteristics but a single purpose: to articulate a line of contact with powers above. The inherent symbolic intensity of these encounters is too seldom invoked in contemporary building: we pile flat concrete floor plates above flat concrete ground planes, and forget the experiential qualities of topography. We design our cities from a bird's eye view, but as Bacon says below, we rarely articulate a meeting point with the sky:

"Now, all too often, we establish a typical floor and repeat it mindlessly upward – all thought ceasing before the sky is reached. We sweep our rubbish into the upper air and use it as the crowning feature of our designs, with pipes, air-conditioners, and TV aerials as symbols of our relationship with the infinity of space."[119]
(figure 5.13)

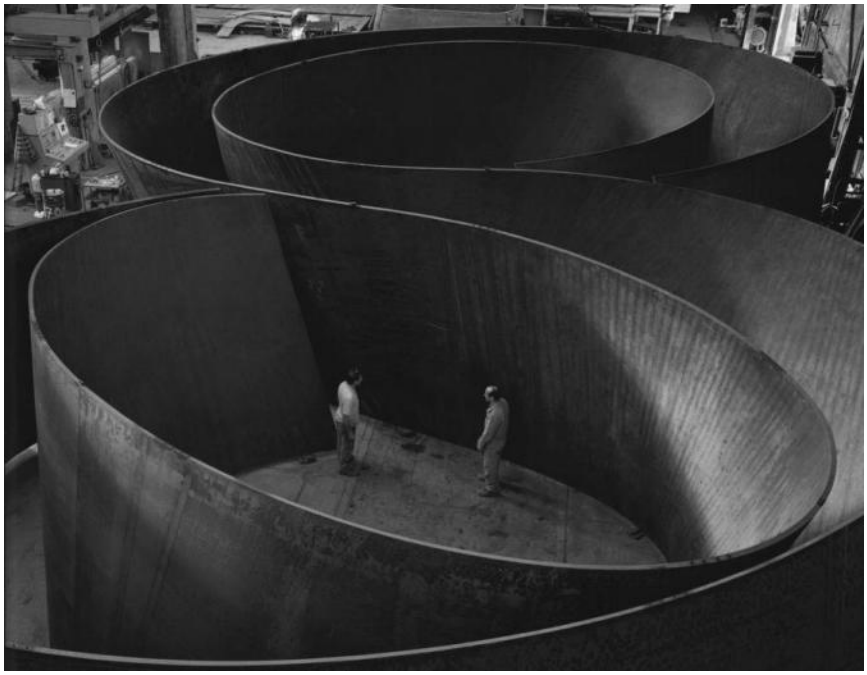




Concave, Convex: Two Cases

The literal cave and mountain are spatial archetypes, but their discussion here is representative: any recess or rise can participate in their symbolic associations. Hierarchy is always a matter of relative scale, like the prosaic King of the Castle, but axial verticality is not always associated to height. Any incline or decline, step up or step down can activate the metaphors of earth and sky. The symbol is characteristic, always more than it appears. It condenses vast realms of meaning into a singular object or act, like the gestural cave above (figure 5.14). Deployed horizontally, concave space and convex form are part of this range of symbolism (figure 5.15).* Referring to the convex Doric and concave Corinthian orders, John Ruskin claims that these two are archetypal while the others are 'useless variety': concave and convex are dialectical principles of order, thus no other form is necessary.[120]

*** Vertical expressions are the focus here, but these symbols can also operate horizontally. Any concave is naturally like a cave: it creates an interior, a sheltering. It suggests enclosure, while a convex wall or surface infers an exterior condition.**

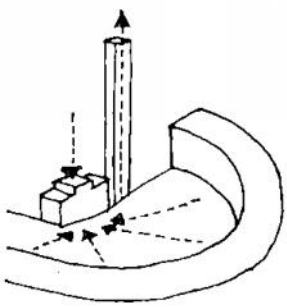


Facing, above:
[5.12] S. MARIA NOVELLA, LEON BATTISTA ALBERTI (FLORENCE)

Facing, below:
[5.13] AERIAL VIEW (ROME)

Top left:
[5.14] 'SEQUENCE', RICHARD SERRA

Bottom left:
[5.15] 'TO LIFT', RICHARD SERRA





Above:
[5.16] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE*

Above, right:
[5.17] PIAZZA DEL CAMPO (SIENA)

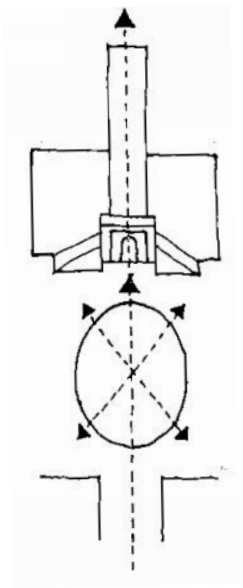
Facing, left:
[5.18] PIAZZA DEL CAMPIDOGLIO, MICHELANGELO (ROME)

Facing, right:
[5.19] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE*:
a) lines of motion
b) Michelangelo's original piazza design concept
c) piazza as realized

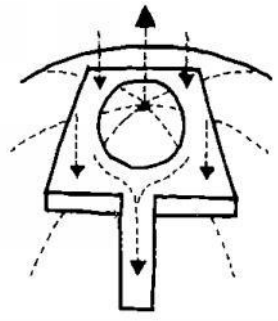
On the ground plane, concave or convex fields are topographical elements in miniature. Concavity evokes the earth as dominant mass and primal protection, like the cave, while convexity infers the mountain's powerful imagery of axis and apex – its superior authority swelling above the horizontal – all in a few vertical inches. Our inborn sensitivity to gravity and balance signal these subtle shifts to us. Curving floors are understandably rare, in architectonic usage, but tectonically very suggestive. Two cases are discussed here, equivalent in function but inverse in relationship to the ground. Each is a secular, civic center, shaping the urban floor to give tectonic authority of its government – like a force of nature.

Siena's Palazzo Pubblico is an anchor, with such solid permanence that it depresses the urban floor (figure 5.16). Collecting from the commercial street around it, the sunken 'shell' of the piazza draws everything inward and downward to that anchor – first the eye, on approach, and then the body is accelerated toward to the civic center (figure 5.17). The depression is asymmetrical, converging on the weighty mass of the Palazzo Pubblico, while the adjacent campanile soars upward as focal point. This is a dynamic field, always balanced but never static: the body participates in this piazza, engaged in an eternal interplay of forces that immortalizes this space.[121]

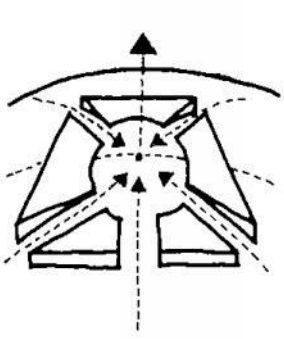




Michelangelo's Piazza del Campidoglio engages the same forces in an inverse relationship (though its current realization is weaker than his original conception).* Municipal buildings likewise anchor the composition, but where Siena's piazza sinks, this one swells with the power of Rome's civic core. A rising tide wells up under the pavement, as if the forces of creation are converging beneath its surface.[122] The dynamic tension embodied here is between this rising ground and the built floors around it. The buildings seem to be braced against its expanding energy, to balance its forces: the oblong composition frames a view of the city beyond, narrowing towards the Cordonata, issuing ceremoniously upward from the busy street below (figure 5.18).



With a strong vertical axis and centralizing geometry, the Piazza del Campidoglio is grounding and uplifting all at once (figure 5.19a). The feeling of this space is indeed a *caput mundi* – the apex of the oval is no less than the top of our globe. The meaning of the Campidoglio is captured in space, and immortalized for all: "Few people escape the fascination of the Capitoline Square, which touches the deepest ground of our psyche."[123] Its archetypal resonance is unmistakable: without ever belonging to the culture it represents, we are bodily involved in its drama and cannot mistake its declarations.

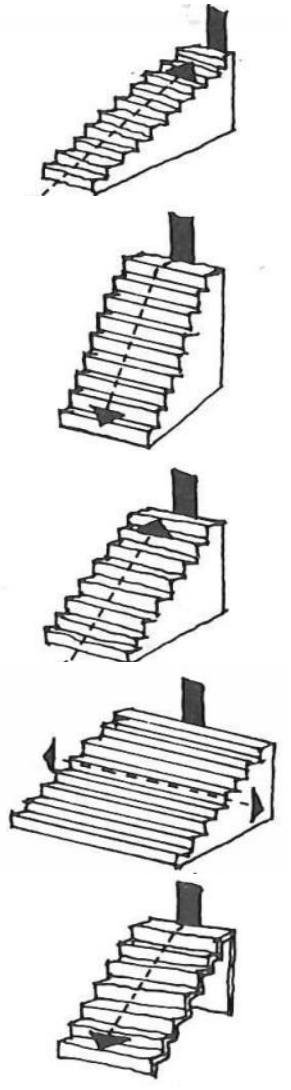


*** The convex oval of the piazza recalls the oval *omphalos* stone of Delphi, in primordial symbolism: Michelangelo's symbolic creation reinstates the Campidoglio as *umbilicus urbis*, center of civic power as it was in the ancient Roman Empire (figure 5.19b: Michelangelo's original design for the piazza made a more emphatic rise). This is one theoretical reason cited why the pope refused to execute the original design; the present realization moderates its motion, more like a 'victory of the ground' (figure 5.19c).[124]**

The Symbolic Stair

"The purely metaphoric, symbolic or conceptual purposes of a stair can supersede its practical function. Throughout history, the stair has represented cosmological ideas and spiritual aspirations, power and authority, prestige and status, hierarchy and classification. Steps and stairs conventionally symbolize the ascent to a higher spiritual plane, each step closer to Heaven. The climbing of steps reflects an archetypal psychic longing to approach the heavenly sphere of the cosmos. The temples of ancient cultures were often terraced to create an image of immense stairs; the ziggurat of Mesopotamia, the Stoup of South Asian Buddhism, and the pyramids of ancient Mexico. The temples of ancient Greece were built in a terraced formation to create a sense of elevation."[125]

– Juhani Pallasmaa



[5.20] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE*

The stair is an archetypal element, mediating between above and below both structurally and symbolically. Pallasmaa names the stair the most important architectural organ: provider of vertical circulation, without which we would be doomed to the horizontal. The physical staircase is also an essential part of the structural frame, like a spine articulating its vertical organization. Hiding the stairs away in the core of contemporary towers renders a building symbolically spineless – the elevator enables greater heights in greater comfort, but disables a central metaphor. Ascending and descending are powerful symbolic experiences: removing these associations makes the experience of the vertical less meaningful (figure 5.20).

Metaphysically, the stair is not only a means of movement between floors, but also between hierarchic levels of meaning. In Bachelard's oneiric house, the stair is the transitional mechanism between planes of consciousness and memory. "A great stairway transcends its physicality and functionality, and becomes a microcosmic complex of images suggesting an epic narrative," Pallasmaa says – "an experience of breathtaking beauty, flight, levitation, and the suffocating fear of falling, the stair makes one think of the tragic myth of Icarus, and the journeys of Ulysses across the sea below."[126]

There is an inherently spiritual quality to the articulation of ascent, says Norberg-Schulz.[127] Stepped terraces and monumental stairs are often employed to articulate a break from the everyday plane, in architecture and urban design – Pallasmaa notes the extraordinary variety of possible expressions, given the practical limitations of stairs.[128] The long, almost flat levels of Michelangelo's Cordonata at the Campidoglio permit a remarkably graceful and easy rhythm of ascent, especially in contrast to the narrow steps of the tall and steep climb – performed as a penitence – to S. Maria in Aracoeli, immediately adjacent.*

The Spanish steps are set to a different cadence, falling gently and pooling into curving belvederes, like a cascade of converging and diverging streams. Ascending them, narrowing in focus toward three crosses against the sky and the serene façade of the Trinita dei Monti, is inarguably spiritual (figure 5.21). Descending is equally delightful but of a different character, drawn downward and outward into the everyday business of the city below. The opening stair at Villa Malaparte has the inverse effect, inducing fear and vertigo: the stair is part of the cliff and house, but its widening embrace declares a belonging to the sky (figure 5.22). As a bodily engagement of the vertical axis, steps and stairs have inherent tectonic meaning.[129]

"As architects, we tend to think that stairs are symmetrical with relation to the activities of ascending and descending. In the prosaic acts of daily life, the two directions may well appear equal. However the specialized mental functions of the extreme floors of the oneiric house reveal the natural symbolism of above and below. Ascending stairs culminate in Heaven, whereas descending stairs eventually lead down to the Underworld."[130]



[5.21] SPANISH STEPS (ROME)



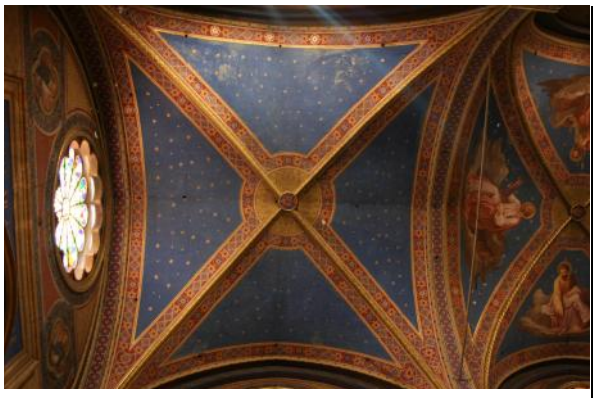
[5.22] VILLA MALAPARTE, ADALBERTO LIBERA(CAPRI)

*** A STAIRWAY TO HEAVEN**

***'The path of life is upward for him who is wise.'* - Proverbs 15:24**

Mountain symbolism is present in many religions, but the humble ladder or stair likewise has widespread symbolic value as a connection to the heavens.[131] Jacob's ladder is a Christian symbol (Genesis 28, 12-19); Sura 70 of the Koran bears the title 'The Stairways', and calls Allah 'Lord of the Stairways'. Ladder symbolism is recorded in various religions, including the Egyptian, the Jewish, the Islamic and that of the Navaho. Stepped ziggurats and pyramids were built as stairways to heaven, as recorded in the Pyramid Texts: "a stairway to heaven shall be laid down for him [the king], that he may ascend to heaven thereon."[132] Dante records his ascent from the underworld as a climb towards the light of heaven, from deep underground:

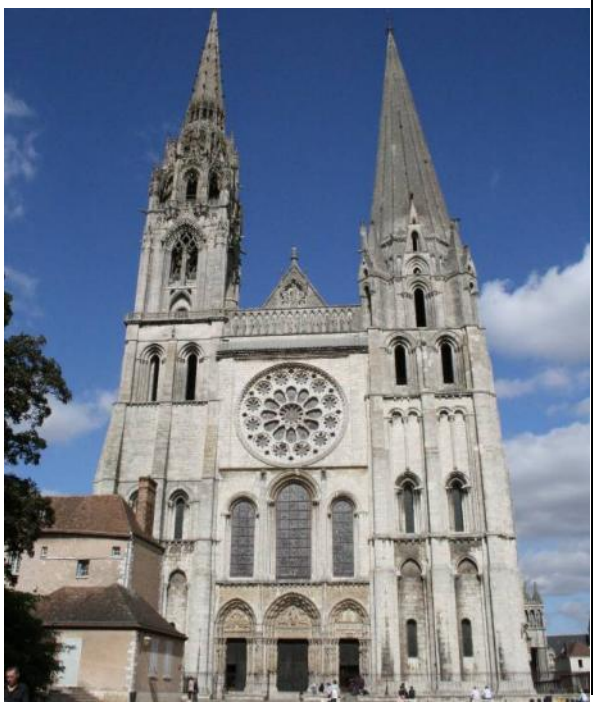
***"My guide and I crossed over and began / to mount that little known and lightless road / to ascend into the shining world again. / He first, I second, without thought of rest / we climbed the dark until we reached the point / where a round opening brought in sight the blest / and beauteous shining of the Heavenly cars. / And we walked out once more beneath the stars."*[133]**



[5.23] S. MARIA SOPRA MINERVA (ROME)

*** The firmament is also imitated pictorially in man-made interiors (figure 5.23). There seems to be a universal belief among primitive cultures that their ancestral shelter represents the cosmic house; these often have blue ceilings, painted with stars.**[134] **Fragments of concave ceilings from ancient Athens show they were etched into blue coffers containing gold stars. The same patterning is found inside Egyptian temples and tombs: as Lethaby says, "These men of Egypt loved the same sky we also love."**[135] **This ancient tradition is widely evident in Italian churches as in the Sainte Chapelle in Paris, Santa Sofia in Istanbul, and beyond Western architecture throughout ancient Persia and Assyria.**

[5.24] CHARTRES CATHEDRAL (FRANCE)



VAULT OF THE HEAVENS, ROOF OF THE SKY

"That stellar concave spreading overhead, softly absorbed into me, rising so free interminably high, stretching east, west, north, south – and I, though but a point in the center below, embodying all."

- Walt Whitman

As the object of so much natural fascination, through all the ages of man, the sky is invoked in architecture in various ways – each one symbolically potent. A circular motif can invoke its horizon meeting the earth. An ascending motion, whether visual or physical, can evoke its uplifting and expansive emotion. The outline of a mass against the sky, like the peak of a world mountain or the skyline of a building, can infer a point of contact between the human realm and the heavens.* Different profiles and shapes articulate different relationships between mass and void: dynamic or static, expanding or contracting, accepting or resisting the sky above and space around, or balancing flatly in equilibrium. All of these are expressive gestures, shaping different experiential spaces.

Exterior objects relate to the real cosmic vault as bodies in the world, like cosmic mountains or sacred pillars. Thus, the ziggurat raises a platform to encounter the sky; the sheer pyramid peak fuses earth and sky at a geometric point; the pedimented Greek temple rises gently (and tends to align with a dip on the horizon, where earth embraces sky). All of these exist in reference to the natural world: every skyline gives profile to that relationship. Interior spaces, starting with the Roman Pantheon, create their own worlds in miniature under simulated skies.* The Gothic cathedral embodies heavenly aspirations in both interior space, under extraordinarily uplifting pointed arches, and exterior form. Its spire is a natural conclusion to the supreme verticality of the building itself (figure 5.24).[136]

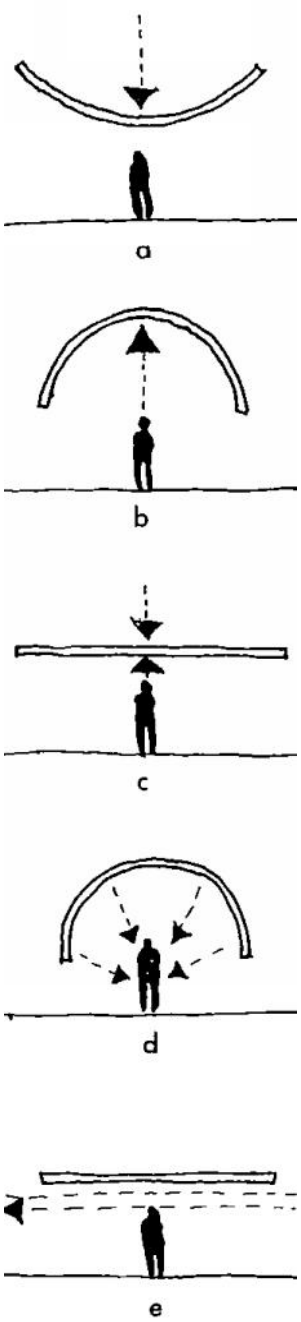




Left: [5.25] CLASSICAL TEMPLE (ROME); [5.26] LONGHOUSE (VANCOUVER)

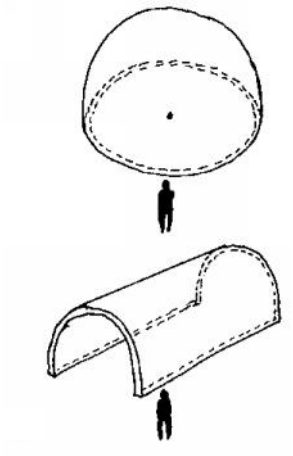
Below: [5.27] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE:*

- **a) receiving the sky**
- **b) resisting**
- **c) balancing**
- **d) closing, sinking**
- **e) neutral, opening**

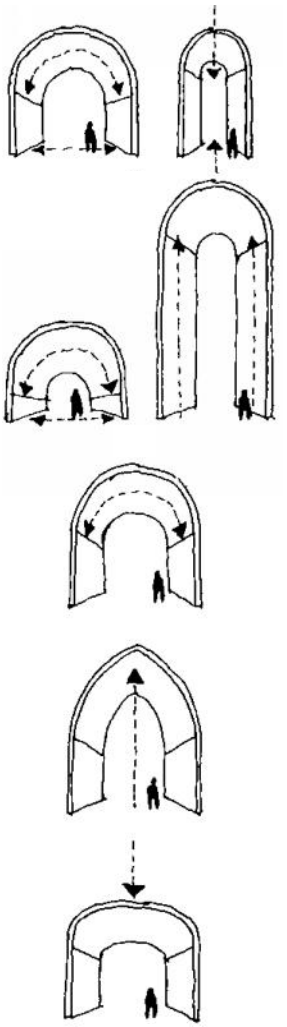


The roof element operates internally and externally, horizontally and vertically: the space around it is horizontal, like the extension of the earth, while the space above it is sky, engaging the vertical dimension. The balance of horizontal and vertical forces expressed can make a visually 'rising' roof, like the longhouse, or a 'sinking' roof like the low-pitched Classical pediment (figures 5.25 & 26).[137] These are dynamic planes, while the flat roof is generally static (although specific articulations can animate a flat roof also). The space below the roof, protected from an exterior both above and around it, takes on a distinct tectonic character. Participating in these expressions, the external conditions we encounter and inhabit shape our internal impressions also.

A roof overhead is the essence of shelter, of interiority, and therefore of dwelling: it defines a place *between*. The primitive house is thereby conceived as a miniature universe, centered on earth beneath the sky.[138] Many traditional roof profiles shape enclosing hollows, pointing skyward but opening downward – they are concave (curved or otherwise), grounding and delimiting both vertical and horizontal space. The etymological connections between 'dome' and the Latin *domus* for house, or 'cupola' and the Sanskrit *kupah* for cave, illustrate this correlation. Primitive domestic typologies like the igloo or the yurt are at once cave-like and dome-like: any concave form shapes an interior space. It represents the essence of interiority, prerequisite for all security, shelter, life.[139] Earth and sky, darkness and light are closely related in these microcosmic houses, recalling Heidegger's invocation that architecture enables dwelling by bringing the sheltering earth nearer underfoot, and sky more closely overhead.[140] Enclosing space pitched upward naturally emphasizes the vertical, creating a concentration, while the flat roof emphasizes the free-flowing horizontal (figure 5.27).



Literally concave forms fuse the elevating characteristics of the sky with the enveloping nature of the earth, excavated from the mass like a primal cave. This is an architecture of internal space rather than external form, whose impact condenses inward rather than radiating outward. Arcuated shapes create hollows to be occupied, as if formed by the body itself (figure 5.28). Expanding and compressing one's physical space, William MacDonald notes the capacity of rounded shapes to induce powerful sensations: an impression of rising or sinking hollowness, concentrating a sense of place and a certain 'rightness' of location. Curving surfaces can enlarge one's primary space, embracing their inhabitant.[141]



Vertically, each variation of the arch expresses a distinct action. The pointed arch rises, springing upward as in the Gothic cathedral – its skyward emphasis is clearly articulated (the exterior spire is a natural conclusion to the verticality of the cathedral, in form and in space). The flat arch sinks, grounding the space beneath it, while the spherical dome balances between. Extruding the arch directionally or rotating upon itself, the vault and the dome express different lateral dynamics also (figure 5.29). The vault is fundamentally a path, guiding horizontal motion: "in the new Roman architecture, man was shown his path and place by vaults overhead as much as by plans and openings."[142] The continuous dome is a place of staying and finally stopping, expressing centrality as well as enclosure.[143] The focal point within this centripetal domain is a still moment, under the apex of the dome – in spiritual cultures, this powerful center is the vertical line of passage between worlds, and shamans or medicine men were imagined to climb up and down this axis. Arch, vault and dome are Roman constructions *par excellence,* but the idea of the 'bowl of the sky' or 'stretched skin of the heavens' – and its representation in building – are evident in much older cultures.

The rising conical dome is a natural form, probably the earliest to be re-created in architecture - like primitive huts - while the sinking flat dome is like a skin over bent poles (historically used like tents to shelter important or sacred earthly places, such as the seat of a powerful personage: the baldachin at St. Peter's is an architectonic 'room' with these spatial qualities, anchored beneath the rising dome of the basilica). The hemispherical dome is an ideological form, resting in equilibrium. An archetypal image of perfection and completeness, like the Roman Pantheon, it expresses a perfect and complete calm. Elongating that spherical shape, like the dome of St. Peter's or the egg-shaped Duomo of Florence, it can reach gently toward the sky (figures 5.30, 31 & 32).[144]







Like the nomadic tent, this shape emerges architecturally among desert cultures, dominated by the sky – in the same culture but different geography of Moorish Spain, a more fertile environment, the dome of the sky is less dominant: internal courtyards emerge to create the same vertical focus.[145] Opening the apex of the dome likewise emphasizes the vertical axis. In primitive examples, a fire is customarily built at the center, with a smoke-hole overhead: the axis of the tent, an *axis mundi*, joins the primal forces of the earth with the immortal sky. Physical or visual, spiritual or otherwise, the implication of vertical movement remains powerfully symbolic.[146]

Combined with other built forms, the dome can create more complex dynamics and symbolic relationships. Raised over another shape, it becomes the sky above a defined human space. On a square base, as it was first arranged in Persia, it can symbolize the circle of the heavens meeting the square of the earth: a complete universe.[147] Elevated on a drum, like the Pantheon, it re-creates the disc of the horizon encircling the human realm. Renaissance churches combine these geometries, lifting the dome over a drum over a rectilinear space (itself over an underground crypt, completing the trinity). This interior, stratified cosmos often culminates with an oculus or cupola, admitting the light of the sky in a final ascent and release to the heavens.[148] Rotated upon itself to create a complete sphere (whether real, as in Boullée's cenotaph, or implied) the hemispherical dome can embody the very cosmos. This level of symbolism is still evident in a 'cosmic cave' like the Pantheon,[149] where the entire Ptolemaic universe is re-created under the dome of the heavens.[150]

Facing: [5.28 & 29]
from THIIS-EVENSEN,
ARCHETYPES IN ARCHITECTURE

Above, from left:
[5.30] ST. PETER'S BASILICA (ROME)
[5.31] DUOMO (FLORENCE)
[5.32] PANTHEON (ROME)

The Temple of the World

"The ambition and daring of the Pantheon are utterly Roman, but in its planetary rotundity the building is also suffused with a quality of seeking for the comprehension of things beyond knowledge, a quality that records the Roman sensitivity to human limits. The Pantheon exists because of a particular man, but the stirring and eloquent message preserved in the universality of its forms belongs to everyone. This is why it is the temple of the whole world."[151]

- William MacDonald



The Roman Pantheon is a singularly powerful space: a metaphor for the universe itself, and tangibly so. In it, the mysteries of the universe and the gods are to be synthesized in the mission of the roman state – bound within the seamless circle of the cosmos and of Roman rule (as MacDonald describes above). Norberg-Schulz explains its cosmic character as the unification of celestial dome with axial arrangement, horizontal with vertical.[152] The quadratura of the Pantheon articulates the eternal relationship between earth and sky, its lower realm earthy and amorphous under the ethereal upper realm of the dome, linked by the horizon of the rotunda. Perforated by a central *axis mundi* rising through the oculus,[153] the Pantheon is the temple of Ptolemy's spherical universe: the temple of all the world.[154]

"Here all forces are equalized in a perfect calm, completely in keeping with the intention of the space as a symbol of unity between spiritual and human power in an all-encompassing universe."[155]

Like the octagonal hall of Nero's Domus Aurea, the Pantheon presents the sky viewed from underground: a compelling vertical drama, grounding and uplifting at once (figure 5.33). The cylindrical drum (divided horizontally like our existence in space[156]) rises to meet the dome by precisely its radius – the space contains a complete sphere, as if the forces of the universe could converge here and be held in its vast interior.[157] The dome dominates, quieting its expansive domain by its own equipoise (figure 5.34). Massive walls isolate the interior from any distraction back to the exterior world – MacDonald calls this an ordering of nature, disallowing views of the natural world and abstracting man from the natural order. Instead, light effects (and sometimes water, as in Domitian's palace) animate the Roman interior. Circular plan and cardinal orientation combine, like the circles and squares of the pavement, under the hemisphere of the heavens – this is a complete cosmic model,[158] a perfect unity of place, position and direction.[159]

"In the tremendous space of the Pantheon, I first felt the passion, the forceful capacity of architecture to engage all the senses. ... Its silent clarity, ordered by light and darkness, embraced my imagination with its abstract inversion of interior and exterior space."[160]

- Steven Holl



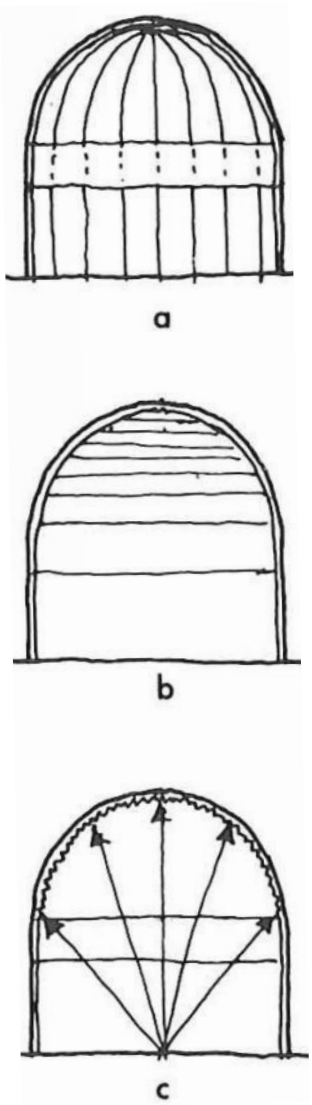
Facing: [5.33] PANTHEON INTERIOR (ROME)

Left: [5.34] PANTHEON CEILING (ROME)

Below: [5.35] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE*, showing how the space of the dome relates to the space below:

a) vertically
b) horizontally
c) perspectivally

The centralizing effects of dome and drum slowly bring horizontal motion to a stop: "as the eye follows the curving wall and vault and it becomes apparent that this vast space is without corners, the spell of the design begins to work. There is really no place to *go.*"[161] There is only stillness, except a visual spiral upwards, like the rotation of the heavens, around the coffered ceiling and released to the open sky (figure 5.35). Even the marble floor swells under the apex of the dome and sinks to meet an encircling horizon: "as if the force of history could change time to weight, this sloping floor seemed to express the gravity around the drum, slowly pushing into the earth."[162] Its curvature is visually imperceptible, but the body responds to the slightest topography. What it *is* to be human in this world – upright on the surface of the earth beneath the sky – is represented here in startling clarity, from the subtly convex pavement underfoot to the dome of the heavens overhead. As Heidegger notes, "on earth' really means 'under heaven'... The four belong to an *original* unity: Earth and Heaven, Mortal and Divine".[163] The Pantheon fuses all of these together, if only for a moment: joining earth and sky, the heavens and the human realm between, under the shifting disc of the sun.



With this powerfully symbolism, the Pantheon effectively introduces interior space as a new existential dimension.[164] Roman curves and vaults demonstrate an acute sensitivity to the sensory effects of these enveloping forms – this is an architecture meant to be filled, embracing the inhabitant.[165] The hollow becomes more important than the mass. Since Roman times, western architecture has been about interior spaces: architectural shells rather than bodies, shaping space within mass rather than mass in space.[166] The real legacy of Roman architecture is the synergy between container and content – not just defining an interior, but making meaningful *human* spaces.

SUMMARY: SYMBOLS OF THE VERTICAL

"The direction upward, against gravity, inscribes into space world-regions to which we attach values, such as those expressed by high and low, rise and decline, climbing and falling, superior and inferior, elevated and downcast, looking up to and despising.' The phenomenon of verticality, closely associated with an upright posture, gives situations their true human qualities."[167]

- Dalibor Vesely (quoting Erwin Strauss)

Architecture is a vertical figure, inherently symbolic because this is how we ourselves experience the world (as Vesely describes above). Our natural human predispositions to center and vertical have many potential origins, in the physical hierarchy of the body and the perceptual order of the stratified cosmos. These parallel metaphors reinforce each other, correlating our own higher and lower selves with the outside world. In vertical rising or horizontal reaching, resting mass or dynamic motion, architecture imitates not only the forms and spaces of our natural world, but our own natural interaction with them: the cosmic metaphor is also a body metaphor. Both share roots in universal human experience, resonating on the level of our collective humanity.

Sacred architectures from all eras engage the vertical to connect human and heavenly realms, pointing to the sky as source of divinity. Sky orientation is manifested in these physical representations of the upward gaze, like the totem pole or pyramid, obelisk or spire.[168] Vertical structures are conceived as a physical link to higher meaning, from primitive origins to the great architectural icons of high civilizations: towers and pillars, plateaus and mountains, tombs, pyramids, ziggurats, arches and domes are all part of the cosmic or global metaphor. The *axis mundi* is a line of connection; movement along that symbolic dimension, physical or otherwise, participates in a cosmic metaphor.

Manifesting the stratified cosmos emphasizes the hierarchy of the vertical axis, but also organizes the ground plane: establishing a center creates priority of place. Centrality itself can represent verticality – the Pueblo Indians organized their villages around a space, rather than a more literal mass, but its inferences are similarly vertical.[169] Fixing a connective axis, marking a focal point and center of gravity against the expanse of infinite horizontal space, these symbolic constructions give a higher order to the human environment and a deeper dimension of meaning to human places. Monuments and iconic architectures provide the most evident examples of these qualities, but their symbolism is equally valid on much smaller scales. Certain universal values, like vertical hierarchy and horizontal centrality, remain constant. Even a slight concave or convex form can activate the symbolic associations of cave or mountain, just as a step up or down can engage the vertical axis, as a line of movement between worlds. The stair is a fundamental symbolic element, mediating between the vertical line of movement and the human horizontal plane:

"The horizontal, vertical, and diagonal directions are interconnected in the design of a staircase, and this formal complexity transforms it into an architectural miniature, a microcosm…"[170]

Although upright bodies in space are the most obvious translation of the vertical principle, any structure that calls earth below and sky above into relationship engages the vertical axis – even without an upright manifestation. However universal its use as an organizing principle, the supremacy of the vertical is not always associated with an emphasis on height.[171] It is, however, always an expression of relationship between earth and sky. Fixing verticals and horizontals gives architecture great expressive potential, manipulating these archetypal elements. Certain forms stress one dimension of movement, usually upwards, while others establish both ascending and descending geometries – these are existential expressions, manifesting specific relationships between vertical and horizontal, earth and sky conditions in tectonic gestures.* Mechanical movement, however, removes this aspect of participation – and thereby the potential for identification and orientation – with the natural strata of space, flattening our experience into a single plane. We forget that ascending and descending have metaphysical as well as physical potential, bringing us into realms of deeper meaning and higher aspirations.[172]

Why this matters, in contemporary context, is simply that these primitive and ancient spatial concepts appear to be innate, rooted in human instinct. This is our universal, qualitative world, before quantitative facts refute the felt realities of our personal cosmic models. By these intuitive conceptions of space, older cultures constructed physical places that continue to resonate with us regardless of our own surface structures: we recognize and identify with the order that they express, as universal human experiences. The gestures of opening and closing, rising and sinking, weight and flight are tangible, tectonic expressions – each building we encounter addresses the world in this vocabulary, a language we participate in through our own bodies and assimilate into our own perceptions and projections of space.



[5.36] SYDNEY OPERA HOUSE, JØRN UTZON (AUSTRALIA)

The Sydney opera house is an example of Expressionist modern architecture (ideologically inclined to distortion and fragmentation) employing archetypal symbolism in its manipulations of the ground plane. Pallasmaa describes how the opera house applies the archetypal idea of a plateau, setting its space apart from the common realm, approached by great flight of stairs to monumentalize its approach and articulate its special grandeur.[173] The instant iconic status of the work reflects its visual grace and technological innovation, to be sure, but its 'epic' narrative in tectonic terms reinforces its universal presence (as Gehry describes below).

"Utzon made a building well ahead of its time, far ahead of available technology, and he persevered through extraordinary malicious publicity and negative criticism to build a building that changed the image of an entire country. It is the first time in our lifetime that such an epic piece of architecture gained such universal presence." **- Frank Gehry**

CHAPTER VI

MICROCOSM: THE BODY METAPHOR

"...like the Almighty, we make everything in our own image, for lack of a more reliable model; our artifacts tell us more about ourselves than our confessions."[174]

– Joseph Brodsky

The global metaphor shapes a human experience, in negative space: it operates as a frame, creating a symbolic environment from the outside inwards. Interior or exterior, as a space surrounded by mass or a mass surrounded by space, we identify with what the work *does* through the tectonic sensations of the body. We sense permanence in a dominating mass, spiritual uplifting on a rising plane or towering peak, more primal grounding in an enclosing hollow, orientation and alignment within a centralizing geometry. We recognize the cave or the mountain, the dome of the heavens or the ordering axes, as familiar features of our external environment. Occupying these spaces and places is elementally powerful, at different ends of the same spectrum. Perceiving these conditions visually, our internal experience is an echo of our physical experience, if we were inhabiting the same external conditions that we perceive: "in the same way as symbolic meanings in architecture, existential expressions form images to which we react. This means that we 'use' our surroundings psychologically prior to using them physically."[175]

The body metaphor reverses that relationship, embodying our human form, forces, feeling or function rather than representing our environment. Both are powerful metaphors of human experience, but a work imitating the body shapes our experience from the inside out: we identify primarily with what it *is*, with our own likeness. We participate in its expression as an empathy between two bodies, *through* that external body, rather than a recognition of external surroundings as they would act *on* us. Mimesis is essential human nature: we instinctively imitate the qualities around us, and represent the realities we know in form and space. We recognize the shape and state of the body in external objects, balanced or tenuous, fixed or mobile, standing or resting, assured or uncertain, strong or struggling, fragmented or whole. Expressions of gravity, axiality, vertical and horizontal all inform our bodily identification with our environment – the body seeks its resonance in space.[176] Symbolic embodiments, based on the body metaphor, are self-evident analogies of how we exist in the world: when we can 'find ourselves' reflected in that environment, we feel at home.

From primitive origins to the ancient world, and forward to the present day, the physical representation of the body has been proposed and applied in built form, in different forms of expression. It serves as a natural model – the architecture that results is not a replica of the human figure, but an embodiment of its character, its form and constituent parts, proportion and scale, verticality and hierarchy. Overviewing our means of bodily identification revealed that, by whichever inborn faculties, we do seek and find semblances of our selves in our environment, empathizing and recognizing our realities in the external world. Much of traditional architecture is unmistakably human, based on the body as a system of measurement, a harmonious composition or a literal, physical model. This immutable unity gave ancient architecture its enduring resonance, but these same characteristics rendered the body metaphor obsolete in recent centuries – too regular and harmonious to represent a shifting, fractal human experience. The wholeness of the body and innateness of our spatial concepts, formerly a means of connecting to the external world, have become a barrier to our assimilation into the increasingly placeless, weightless, instantaneous virtual reality where we live today. Our natural inclination to imitate and identify, projecting our realities onto the world, becomes an instrument of alienation when no familiar image is reflected back to us. Vidler describes the progressive distancing of body and building, as evolutionary phases in human thought:

"Three moments in this successive transformation of bodily projection seem especially important for contemporary theory: these might be described concisely as (1) the idea that the building is a body of some kind; (2) the idea that the building embodies states of the body or, more importantly, states of mind based on bodily sensation; and (3) the sense that the environment as a whole is endowed with bodily or at least organic characteristics."[177]

Our relationship to the world continues to change – but what we are and *how* we relate remain essentially the same. The enduring validity of the body metaphor, then, is our humanity itself; the built world is, after all, always experienced in relationship to our own body. Surveying how that common unit of human societies was embodied and represented in relation to the world, in terms of deep structures – beneath the belief structures that contextualized these fundamental, natural human convictions – we may hope to find some means of reconciling body and building, as a mediator between body and world.

The metaphorical body or metaphorical world are joint conditions, as figure and frame, converging in human experience – both are fundamentally human metaphors. They are discussed separately here according to their different models, but these are overlapping symbolic realms. Both articulate the vertical against the horizontal, fixing a center point and ordering the ground plane around them. Both establish a three-part order of upper, middle and lower, with similar existential associations whether they represent the stratified universe or the arrangement of the upright body. Both give meaning to form, space, mass and movement, prioritizing verticality, hierarchy, frontality and centrality. Every building is like a body, says Ryckwert.[178] The embodied axis may be modeled on the supporting pillar of the earth, or the standing human figure: their intended references are distinct, but their deep symbolic expression is interchangeable. The body metaphor also has global references, since human creation is connected to all of nature. Anthropomorphic architecture could relate the man-made world to the god-made world – the human form served as mediator, making the building like the body and therefore like the world. The order of the body was also a cosmic order.

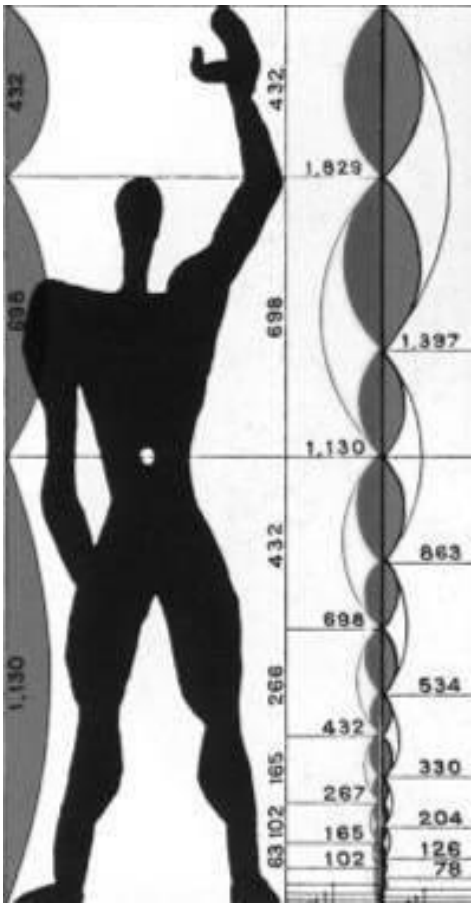
The Universal Unit

Human measures are a natural increment of construction: the body has been used formally as a mathematical scale since ancient Egypt, and as a geometric model of proportion since ancient Greece. When the process of architecture was manual, the expression of a building's humanity was inevitable – it bore the mark of its creator at every level. Even in buildings not meant to accommodate the body internally, like temples or pyramids, deep structures embed a human reference in proportions and composition. But the pursuit of unity through harmonious proportions is not limited to traditional architecture: Corbusier's Modulor (figure 6.1) echoes the logic of the Vitruvian module, applying the geometries of the human figure (in its various positions) as a system to create the necessary order in building, at a human scale.[180]

The great temples and cathedrals of past eras were built to a precise system of human dimensions, resulting in an essential unity of the structure as Corbusier notes (quoted at right). Rationalizing these dimensions into a singular ratio, based on the height of an average human being, he proposes the Modulor as universal unit for modern architecture. From applications to ancient icons – the Abbey of Chaalis near Paris, a bas-relief from an Egyptian temple, Emperor Justinian's palace in Istanbul, a temple in the forum at Pompeii – Corbusier concluded that his Modulor was indeed a universal measure. What he had really proven, however, was that historical units (and their metric correspondents) from various ages bear a common proportional relationship to the human body. The *body* is the universal measure – the Modulor is a modern, mathematical reiteration of that eternal unit, which primitive and ancient cultures used as an intuitive model.[181]

Le Corbusier wrote that order and harmony "is the spontaneous, indefaticable and tenacious quest of man animated by a single force: the sense of the divine, and pursuing one aim: to make a paradise on earth."[182] The tragedy of our times, he said, is that measures have been made arbitrary rather than flesh.[183]

"Primitive men at all times and in all places, are also the bearers of high civilizations, Egyptian, Chaldean, Greek, all these have built and, by that token, measured. What were the tools they used? They were eternal and enduring, precious because they were linked to the human person. ... they formed an integral part of the human body, and for that reason they were fit to serve as measures for the huts, the houses and the temples ... More than that, they were infinitely rich and subtle because they formed part of the mathematics of the human body, gracious, elegant and firm, the source of the harmony that moves us: beauty (appreciated, let it be understood, by the human eye in accordance with a well-understood human concept; there cannot and could never be another criterion). The elbow, the pace, the foot and the thumb were and still are both the prehistoric and the modern tools of man."[179]



[6.1] 'MODULOR', from LE CORBUSIER, *THE MODULOR*

THE ARCHITECTURAL BODY

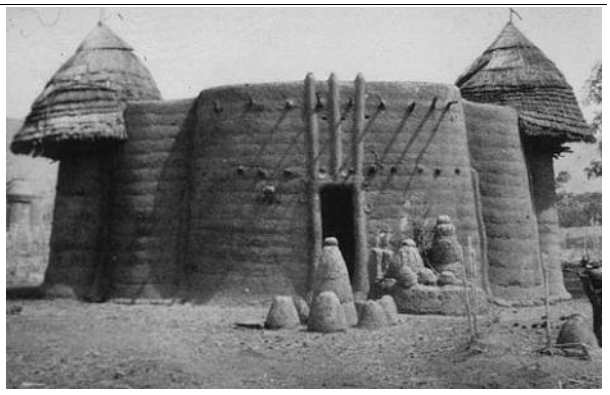
"I am like our sculptors: the human contents me; I find everything there, even what is eternal... Natural objects and sacred emblems have value for me only as they are weighted with human associations..."[184]

- Marguerite Yourcenar

Architecture is always an embodiment, with inexorably symbolic human associations. The basic principles associating body and building are intertwined in the human imagination: architecture is invariably anthropocentric, as an inhabited art. The analogy between body and building, in accord or discord, is an inborn idea: interpreting the building *as* a body is simple human nature.* Building according to our own corporeal logic follows the archaic tradition of mimetic architectures as a literal form of identification, linking the built environment to the order of the natural world. The human body provides a model of harmony and unity, synthesizing form and function within a familiar hierarchy, standing between earth and sky.

From primitive constructions to classical architecture, and beyond, the notional integrity of the body gave structural value to the built world.* The relationship between body and building was literal, physical, and reciprocal: "The building derived its authority, proportional and compositional, from this body, and, in a complementary way, the building then acted to confirm and establish the body – social and individual – in the world."[187] Ryckwert posits that, from the primitive recognition of the upright tree or post as an analogy of the body, all building became a metaphoric act and a symbolic representation of man in the world:

"However many millennia it took, the passage from the coupling of perishable body with growing tree or friable post to a rather different coupling of the body with permanent column seems almost inevitable. Whether such a post does or does not carry a beam is at this point immaterial."[188]



[6.2] BATTAMALIBA TRIBAL HOUSE, with male and female granary bodies

*** The Batammaliba tribe of Togo and Benin, Africa, name themselves 'those who are the real architects of the earth.' Their houses are conceived and perceived like a complete human organism: in exterior elevation it is like the vertical body, in plan it is a horizontal body, and its ritual construction is like birth. The Batammaliba strive for an alignment of powers in their dwellings – destined to become houses for the gods.**[185] **As Blier explains, their architecture is an existential necessity:**

"Without architecture, the Batammaliba normative ideas of individual balance and completeness cannot be achieved. Anthropomorphism and the psychology of architecture in this way appear to be closely joined because arranging forms to define the human, Batammaliba architects turn both to themselves and to the cultures in which they are working. In this process, architects express, through their buildings, essential dimensions of the self-image and changing self-images of both themselves and their culture."[186]

CLASSICAL EMBODIMENT

"The column-and-beam element is, in itself, a constituent of the man-made, of the artificial world. It is also part of an all-encompassing metaphor that makes human shelter an embodying, an in-corporation. ... However, wherever, whenever that image was first devised, the organization of any building since has evoked, even imposed, some comparison to the human body with its articulations, varieties, mutation – all its inevitable historicity."[189] - Joseph Ryckwert

Like our own standing posture, the vertical post or column embodies stability and action: the horizontal body is at rest but the vertical body is an upright pillar, balanced, bearing downward, resisting gravity to remain erect.[190] The primal post embodies these basic tectonic similarities, but the column transfers the body metaphor into an act of permanent architecture – body, building and world coincide in the symbolic vertical, participating in the order of the cosmos. We can naturally identify with these upright bodies, participating in its forces, aggrandized before it and uplifted along with it.

The articulated columns of Classical Greece are perhaps the most refined example of anthropomorphic building. The column stands, corresponding to the hierarchy of form and function we know in our own bodies: the purposefully broad base on the ground and finer capital aloft, joined by the upright shaft (figure 6.3). In its essential verticality, bilateral symmetry and tripartite hierarchy, proportional unity and animate energy, we recognize the conditions of being human. Together, column and beam express stability and bearing, motion and support: the frame is a complete figure.[191]

The classical language of architecture is immediately comprehensible to us, because its deep structures are so clearly our own. The human metaphor carries though the composition, accentuating the natural analogy between foot and base, body and shaft, head and capital. Vertically divided into a three-part hierarchy, the column corresponds to the basic conditions of what we are, and how we experience the world: below, between and above, in all their symbolic associations. Ordered as we are, unified in relation to each other, these three distinct parts and specific functions comply with our most instinctive model of order and meaning: ourselves. This is an architecture, in Norberg-Schulz's words, permeated with corporeal proximity – not only in form, but also in animate forces.[192] We can understand physically how the column is planted against the earth and how it bears upwards. Its verticality parallels our own, as does its embodied energy. James Howard Kunstler credits this anthropomorphic organization with the enduring appeal of classical architecture.[193]



[6.3] TEMPLE RUINS at TEATRO MARCELLO (ROME)

Below:
[6.4] HERA TEMPLE 1 at PAESTUM, showing the flattening of the echinus Burkhardt describes (at right)

Facing:
[6.5 & 6] TEMPLES at PAESTUM

The Human Order

"The Greeks worked through the idealized treatment of form rather than through mass … The first device is the narrowing of the column at the top … which assures the eye that the column cannot be overturned; next are the flutes. They signify that the column is condensing and hardening, as it were, gathering its strength. At the same time, they emphasize the upward thrust … The powerful pressure spreads its upper ending out into a swelling – the Echinus … Its profile is the most important measure of strength in every Doric temple; at its base it is edged by three channels, like the folds of a delicate, slack outer skin."[194]

– Jacob Burkhardt

The order is a carefully integrated unity, like the body itself; each element contributes to the character of the whole. The tectonic sturdiness of a thick and heavy column, its wide figure broadening towards its base, gives it a robust and stalwart character. The elegance of a narrower column, its tall and slender shaft swelling only slightly, to show that it bears any weight at all, expresses a graceful deportment. The body of the column establishes a character, in the strength and grace of it's bearing, and the capital is its countenance – the classical orders are most widely recognized by these distinct features. The plastic treatment of the column form embodies the effort of its bearing, articulating bodily the particular balance of forces it achieves:

"The classical artist developed forms based on things themselves … Just as every individual part of the human body cooperates in defining the totality of the body, the same principle is at work in the organicism of the building…"[195]



Experiencing the classical temple is many things, which others have described better (see Scully, overleaf) but to me it is always a startling moment of tangible certainty: an inexplicable bodily synchrony with some eternal and unnamed energy, as if even gravity is more certain of its forces within the field of this prevailing entity.





Applied to the temple, this unity of expression extends throughout the structure. The balance of vertical and horizontal forces is refined with each generation of building – the evolution that can be observed between the temples at Paestum provides an example. The Doric template is refined with each reincarnation: the temple's verticality is emphasized by the imperceptible inward slant of columns, while its conditions of its bearing are visually fortified by the 'solidification' of the echinus (figure 6.4). The entasis of the columns is likewise adjusted, striking a balance between the expression of a mass swelling under pressure and a powerful upstanding posture. The struggle between horizontal and vertical forces, obvious in the first temple, is resolved in the third – the apotheosis of the Doric order, perfected and perpetuated through to the Parthenon (figures 6.5 & 6).

The complex optical corrections that the ancient Greek builders employed are well known (and still fascinating), but the objective of these articulations is commonly ascribed to visual perfection, or nothing more than a devotion to advanced mathematics. The aesthetic satisfaction of the seemingly straight lines and precise orthogonality of the classical temple is undeniable, and certainly in keeping with the Greek notion of harmony through geometry. Still, their purpose cannot be purely visual or flatly illusory, for whatever spiritual impact: that would seem like a perversion of the Greek spirit, pursuing the image of a perfectly rectilinear, proportional unity by distorting its true physical nature. The image of perfection must be the means, not the ends, of the temple's intentions.

These laborious refinements are more corporeal than visual, compensating for the eye's own misrepresentation of the building - for what we would see as diverging verticals and curving horizontals - in order to represent its tectonic realities. Optical adjustments permit the imperfect eye to capture what the body senses to be true: the timeless forces of vertical and horizontal, our most elemental and most powerful realities, in perfect balance.



"There are no verbal equivalents for these forms, nor is there any music. Both words and music must be experienced over time, and the observer can only be aware that time stops in this classic art. There is only being and light. ... Gods and men alike are radiant in this light. It is the only immortality for human beings, approaching the hazard of the light with the gods. … In this light everything is simple and grave. The relation of the buildings to each other and to the land fuses in the white light. What remains is beyond action, too instantaneous for reverie, too deep for calm. It is silence, the sweet deep breath taken. Time stops. Fear lies dead upon the rock. The column is. It stands."[196]

The classical temple is an expression of living forces, embodying recognizable human qualities but also a human context.[197] Fundamentally humanist and anthropocentric, classical architecture manifests ways of being, assembling the world into an articulated image where earth and man are primary. Vitruvius teaches that the orders represent the harmony inherent in human form; Scully (quoted above) asserts that they indicate not only the unity of man, but also the accord between humanity and nature.* Designed as a house for the gods, the temple is an earthly meeting ground: aligned with a symbolic landscape, the whole universe of man and nature comes together.[198] Heidegger repeats that the temple fulfills its function simply by standing: its relationship to earth and sky confirm its identity between (see also Norberg-Schulz, quoted below).[199] The architectonic order frames of the column figure, placing the eternal and universal human being in the world – the classical language is based on the fundamental theme of earth-sky relationship. Its enduring, even universal, influence is intrinsic to those existential connections.[200]

[6.7] PORCH OF THE ERECTHEON (ATHENS)

*** Like the portentous column in Iphigenia's dream, the metaphoric equation of man to post or column is widely recognized – its proverbial symbolism is valid in many languages. The column literally sculpted as a body, however, is less common than the popularity of the metaphor would infer. The graceful caryatids on the Acropolis (figure 6.7) provide a rare and beautiful incarnation: here the more general metaphor is unmistakably clear, placing humankind within an architectural frame as the link between earth and sky.[201] Thus, the ancient Greeks strengthened the analogy between body and building, and between building and world: the order, relating column to podium and pediment, describes a human place in the universe.**

"The orders, therefore, manifest the unity of nature and man, and it was precisely this global identification that made possible their generic validity. In other words, they express the relationship between earth and sky and can therefore serve as a 'frame' for various structures of use. The base, the shaft, and the capital compose an indivisible unity, and when we add to them a plinth and a trabeation, the elevation appears as a section of a world comprehended."[202]

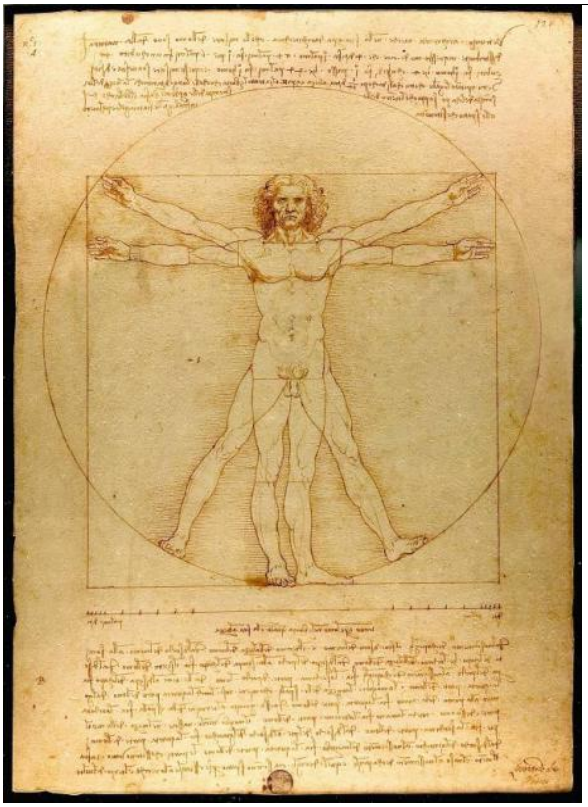
Renaissance and Revival: Humanism Reborn

"There is no question but that architectural members reflect the members of Man and that those who do not know the human body cannot be good architects."

– Michelangelo Buonarroti

Western humanism, from formal origins in ancient Greece through all its reincarnations, asserted the age-old authority of the body and strove to replicate its proportions and composition. The classical emphasis on harmony through geometry informed the iconic Vitruvian Man, mapping the human form into the centralizing geometry of the circle and square: the archaic symbol of heaven, brought to earth (figure 6.8).[203] Vitruvius' man as *microcosmos* is best known by da Vinci's illustration of zodiacal man – fifteen hundred years separate these canonic architects, but the relationship of human microcosm to larger macrocosm remains central. Vitruvius connects this essential polarity with building; Western architects throughout history have perpetuated this pursuit of connection between body, building and world.[204]

Renaissance architects returned to the classical study of harmony through proportional totality: the beauty of all things is, as in nature, in the accord of the parts with the whole.[205] The body is thereby an ideal template for architecture, to grant the building a similar unity. For Gian Lorenzo Bernini ('celebrity' Baroque architect and sculptor) there could be no beauty without an inherent harmony of proportions. The notion of man as microcosm is fundamental to his principles of building: what better model of perfect symmetry and geometry than the body of Adam, created in God's own divine image?[206] Its order is eternal, and inalterable – after the re-discovery of Vitruvius architecture was a strict system of prescribed elements, assembled according to a precise geometry (as Wittkower describes below).



In *Architectural Principles in the Age of Humanism,* Wittkower describes the collective standards that architects adhered to so devoutly:

***"... the architect is by no means free to apply to a building systems of ratios of his own choosing, that the ratios have to comply with conceptions of a higher order and that a building should mirror the proportions if the human body; a demand which became universally accepted on Vitruvius' authority. As man is the image of God and the proportions of his body are produced by divine will, so the proportions of architecture have to embrace and express the cosmic order."*[207]**

[6.8] VITRUVIAN MAN, LEONARDO DA VINCI



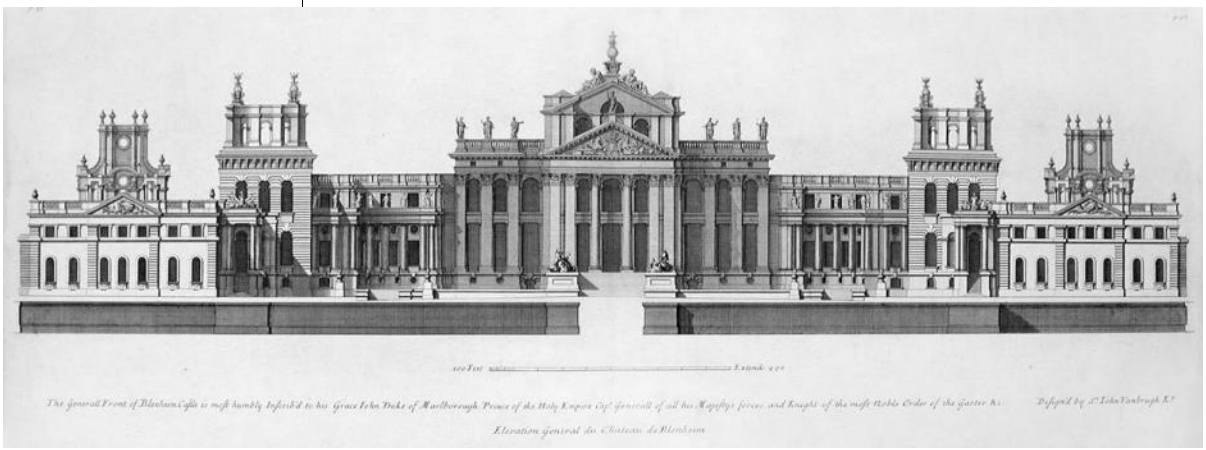
Above:
[6.9] ST PETER'S SQUARE, BERNINI (ROME)

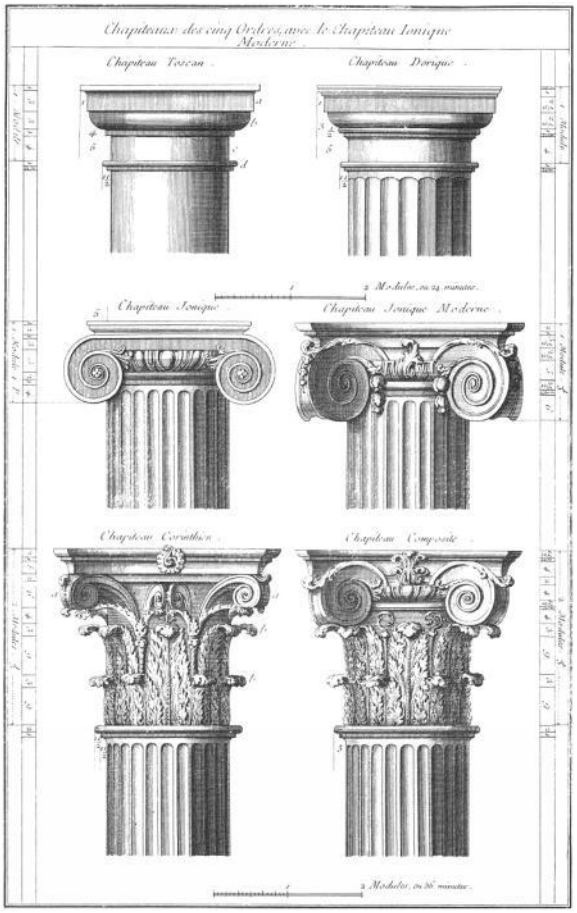
Below:
[6.10] BLENHEIM PALACE, SIR JOHN VANBRUGH (OXFORDSHIRE, UK). ENTRANCE FAÇADE from *VITRUVIUS BRITTANICUS* 1725

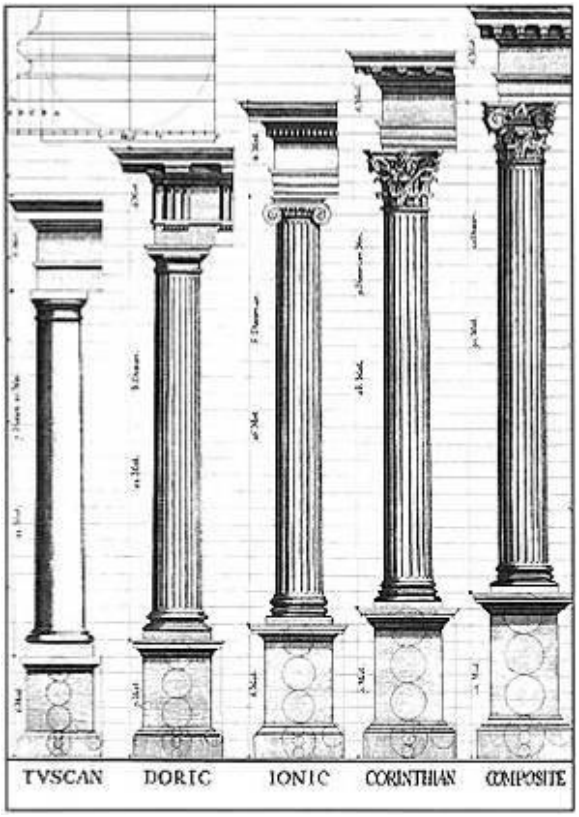
Facing:
[6.11 & 12] CLASSICAL ORDERS, plate from *ENCYCLOPÉDIE* Vol. 18 and from CHARLES PERRAULT

The structural logic, significant functions and natural hierarchy of the human form were thus represented in the column, the building, and even the Renaissance city. These convictions of absolute authority and immutable order are outmoded, in contemporary context, but the classical language itself remains convincing. Its rhetoric – "the Baroque is nearly always rhetorical, in the sense of grandiloquent, contrived, persuasive oratory"[208] – is internally compelling: we may no longer *agree* with what it says, but we certainly sense what it means to convey. Sir John Summerson selects the Louvre, Blenheim Palace and St. Peter's Basilica as prime examples, each making a powerful statement that resounds with some sense of a 'natural' truth (figures 6.9 & 6.10). Differing in origins and use, they demonstrate the enduring brilliance of Baroque expression: a tangible vertical drama that convinces us of their message, as Summerson describes below.

"These buildings use the classical language of architecture with force and drama in order to overcome our resistance and persuade us into the truth of what they have to tell us – whether it is about the invincible glory of British arms, the paramount magnificence of Louis XIV, or the universal embrace of the Roman Church."[209]







Classical Revival architects applied the orders to another generation of buildings and typologies, but still their characters remain distinct (figures 6.11 & 12). The orders were personalities, used in architectural applications appropriate to their inherent natures. The serious and noble simplicity of the Doric embodies a feeling of unshakeable austerity, portentous of solid, primitive virtues. The refined graces and sophistication of the Ionic suggest more erudite and intellectual applications, while the full-blown Corinthian order embodies more fanciful loveliness. Naturally, none of these are exclusive in purpose, and are often combined in the same building, but each maintains a clear architectonic *identity* and essential unity of expression.

In widely separated periods, locations and cultures, the classical orders have been revived and revisited as a dignified and intimately human language. Bodily identification and expression seem to be eternal characteristics of the orders, as recognizable in our time as in millennia past. Male-Doric or female-Ionic associations are specific instances of a more general metaphor, eventually extended to other orders, which loosened only around the end of the seventeenth century.[210] The dispositions of the various orders need not be elaborated further, because they are so widely recognized – but how are the 'personalities' of these classical forms such common knowledge, even today, while the same tectonic vocabulary is so rarely considered for modern buildings? Why does so much of the contemporary environment, made for our time, seem mute to us while these ancient expressions still speak so clearly?

A Living Language

"Greek architecture spoke to another time, and in other circumstances, but I think we may also listen to its discourse. It will not invite us to mimicry, to repeating catalogues of details or features, but it does demonstrate the validity of such technical speculations as the Modulor. Greek architecture shows how buildings should be conceived, how physical forms relate to the fabric of human groups, to societies and communities. Building is, after all, the group activity par excellence. What the Greeks really do is show us what we are entitled to expect of our buildings. And since we are so entitled, we should protest … when we are given short change."[211] – Joseph Ryckwert

Anthropomorphic architecture is innately symbolic, identifying body with building through a synchrony of form, forces, feeling and function. The notion of the human figure as a model of divine creation and cosmic order make it a natural model for architecture, in structural composition as well as powerfully animate expression. Ryckwert calls it our first model;[212] the first phase of bodily projection endured through many ages of man, from the primitive recognition of the upright post as a body analogy, through the classical language born in ancient Greece, and all its reincarnations. Seminal philosophers like Plato, Aristotle, Augustine, and Aquinas described human embodiment as a natural 'rightness' and harmony of elements.[213]

The classical orders uphold the dignity of the human figure, as a model of cosmic order – an unchanging, unified totality. The proportions and anthropomorphic associations of the classical order, in turn, partake of the absolute values of the body: a metaphor of unity, identity, human composition and human characteristics. "To put it another way: the body analogy guaranteed the notional integrity of the order, its corporate nature, its numerical and dimensional identity, the cosmogonic and legendary-historical aspect of the architecture…"[214] The breakdown of the classical language – from Romantic recombination, to Modern abstraction, to Deconstructivist dismemberment – permitted new forms of expression, but an architecture of such compelling and enduring clarity has yet to be found.[215]

Architecture is essentially a *gesture,* making mass into form, shaping the space that form defines. Like a sculptor, the architect gives profile to an idea, by different models. Taking form, the building sculpts the space we occupy, defining verticals and horizontals, openings and enclosures, manipulating the terms of relationship between mass and void. In the silent but constant dialogue between body and space we participate in their mass, motion and substance, seeking similarities and empathy with our surroundings. The tectonic senses of our own bodies in the world, and our ability to identify with those realities in other objects, shape our impression of the built environment.

Mass and space, vertical and horizontal, in their essential gestures downward and inward, upward and outward, are the most basic and concentrated form of architectonic expression: they are tangible, physical certainties, uncontrived and unambiguous. The language of form and space is articulated in these terms: this is the basic vocabulary that defines place, against infinite space, and gives order and meaning to our world – without which, we cannot comprehend or connect to our surrounding environment.

ROMANTIC EMOTION, ENLIGHTENMENT REASON

"I know it has been said a long time since, and echoes backward and forward from one writer to another a thousand times, that the proportions of building have been taken from the human body. ... But it appears very clearly to me, that the human figure never supplied the architect with any of his ideas."[216] *... "And certainly nothing could be more unaccountably whimsical, than for an architect to model his performance by the human figure, since no two things can have less resemblance or analogy, than a man, and a house or a temple."*[217]

– Edmund Burke

The primitive and ancient identification between the body and the column, house or temple is basic human nature: we are mimetic beings, seeking similarities to identify ourselves with our surroundings. Our instinctive reading of building as body remains embedded in the deepest levels of thought, but the classical conception of the body in architecture was declared obsolete in the eighteenth-century – too archaic for the Rationalists, not primitive enough for the Romantics, and too rigid and prescriptive in either case.* Architecture is always a mirror of culture, and the division of this era is evident in its dissident styles.

The Romantic sublime superseded classical organicism: humanist notions of the building as a body were obsolete, even ridiculously contrived.[218] The role of art was reinterpreted as a personal expression, first and foremost, rather than representation; "as for architecture, notions of harmony and composition were displaced by those of taste and character."[219] Instead of imitating the physical human being, through precise proportion and scale, the romantic aesthetic emphasized sensory value over structural, emotion over composition, and the sensory freedom of the architectural process and product above all – reviving medieval and Gothic styles, as an architecture of appropriate morality. Rather than a model of harmony, as it had been for Renaissance and Baroque works, the body became an object of Romantic nostalgia.[220]

Where classical architecture had been a lesson in dignified restraint, the architecture of the Romantic sublime was intensely imaginative and emotional, evoking terror and delight. The classical language simply didn't provide enough original possibilities – the stoic nobility and graceful serenity of classical buildings gave way to a drama of aspiration, nostalgia, melodrama, caricature, grotesque and uncanny. Liberated from what had been a discipline, architecture became an art of free association – without a model of wholeness to command the unity of its constituent parts. What had been a fairly consistent language became, in Vidler's description, a Babel of fragments: conceiving buildings as purveyors of messages, designers extracted their vocabulary from multiple architectures, mixing metaphors, juxtaposing styles and allusions.[221] Since the late eighteenth century architecture has oscillated between the poles of synchronic or diachronic relativism: all styles are possible, or all styles are forbidden.[222] The language of architecture is confused either way.

*** The late 17th century saw the decay of rhetoric, as a father of lies, and the rise of individual intellectual freedom and personal sensibilities. In the turmoil of their own time, the spirit of the age was divided between the scientific future and the simpler past, the triumph of the intellect versus the return to nature and natural instincts.**

MODERN MORALITY AND ABSTRACTION

"The history of the bodily analogy in architecture, from Vitruvius to the present, might be described in one sense as the progressive distancing of the body from the building, a gradual extension of anthropomorphic analogy into wider and wider domains leading insensibly but inexorably to the final 'loss' of the body as an authoritative foundation for architecture. With the isolated exception of Le Corbusier's vain attempt to establish the Modulor as the basis for measurement and proportion, the long tradition of bodily reference from Vitruvius through Alberti, Filarete, Francesco di Giorgio, and Leonardo seems to have been definitively abandoned with the rise of a modernist sensibility dedicated more to the rational sheltering of the body than to its mathematical inscription or pictorial emulation."[223]

– Anthony Vidler

The 'loss of the Renaissance body' and general breakdown of traditional frames of reference left an ideological vacuum, which Modernism emerged to fill. Inverting the Romantic view of the past as morally superior to the present, the Modernists rejected any notion of a lost golden age. These new pioneers of the 1920s embraced the spirit of progress as the only spirit for our time, with genuine conviction that (as Adolf Loos has described) good people in tune with the times would make good architecture, and architecture would make the people good.[224] Le Corbusier expressed the same optimism, calling architecture "a thing which in itself produces happy peoples."[225] Modernism's therapeutic programs were conceived to erase the shadows and squalor of the nineteenth century, creating an architecture of physical and moral hygiene.[226] Sweeping away the obsolete standards and conventions of architectural history, Heroic Modernism promised purification and revitalization – rendering man fit for a new era and free to reinvent the world.

Where classical humanism has stressed the structural value of the body, and the romantic sublime had emphasized emotion value, Modernism asserted the values of reason and ethics – distilling architecture *and* humanity down to its barest, thus purest, essences. The Modernists asserted their freedom from all of architectural tradition, including the age-old anthropomorphic reference that a building is composed like a body. They proclaimed that the building should perform like a body, but in this case form did not follow function: corporeal logic was interpreted as a mechanical model, purposeful and efficient.

Le Corbusier's design ideologies, situated somewhere between heroic modernism and classical humanism, perpetuated the human metaphor and attempted to reinstate it in modern terms but his Modulor failed to gain popular acceptance. In the culture of the fragment, the essential unity of the body – a model of wholeness, harmony, proportion and integration – was no longer collectively regarded as a relevant metaphor for architecture. The new aesthetic aimed at universalizing abstraction, paring down representation to an unadorned psychology of sensation and movement.

Vidler (quoted below right) describes the reinterpretation of the body as a higher order of perception, but Wittkower suggests that this autonomy of the artist – declaring proportion and beauty as grounds for personal and subjective interpretation – is 'against nature':

"Never before in history (at least in the history of higher civilizations) had circumstances led to a situation in the arts where the principle of order was left exclusively to the direction of the individual artist. … a reversal of the artist's approach to proportion began as early as … the work of the Cubists, who cast conventional forms to the wind, endeavoring to return to basic geometric shapes."[230]

The unity of the figure was of less interest than the desire to represent the movement inherent to modern life itself: modern art effected the decomposition of the body to recompose it in these terms.[227] Imitating dynamic urban life led to breaking objects into pieces: geometries, cubism, intersecting planes, multiple perspectives and duplicate forms were employed to suggest movement, ultimately abandoning the depiction of reality to experiment with representations of pure mechanics or dynamics.[228]

"From Duchamp's Nude Descending a Staircase, based on Etienne-Jules Marey's careful studies of movement, to Balla's Woman with a Dog on a Leash, there seems to be no fear that the body is entirely lost: rather the question is one of representing a higher order of truth of perception – of movement, forces, and rest."[229]



[6.13] CUBIST HOUSE NEKLANOVA (PRAGUE)



[6.14] 'NUDE DESCENDING A STAIRCASE', MARCEL DUCHAMP

The New Order

"It is a question of building which is at the root of the social unrest of today: architecture or revolution."[231]
- Le Corbusier

Liberated from classical orientation, composition, proportion and balance – all corporeal qualities – modern architecture set boldly forth to reinvent humankind, by revolutionizing the human environment. New technologies and construction enabled entirely different material expressions, inventing forms with new possibilities – and effectively disintegrating the conventional architectural body, not only in form but also in mass and materiality. Macrae-Gibson points out how "the traditional anthropomorphic significance of the vertical façade has been replaced by the new and insistently non-anthropomorphic horizontality."[232] Concrete and steel (as in Corbusier's Dom-Ino typology) freed plan and façade from the constraints of load-bearing walls, eliminating those typical expressions of vertical force and opening interior spaces to lateral flow. Without the definition of a vertical façade the building itself disappears, presenting a blank mirror or open aquarium, 'losing face' and corporeal identity (figure 6.15).

A load-bearing wall is the *a priori* vertical surface, traditionally marked with an intimation of the inside. The horizontal slab on minimal columns endangered the façade, and eliminated the vertical – in Vidler's estimation, this lack of interest in body and face is a consistent failure of modern architecture.[233] Colin Rowe provides an admittedly humanist critique of the Stuttgart Staatsgalerie's un-façade on these grounds (figure 6.16). He stresses the critical need for architectural faces, insisting on walls 'thicker the better'. Dense vertical surfaces provide the interface between eye and idea – "a metaphorical plane of intersection between the eyes of the observer and what one may dare to call the 'soul' of the building" – prerequisite to any identification or interaction.

Boundary conditions between interior and exterior also dissolve: the modern interior is out on the street, no longer visually 'inside' at all. The obsolete solid façade is replaced with glass – the modern material *par excellence*, says Frank Lloyd Wright. In his Kahn lectures at Princeton, he describes this unprecedented building material: "tradition left no orders concerning this material of perfect visibility."[234] Never before in architectural history could transparency replace all traces of solidity, replacing the interior-exterior interface with another kind of abstraction: the *picture* window, making a world of glossy images.[235]





The *presence* of traditional architecture, asserting the experiential realities of the body in the world, becomes absence in most modern architecture. In the natural, mimetic interaction between body and built environment (so critical to humanist ideas and much older architectural traditions) these lifeless machines present only blank faces, disengaged from spatial dialogue. Baudrillard comments to this effect, at right.

"All around, the tinted glass façades of the buildings are like faces: frosted surfaces. It is as though there were no one inside the buildings, as if there were no one behind the faces. And there really is no one. This is what the ideal city is like."[236]

There is no question that minimalist modernist buildings, like the works of Walter Gropius and Mies Van der Rohe, possess an austere beauty: an uncommon stillness, in exacting lines and purified forms. There is an ethereal quality to these architectural essences, glorifying their materials and assembly. In its most refined expressions, concrete, steel and glass can create beautiful architecture with exceptional possibilities. Schiller calls this the last real aesthetic of architecture (which unfortunately resulted in a style that could be replicated quickly and cheaply, without understanding: this has been its demise). It resulted in a new social ideal of beauty – the cool, detached individual, liberated from old constraints and facing his own future.* This pure and rational approach was sincerely intended to improve urban life (as Schiller elaborates, at right).

"... behind the aesthetic was the fundamental expectation that the mass production of good architecture could make the life of the common man much better. It was a translation of the Bell, Burroughs, and Sullivan notion that art could elevate, only this time it was translated into a scientific determinism that truly thought that if we made safe, clean, open buildings, the stress on people's lives would be reduced. They would be happier and many societal ills would become obsolete."[237]

Facing: [6.15] BDC BUILDING, GUILMETTE LARUE ARCHITECT (MONTREAL); [6.16] NEUE STAATSGALERIE, JAMES STIRLING (STUTTGART)

Left: [6.17] UNITE D'HABITATION, LE CORBUSIER (MARSEILLES)



*** The International Style liberated architecture from its classical bonds to the body and to the world, only to become just like modern man in the world: an entity with infinite possibilities but no fixed points, everywhere and nowhere, free to be reinvented but without any historical or traditional foundation to build an identity on. The modern tower stands as we do, uncertain of its place in the world: it could be here, or somewhere else. (figure 6.17) In all of its historical reincarnations, the architectural body was never free-standing before ... how shall a mobile architecture express the permanence and certainty of place that we seek for ourselves, in the world?**

Modern Humanism

"[Many modern works] are inert, not monumental, because they do not value the individual act; but Le Corbusier's aggrandize the man who stands before them by stretching his own force empathetically upward with them. … Men thus return to the earth as men. They no longer either ignore it for a dream of ideal formal or mechanical perfection or seek to evade human identification by dissolving into the other, 'natural', or evolutionary dreams. …This seems to be the fullest realization in architecture so far of the new humanity, self-governing and expecting no favors, which first began to be imagined two hundred years ago and sought its ancestry in Greece: 'a shaft … inflexible and free.'"[238]

– Vincent Scully



[6.18] HOUSE AT WERKBUND EXHIBITION, LE CORBUSIER (STUTTGART)

As exception rather than rule, the human metaphor is still present in certain strains of modern architecture: contemporary humanism is possible, though not often practiced. Scully describes a new phase of identification, both humanist and modern: neither ignoring nor evading the natural identification between body and building, asserting the independent spirit of modern man. He cites the animate forms of Le Corbusier's buildings, engaging the observer to rise empathetically with them (figure 6.18).

The human figure is undeniably present in his works, if presented in a new relationship to surrounding space.* Men return to the earth as new men, self-made and standing alone, with no heavens overhead or Hades underfoot to call into connection – what Le Corbusier proposes is the archetypal figure, but a fundamentally new frame. The modernized man expects no favors, needing no traditional earthly comforts or celestial assurances: this is the brave new world Modernism promised, for a purified human race.

***It is critical to note Le Corbusier's own studies of ancient architecture, applied concurrently with modernist principles. His concern for harmony, human proportions and symbolic alignments are classical in origin, giving his work some of the same ethereal grace that he noted among the monuments of ancient Greece. Le Corbusier's works stand forth as high expressions of heroic modernism, because – for all his proclamations – they are actually infused with ancient principles, combining optimistic interventions and innovations with timeless principles of proportion, composition and scale.**

"From the house to the city, the body acts, for Le Corbusier, as the central referent: its shape informs the layout of the Ville Radieuse; its analogy infuses biology into the mechanics of the city and the building; its proportions are embedded into every measure through the operation of the traces regulateurs or the Modulor."[239]

The organic identification between body and building had weakened, to be sure, but certain modern architects upheld the human figure as a meaningful model. Louis Sullivan's approach was clearly humanist, applying classical principles to the new typology of the skyscraper. Like a classical column, his buildings honour the human form in architectural images of muscle and bone. Sullivan saw buildings are upright sculptural bodies, as he describes the Marshall Field warehouse (figure 6.19): "here is a man for you to look at. A man that walks on two legs instead of four, has active muscles … lives and breathes …" [240] This empathetic analogy between body and building is evident in Sullivan's writing and in practice, engaging the body in architectonic action – Vincent Scully offers an equally humanist interpretation of Adler & Sullivan's Guaranty Building (figure 6.20):

"A drama of vertical continuity, hung weights, and human uprightness is realized at once by the observer's empathetic association of himself with the visual analogies for compression and tension … the building seems to stretch and stir, 'walks on two legs … lives and breathes'."[241]

Sullivan expresses a deeply ingrained feeling that the body and the orders, and therefore the body and all building, are parallel entities. In 'The Tall Office Building Artistically Considered' he insists that the skyscraper should bear a division into base, shaft and capital. He invokes the law that form must follow function: the vertical functions of a building are tripartite, therefore the form should articulate bottom, middle, and top. Sullivan's architectural theory follows an "ancient and grandiose – but apparently buried or broken – tradition: that the Greek orders enshrined and transmitted values of primordial as well as perennial validity."[242]



[6.19] MARSHALL FIELD STORE (NOW MACY'S), LOUIS SULLIVAN (CHICAGO)



[6.20] GUARANTY BUILDING, ADLER & SULLIVAN (BUFFALO)





Therein, Scully explains, lies Sullivan's uniqueness among American architects:

"[Sullivan] was the great, perhaps the only, humanist architect of the late nineteenth century, as he brought into the mass metropolis – in terms of its new program of the skyscraper office building – a dignified image of human potency and force."[243]

Sullivan's Bayard-Condict building (figure 6.21) adopts this classical approach, without resorting to classical replication: the column prototype is extended to the building scale, with cap, midsection and base clearly delineated. It doesn't look like a column – nor should it – but it does represent a recognizable order of being in the world.* The lightness of the penthouse storey with respect to the floors beneath it, and finally the heavy ironwork of the lower stories, convey a sensibility to the structural function of each section. A massive base and delicate upper edge establish a strong relationship to open sky above and solid earth below (as in his Carson Pirie-Scott building, figure 6.22). It doesn't look like a body but it does stand and address the world like one, engaging the viewer in its mass, motion and substance. Firmly fixed in place, it stands with an uncommon strength and grace, dignifying the image of man in the world. Sullivan's Bayard building engages the empathetic body and makes its construction comprehensible - it "not only clearly articulates the special structure and functional characteristics of its parts but also embodies a full drama of forces in which the observer can physically participate."[244]

*** Sullivan also notes the three-part framework of various theoretical models: the architectural composition of base-shaft-capital like the body itself, the organic structure of root-trunk-canopy, the cosmic division of morning-noon-night, or the intellectual logic of beginning-middle-ending.[245] He proposes that division into three parts is a natural order, echoing the ancient Pythagorean notion of three as the prime numerical entity.[246]**

Mies van der Rohe's 1923 manifesto declared steel, concrete and glass the 'materials of a skin-and-bone construction': no bodily form, mass or force, no face, no anthropomorphic expression. He invokes the *essence* of this upright figure, as in the Seagram Building, in the fixed skeleton of the rectangular frame (figure 6.23). For Mies the role of the skin is to express the significance of the frame,[247] but in empathetic terms it seems less is not more: the ethereal lightness of the steel frame lacks the corporeal vigor of Sullivan's style.

"... the Seagram Building can stand upon its legs, as a sculptural body, not as a structural cage or a spatial hollow. In this way Sullivan's image of human uprightness was returned to the center of the city, though now in Mies' rather frozen, thin, classicizing, and essentially inactive form."[248]

The skin-and-bone tower is necessarily passive, presenting no image of mass or muscle to suggest human action or vital energy. This is a body reduced to its minimal requirements, standing – but not living – skeletal and exposed behind a fragile transparent skin. His Lakeshore Drive apartments are similarly ascetic (figure 6.24), while Farnsworth House (discussed further in Part 3) is the apotheosis of the Miesian *beinahe nichts*, 'almost nothing'.[249] Still affirmed in Sullivan's brick towers or Corbusier's concrete forms, the anthropomorphic vertical body is dematerialized in modern steel-and-glass architecture – reduced to an ethereal spectre, almost nothing at all.





Facing, left:
[6.21] BAYARD-CONDICT BUILDING, LOUIS SULLIVAN (NYC)

Facing, right:
[6.22] CARSON PIRIE-SCOTT BUILDING, LOUIS SULLIVAN (CHICAGO)

Above:
[6.23] SEAGRAM BUILDING, MIES VAN DER ROHE (NYC)

Left:
[6.24] LAKESHORE DRIVE APARTMENTS, MIES VAN DER ROHE (CHICAGO)

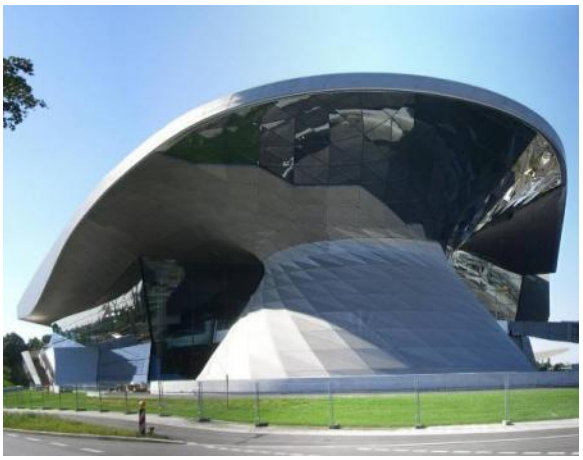
DECONSTRUCTION AND DISTORTION

"Evoked as referent and as generator of an architecture that stands, as Coop Himmelb(l)au has insisted since the late '60s, against 'Palladian' humanism and Corbusian modernism alike, this body no longer serves to center, to fix, or to stabilize. Rather, its limits, interior or exterior, seem infinitely ambiguous and extensive; its forms, literal or metaphorical, are no longer confined to the recognizably human but embrace all biological existence from the embryonic to the monstrous; its power lies no longer in the model of unity but in the imitation of the fragmentary, the morselated, the broken."[250]

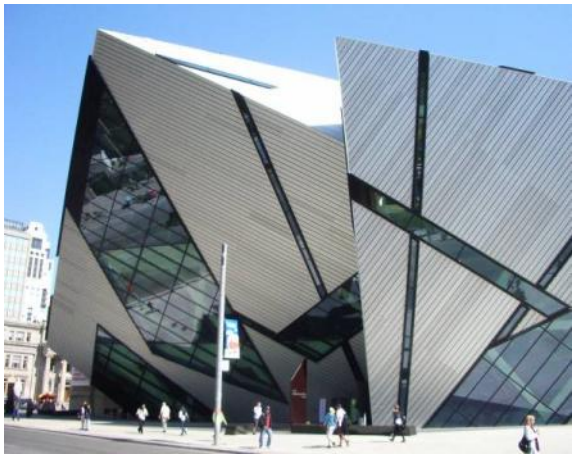
- Anthony Vidler

Vidler describes the progressive distancing of the human metaphor from architectural discourse, first expressed through the physical humanist embodiment of similar form, then through the emotional Romantic evocation of human drama, and finally through the intellectual Modernist appeal to human perfectability, in essence and ethics. He goes on to describe a fourth phase in the loss of the body: its unlikely return as referent inspiration in postmodern architecture, but no longer applied in its traditional way. In Vidler's description this final phase of the human metaphor marks the definitive loss of the body, whether by violence or by vagueness: extending the body metaphor more and more generally into alternative states of being, or taking it apart – as Modern art effects – but without any intention to recompose the fragments as a integrated whole (figures 6.25 & 26).

This new human image shares the same origins in classical theory as the Renaissance body, but with an altogether different sensibility – this is a contorted figure, a fragmented carcass rather than a corporeal unity. Breaking down the architectural body is a potent metaphor, physically dismembering classical traditions in building. Where it formerly served to embody the human form and represent human truths, the 'deliberately aggressive expressions of the postmodern corporeal'[251] distort these ancient certainties. The deconstructed architectural body is an assembly of irreconcilable fragments, like Mary Shelley's Frankenstein: "as described in architectural form, it seems to be a body in pieces, fragmented, if not deliberately torn apart and mutilated almost beyond recognition."



[6.25] BMW WELT, COOP HIMMELBLAU (MUNICH)



[6.26] MICHAEL LEE CHIN CRYSTAL at ROM, DANIEL LIEBESKIND (TORONTO)

Coop Himmelb(l)au claims that we *want* an architecture that bleeds, even breaks – an architecture alive or dead. It cannot be denied that such an incarnation is infinitely richer in human drama – without any illusion of romantic theatricality – than the disembodied banality of much modern building (figure 6.27). This raw provocation does re-assert the body in architecture, re-awakening our empathetic capacities (however fiercely) to the world around us. The psychological responses evoked by projecting the body onto this dismembered architecture have a primal power, with archetypal intensity – like much of Modern art and Modern film, this architecture is designed for shock value:

"[Tschumi] suggested that habitual routines of daily life could be more effectively challenged by a full spectrum of design tactics ranging from shock to subterfuge: by regulating events, a more subtle and sophisticated regime of defamiliarizations was produced than by aesthetic and symbolic systems of shock."[254]

This style of Deconstructivism presents an alternative reality, bearing relation to our own but less than comforting: a shattered skeletal frame, twisted swells of exposed organs, punctures and protrusions of a lacerated skin. The 'body' may be present within this nihilistic framework, but its archaic role - to assert human dignity within eternal realities, glorifying ourselves and our place in the world - is assuredly dead.[255] The form endures, but its symbolic wholeness and 'rightness' are no longer suitable metaphors for modern life: this is an architecture of non-being, disjointed and momentary.*

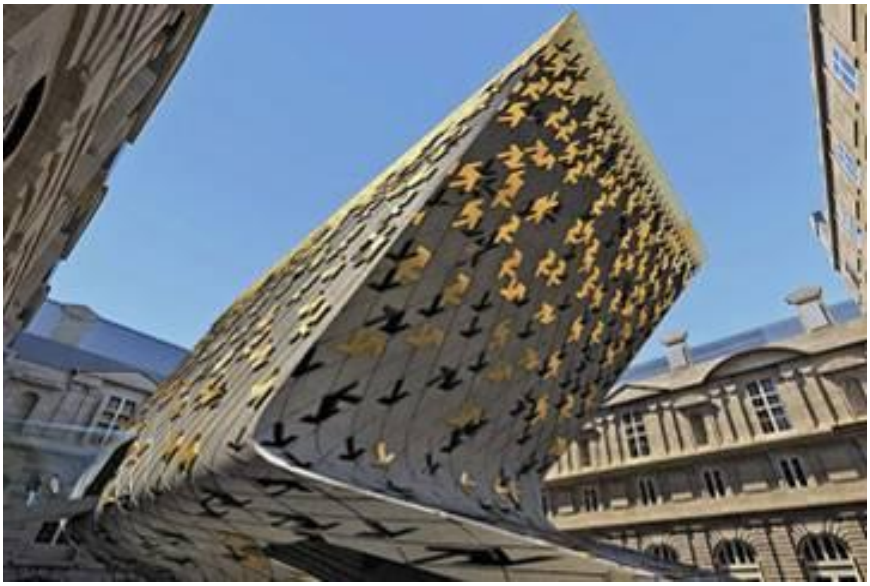


[6.27] GRONINGER MUSEUM, PHILIPPE STARK, ALESSANDRO MENDINI & COOP HIMMELBLAU (NDL)

"Confronting the architecture of Himmelblau or, less dramatically, of Tschumi, the owner of a conventional body is undeniably placed under threat as the reciprocal distortions and absences felt by the viewer, in response to the reflected projection of bodily empathy, operate almost viscerally on the body. We are contorted, racked, cut, wounded, dissected, intestinally revealed, impaled, immolated; we are suspended in a state of vertigo …" [252]

*** Both accord and discord have powerful impacts upon our instinctive impressions. Sympathetic surroundings are 'humane' and comfortable, making us feel at home, consoling us with feelings of innate familiarity. Discord is more distinct: like an alarm bell, dissonance alerts us and focuses our attention. Distortions of the human figure are pervasive from ancient mythology to modern stories, marking a character as an exception: variations signal otherness, not automatically sinister, but necessarily different. Like the tiny Lilliputians or giants of Brobdingnag in Gulliver's Travels, opposed to the deformed Yahoos, the representative scale of the body model is less important than its unity and harmony of expression.[253] Distortion defies predictability, creating incomprehension, discomfort and even terror – its resolution is always dramatic.**

[6.28] PROPOSED EXPANSION TO THE LOUVRE, ZAHA HADID (PARIS)



SUMMARY: THE DIFFICULT WHOLE

"The fundamental idea [of Vitruvius] is that our buildings reflect the human qualities of having a base, a middle, and a top, equivalent to the feet, torso, and head of a human figure. We stand erect, we address the world vertically, and perceive it visually that way. Our buildings express a like verticality and reflect it back at us, completing a feedback loop that reinforces our sense of humanity in the things we make. Everything in traditional architecture – that is, all architecture before the schism of twentieth-century modernism – proceeds from that idea. It also instructs the method for establishing our spiritual position in the world, our sense of place. The fixed dwelling with its feet (its base) on the ground becomes the particular place we call home." [256]

- James Howard Kunstler

The eternal truths of what we are and how we exist in the world are simple and few, but they are immutable: universal man is an upright figure, facing the horizon with his feet against the earth and head under the sky. We have axial orientation and a natural order – a built-in hierarchy that gives structure and significance to the space around us. These parameters are so elementary, so inherent, that the basics of our own structure and composition appear in built form in all the ages of man. Vitruvius describes the ancient logic of the vertical object, its base, middle and top representing *being* as we know it. Kunstler notes that this architectural embodiment has always been a connection between body and building, humanizing our external environment, but also between man and the world: anthropomorphic architecture expresses how we fit into a larger order, showing us where we belong. This is the nature of dwelling, fixed to the ground addressing the sky: this is *home,* as human beings have built since time immemorial.

Examples from the Batammaliba tribal house to Bernini's colonnade at St. Peter's uphold the dignity of the human form, the supreme logic of its composition and proportions, and the inherent value of its verticality and orientation. From the primal post to the anthropomorphic column, in all its human characteristics, the upright figure is present in the architecture of manifold cultures. It is always symbolic, representing our most intimately known and felt experiences: our own *lived* reality. This is an architecture of embodiment – presence and permanence, mass and balance, proportion and *unity* – firmly rooted in human experience. Traditional belief structures reinforced this image of man, within an integrated cosmos, from primitive origins through to recent centuries in Western architecture – but shifting concepts of self, space and cosmos have rendered those ancient certainties obsolete.

"The simplified idealization of the Renaissance does not correspond to modern-day everyday life, which can no longer be understood as that constant and harmonious order in which – as Leon Battista Alberti put it – 'nothing can be added or taken away' … "[257]

Ours is not a harmonious universe, complete and knowable: "we have lost all the beautiful certainty about the way the world works – we are not even sure if it is expanding or contracting, whether it was produced by a catastrophe or is continuously renewing itself."[258] The challenge of representing these realities – certainty of uncertainty, constancy of change – has created new forms of expression in art and architecture, enabled by new realms of technological possibilities. The architectural body shape-shifts, deformed or disguised, defying gravity, dissolving into immateriality, evading any deeper assertions or else fading into banality altogether – making anthropomorphic identification uncomfortable or sometimes impossible.

The new architecture is an art of disembodiment: freeing form from the constraints of mass, musculature and enclosure, liberating space to lateral flow, even absolving the object from any attached value or meaning. We are left with the Miesian "aesthetic of silence and absence that some have considered the only appropriate one for our alienated and technology-dominated time".[259] We have ceased to expect *identity* in our buildings, interrupting the reinforcement loop Kunstler describes (at left). Architecture is always an existential expression – if what we make is less comprehensible, then who we are what we desire and where we belong must be less certain also.

SYNOPSIS: BODY, BUILDING, WORLD

"Buildings and cities provide the horizon for the understanding and confronting of the human existential condition. Instead of creating mere objects of visual seduction, architecture relates, mediates and projects meanings. Significant architecture makes us experience ourselves as complete embodied and spiritual beings. In fact, this is the great function of all meaningful art."[260]

– Juhani Pallasmaa

This section has explored two types of spatial and conceptual metaphors: the stratified cosmos and the upright human body. Across the ages, human societies have modeled their belief structures – ordering their world and giving it meaning – according to these parallel models, along a single axis. Vertical hierarchy, axiality and centrality have seemingly universal value in very different cultures, derived from the natural logic of our own structure and the world as we know it. In giving a symbolic dimension to these archetypal conditions of his environment (with universal associations), man makes his surroundings significant and defines his relationships to the external world. Specific accounts of how these are articulated in myth, art and architecture could catalogue infinite variations, but the theme of the dominant vertical remains constant: dominating the human imagination since the Neolithic era, ingrained in our conscious and unconscious thought. Horizontal and vertical are absolute values of human experience, at all times and in all places. These elemental realities, understood through our own inborn structures, provide some common ground to unite contemporary man to the earliest cave dwellers and all the ages between.

The conceptual structure of a stratified cosmos is humanity's most pervasive idea of the universe. Verticality is a property of the sun, the pull of gravity and the connective axis of the cosmos; hierarchy is evident in the stratified underworld, middle earth and upperworld; centrality articulates proximity to the point of contact between these realms, intimately linked to the singular axiality of the vertical and quartered horizontal. Some metaphorical equivalent to the biblical heaven, earth, and hell is seemingly universal, emerging wherever human beings live beneath the celestial dome.[261] Situating the human realm between upperworld and underworld, joined by a connective axis, gives inherent meaning to every point in space. Within this absolute space, characteristic of the ancient world, natural topography had inherent meaning – places were perceived and conceived with specific characteristics and spiritual values, according to the *genius loci*. The shifting physical balance between earth and sky, typified in the examples of primal cave and world mountain, were instinctively associated (in dissociated human societies) to spiritual poles. Mountains and heights are sacred to the transcendent sky; cave-spaces and depths commune with the archaic forces of the earth and the eternal cycle of birth and death. These symbolic dichotomies of earth and sky are intuitive, rooted in our universal means to experience the world. This is our vocabulary of space: the basis for a tectonic language of architecture.

Exploring primitive and ancient concepts reminds us of these first principles, obscured by current complexities but eternally valid at some fundamental level. Hierarchy and centrality have lost their cosmic significance – we know that we are not at the center of the world, nor the center of the universe – but their associations still have latent meaning. The stratified cosmos or world mountain may no longer be significant to us, but mass and

volume, vertical and horizontal are spatial archetypes: their symbolic value is absolute, rooted in our common humanity. Early civilizations demonstrate their potential impact, for all ages – as the point of contact between mass and space architecture is always a cosmic metaphor, mediating between the macrocosm of the larger universe and the microcosm that is man. In relating the building to the world, these buildings inevitably articulate man's place within that world also: a participant in a larger order with meaning far beyond himself, in relationship to his total environment. By eternal human nature, our engagement in the world around us is always physical *and* visual, conscious and unconscious, tangible and conceptual.

As a cosmic or global metaphor, the building serves to define a relationship between earth and sky, shaping a human place. Ours is the middle place, between underworld and upperworld. Height-depth, ascent-descent, flight-weight, open-enclosed, light-dark, exposed-protected … our domain is between these liminal conditions, whether interior or exterior, as a space within mass, or a mass in space. Earth and sky have inherently symbolic associations, and we have different emotive responses to each, sheltered within or standing alone. In many primitive and ancient societies a cosmic metaphor gives them spiritual meaning, but religions are surface structures, fading with time. Their archetypal symbolism transcends any spiritual reference: mass and space, centrality and verticality are *a priori* conditions. Their religious or psychological connotations are secondary, attached to an already powerful symbol, rooted in universal human experience. The global metaphor resonates on a deeper level: our eternal, universal experience of space.

The body is another eternal, universal model: it likewise confers meaning on surrounding space, mapping the hierarchic compositions of the body onto the world. Verticality and centrality, frontality and axiality are natural characteristics of the human form, shaping how we experience the world – it is only natural that the same logic should give order and meaning to the corporeal entities we create. From the basic uprightness of the primal post to the sophisticated anthropomorphic orders of classical humanism, the body has served as a model for architectural elements and for buildings themselves. Imitating the hierarchic composition, proportional unity and material vitality of the body can embody human characteristics in built for, creating those grounds for identification. The progressive distancing of body and building has diminished the symbolic role of architecture, with no correspondence to human order – what we are, what we feel, what we know about the world – and no dominant metaphor to give value or meaning to space.

Rearranging or dismantling that model, as the evolution of the human metaphor demonstrates, breaks down that natural empathetic relation between body and building. The same conditions are true of the cosmic or global metaphor: it can reinforce the verticality of our world, asserting our realities, but it can also neutralize and deny symbolic connections creating counter-intuitive spaces, where we cannot feel at home. These existential metaphors have historically served as instruments of identification, but where they are ignored or inverted, the same faculties become agents of alienation. Distancing body from building, and building from world, spells our inevitable estrangement from an incomprehensible environment.

3. DISCUSSION: POWER STRUCTURES

CHAPTER VII

REVOLUTIONS: SPACE, PLACE AND DWELLING

"The most significant change in the representation of reality took place in the period traditionally associated with the formation and development of modern science and with the beginning of its dominant role in modern culture. … If we look at the politics, philosophy, literature, visual arts, and everyday life of that time, we find a common search for order and certainty in an environment dominated by fragmentation, relativism of values, skepticism, and pessimism."[1]

- Dalibor Vesely

In antiquity, "science, myth and building were inseparable."[2] Architecture held a vital symbolic role as conciliator between man and environment: concretizing a lived reality and the meaning of the world as it was understood. The building established a mesocosm, mediating between the microcosm that is man and the macrocosm of the larger universe. Drawing its imagery from the prevailing cosmic model, or from the human figure as an image of the divine, architecture could affirm man's position within a larger system. We have explored the distancing of body and building and final loss of body as referent model for architecture, alienating us from the forms we perceive. The breakdown of cosmic or divine order further challenges our potential for meaningful connections.

Cosmic models, global metaphors and all of their architectural expressions share a common foundation: a knowable, meaningful, deliberate world that we can recognize and relate to. Space has significance within that greater order, and architecture has symbolic value as an art of space. The shift away from natural, value-charged models of verticality toward a scientific, neutral horizontal landscape began in the middle ages, gradually losing dimension and dissolving into abstract space. "In Europe, some time between 1500 and 1700 A.D, the medieval conception of a vertical cosmos yielded slowly to a new and increasingly secular way of representing the world. The vertical dimension was being replaced by the horizontal; cosmos was giving way to a flat nonrotary segment of nature called landscape."[3] The flattening of the symbolic world continues into the present day, as does the confusion and disorientation that it engenders (both physically and psychologically).

The paradigm shifts and ideological fractures spanning these pivotal centuries are culturally and scientifically complex, but spatially, much simpler: concepts of the universe and the human place therein were systematically decentralized and destabilized, stripped of hierarchic order and neutralized of symbolic meaning – in the name of higher truth, and greater *freedom*. Science proved archaic spatial concepts wrong, negating the divine order of the cosmos, the priority of our planet or the natural dignity of man. In the breakdown of constraining ordering frameworks – like religious authority, social hierarchy and the hegemony of knowledge – any prescriptive historical discipline (including design education and convention) was cast off on principle. Natural instinct or bodily intuition was likewise denied: the qualitative was replaced by the quantitative, and therefore quantifiable, as if what we could prove was somehow more authentic than what we could feel. The words of Descartes summarize this trend, rejecting accepted truths – natural as well as constructed – in favor of individual discovery and intellectual freedom: "we should seek whatever we can intuit clearly and evidently … not what others have thought about them or what we ourselves might guess; for scientific knowledge cannot be acquired any other way."[4] Through skepticism and reason, Enlightened man aims to apprehend the logic of the universe that older cultures had built up experientially, reinforcing their perceptions through mythical belief structures.[5]

Transitions

"The shift from belief in an earth-centred, self-contained, closed universe to a boundless one, and the consequent opening of the human mind to new metaphysical possibilities, had a profound effect on philosophy, This unharnessing of the intellect from ancient constructs found parallel physical expression in the treatment of space …"[6] - Elizabeth Barlow-Rogers

Integrating human experience and the larger world within a totalizing system, microcosmism dominated Western thinking until the end of the seventeenth century and in architectural thinking until the late eighteenth century, manifesting the relationship between body and world through symbolization. Breaking down this relationship was not, Vesely notes, a purely intellectual transformation: what really changed was the *world* (in our altered view of reality, via perspectival representations and the printed book).[8] The scientific advancements of the Enlightenment brought doubts rather than certainties: where do man and his planet belong in the value-neutral scientific order? More critically, if our spatial position bears no priority within that larger system, how do we relate to nature and the divine? Conventional hierarchies based on some special distinction of man, or his natural or constructed worlds, cannot hold.* The centralized, axial cosmos, as well as the unity of the human form as a cosmic model, were suddenly open to re-interpretation.[9]

The Copernican revolution proposed a heliocentric universe, displacing the concept of man or earth as centre, while Galileo's observations and Kepler's elliptical orbits reported that there was in fact no bounded universe, nor circular perfection in the stars. Spatial hierarchy or priority was displaced, re-organizing the cosmos according to the democratic neutrality of Descartes' *res extensa*. Newton's clockwork universe, undifferentiated in space or time, established that "space in its own nature, without regard to anything external, remains always similar and immovable…"[10] This 'gravitational revolution' put an end to notions of any absolute positions in space, just as Einstein's relativity revolution eliminated the theory of absolute time or any predictable physical order. These unsettling conceptual shifts from earth-centred, self-contained, closed and knowable systems into a boundless universe – neutral, calculable, and yet infinitely unknowable – necessarily opened the mind to new questions, and introduced new concepts in architecture.

[7.1] NEWTON'S CENOTAPH, ETIENNE BOULLEE



**** "Spatial concatenation was challenged by the rationalist philosophers and the utopian and revolutionary architects of the late-seventeenth and eighteenth centuries. These philosophers, especially Descartes and Kant, and architects, especially Ledoux, Boullée, Lequeu, and Durand (the revolutionary architects) substituted autonomy for sequencing. Rejecting the hierarchy implied in Baroque design, they created buildings that were linked to nothing else. They proposed … cities of individual houses with no links between them or to their sites. They also rejected ornament and symbol in an effort to rediscover basic principles of form and function."***[7]

Aristotelian logic supposes a contained and ordered universe, finite and quantifiable in terms of geometry and reason:[11] this certainty no longer holds in an Einsteinian universe (as Barlow-Rogers notes at right). The ancient, Aristotelian view of art and architecture as imitations of this divine harmony, like the human figure, seems likewise obsolete.[12] The comprehensible human body, architectural body or cosmic body ceased to offer relevant models for modern experience, as metaphors of unity and certainty in a rapidly changing world.

"This meant in effect the abandonment of the Aristotelian notion of topos, the idea that place is coterminous with contained and defined space. Cartesian space, by contrast, is boundless and, with regard to the concept of place, value-neutral, since space could now be conceived as a universal grid of mathematical coordinates."[16]

As Heidegger reminds us, our existence is primarily spatial[13] – the establishment of value-neutral space challenges traditional place, identity, meaning and hierarchy. Displacing anthropocentric space with cosmocentric vision requires a shift in intellectual focus to an external viewpoint that is not our own, separating the way we think about the world from the way we actually experience it. The existential result is alienating abstraction, as in the disembodied Cartesian *cogito* (see Vesely, quoted at right): divorcing mind and body, thought and feeling, vision and sensation.[14]

"It is one thing to describe a possible or imaginary world, it is quite another to build such a world starting from Descartes' position. It is not difficult to see that Cartesian reasoning originated in the development of perspective, where representation became so closely identified with the essence of vision that it was only too easy to substitute one for the other."[17]

The *res extensa* is a two-dimensional world, in every sense: it is infinite, unlimited by the dimensions of space or time. It is impartial, cancelling out any specificity or hierarchy of place. The equality of the grid negates the range of specialness which colors 'absolute' space, as experienced by archaic and ancient cultures. The qualitative world is overwritten by the quantitative – the irony is that, in making every precise point numerically distinct, this cognitive shift erased specificity of place and made all points equal. Value-neutral space extends infinitely in all directions, effectively cancelling the richly stratified and centralized values of absolute space. The notion of an axis mundi or sacred centre is incompatible with the democratic homogeneity of abstract space: there can be no intersection point, for the extension of the grid denies variations. The vertical remains a physical property, but value-neutral space conceptually eliminates the third dimension (see Lefebvre, quoted at right).[15]

"The fact is that around 1910 a certain space was shattered. It was the space of common sense, of knowledge, of social practice, of political power, a space thitherto enshrined in everyday discourse, just as in abstract thought, as the environment of and channel for communications; the space, too, of classical perspective and geometry, developed from the Renaissance onwards on the basis of the Greek tradition (Euclid, logic) and bodied forth in Western art and philosophy, as in the form of the city and town… Euclidian and perspectivist space have disappeared as systems of reference, along with other former 'commonplaces' such as the town, history, paternity, the tonal system in music, traditional morality, and so forth. This was truly a crucial moment."[18]



[7.2] PRIMITIVE HUT from LAUGIER, *ESSAI SUR L'ARCHITECTURE*

"One by one, from the end of the eighteenth century to the present, the cave, the hut, the tent, the temple, either in their supposed historical beginnings or in their hypothetical typical forms, have been relegated to the status of historicist fictions, useful for their time but without resonance in the present."[19]

"Modern psychological development leads to a much better understanding of what man really consists of. The gods at first lived in superhuman power and beauty, on the top of snowclad mountains or in the darkness of caves ... Later they drew into one god, and then that god became man."[20]

Power and Belief

"The loss of a center, a focal point, gravity, and a sense of place in our environment cannot help but mean the loss of corresponding qualities in our minds. Man's external catastrophe stems only from internal catastrophe."[21]

- Juhani Pallasmaa

Pallasmaa describes an existential rupture, and as Harries asserts, we cannot exist in chaos:[22] a new order – even an order of disorder – had to be declared, addressing the dynamism and freedom of our modern reality. Rationalism and Empiricism gave authority over to individual logic or personal experience, deeming ancient human traditions like the language of architecture unable to speak to our time. The archetypal forms of human constructions have been relegated to the status of myths, valid within their own context, but with no enduring relevance in ours (see Vidler, quoted at left).

Abandoning historical precedents, modern life is purged of its deeper layers of meaning as if only what is seen could be there. The infinitely subtle layers of the symbolic world are flattened into images, purging all previous meaning, clearing our 'eyes that do not see' in Corbusier's words.[23] Gideon names this the devaluation of symbols; Norberg-Schulz paraphrases this concept as the devaluation of forms, with no true presence.[24] Not until the nineteenth century, he says, did architecture turn entirely away from cultural symbolization – that comprehension was lost. Perhaps the discovery that things are not as they seem, in our universe or environment or even within our own unconscious minds, has rendered *any* absolute value unacceptable to our imaginations, on principle alone. Perhaps, in the individualist Western world at least, we cannot feel ourselves to be a part of any greater order – nor are we convinced that such a unity can exist (see von Franz, left), and so we act individually.

Older societies shared great power in belief, the impetus that created architectural icons from time immemorial; in our time, those convictions have been replaced by some internal *human*

power, for lack of any comprehensible order and meaning in our external worlds. Traditional hierarchies are absent, just as the divine is absent. The architecture of individual democracy neutralizes hierarchy, flattening layers of meaning into images. Operating in abstract space, symbolic form is similarly value-neutral. Alienation is a natural consequence of our incomprehensible environment, estranging man from the world he inhabits both physically and 'spiritually'. Placelessness has become a condition of modernity – a problem that architecture today is still struggling to resolve:

"In his 'free' arrogance [man] has departed from place and 'conquered' the world. But he is left with emptiness and no real freedom. He has forgotten what it means to 'dwell'..."[25]

Certainties and truths are hard to identify or express today, in our buildings as in our world and ourselves. Connections between our internal and external worlds fail: if we cannot believe in time or space, order or stability, there is nothing significant to connect to beyond our personal spheres. Breaking down these age-old connections is the paradoxical legacy of modern science, as Koyré explains below: replacing the qualitative, mystical world of life with a scientific universe grants us greater knowledge, but at the cost of deeper understanding.

"There is something for which Newton – or better to say not Newton alone, but modern science in general – can still be made responsible: it is the splitting of our world in two. ... It did this by substituting for our world of quality and sense perception, the world in which we live and love and die, another world – the world of quantity, of reified geometry, a world in which though there is a place for everything, there is no place for man. This, the world of science – the real world – became estranged and utterly divorced from the world of life which science has been unable to explain – not even to explain away by calling it subjective. ... Two worlds, this means two truths. Or no truth at all. This is a tragedy of modern life which solved the riddle of the universe but only to replace it by another riddle, the riddle of itself."[26]

Becoming Modern

"Our loss of faith in magic, inevitable progress, eternal existence, the vast perspectives of time and space opened by science, and our inability to understand history as a coherent process, all put heavy stress on our image of time, expose the individual to alienation, and tend to enclose him in a purposeless present. When we look forward or back, we no longer feel at home."[27]

- Kevin Lynch

The discourse thus far has revisited the ages of architectural history – and therein, cultural history – that belong largely to pre-modern man. In Parts 1 and 2, architecture has been explored as a type of mythology or even cosmology, shaping form and space to tell a story about how man relates to his world. From that most intimate and intuitive of languages, new stories have continuously emerged with common elements: Franz Boas says "it would seem that mythological worlds have been built up only to be shattered again, and that new worlds were built from the fragments."[28] As human relationships to the world have shifted, the role of architecture – as an interpretation of the human spirit – shifts also, defining different conditions of relationship between our inner and outer worlds. Modernity has broken free of those archaic connections: here enters modern man. Part 3 finds us within this brave new world, which we are still learning to inhabit, interpret and express.

"While many theorists say that the modern period is over, I disagree. Given the enormous and hugely difficult labor involved in becoming conscious, it's more likely that modernism is still in its earliest phases."[29]

I agree with Levitt (quoted above) that we are still in the process of becoming modern, rebuilding our foundations and re-establishing our relationships and connections. We have not yet found the means to reconcile building, as mediator between man and the world, with scientific reality and the existential beliefs – psychological and mythological – that enable meaningful connections.

As James Hillman explains, "mythology is a psychology of antiquity. Psychology is a mythology of modernity."[30] If we consider architecture a concretized mythology, as a human story written in universal form and space, then we could explore Hillman's statement in modified terms: *architecture* as a psychology of antiquity, and psychology as an architecture of modernity. The promises and failures of architectural movements over the last century represent the challenges of contemporary expression, within a state of flux and fundamental uncertainty. If we consider how the language of architecture has been used to compose (and decompose) modern works, it is evident in those revisions, inversions, and distortions of traditional architectural language that we are still struggling for 'words' to describe the modern condition. We are still adrift, searching for an architectural language to tell the story of modern humanity in relation to our environment, creating a place where we can feel at home in a chaotic world – permitting us to dwell. Modern man has to face existential challenges in both inner and outer worlds, as the certainties of the Old World collapse beneath his feet:

"The consolidation and the gradual expansion of the Newtonian model introduced new criteria of intelligibility, truth, and relevance that have transformed and silenced whole areas of creativity and culture as outdated or irrelevant. The most significant consequence of this change has been the disintegration of the communicative structure and unity of the common world."[31]

This breakdown of unity poses vital challenges to architecture, in its timeless role as conciliator between man and his universe. Our built environments express this existential confusion and divergence of opinion, without belief structures to aspire towards or any established models to work within.*

Vesely explores the preoccupation with *transparency* as the new manifestation of truth in our time, particularly evident in architecture: "it becomes an aspect of a value-free style and eventually an emancipated symbolic representation of modernity."[32] Contemporary steel-and-glass spectres are born of the technical redundancy of load-bearing walls (and growing indifference to architectural physiognomy) but this trend is more psychological than structural or aesthetic. The most celebrated architecture today – like Gehry's or Liebeskind's projects in North American cities, or the fantastically ethereal mirage-city of Dubai – all expresses a tendency toward the transparency of pure *concepts*. Our elaborately complex or seemingly weightless structures present more than a will to originality. At its roots this is a will to power, unifying the divergent architectural expressions of recent centuries under a common aim: the desire to eliminate all that cannot be calculated and controlled. Emancipating design from the mystical symbolic world is part of our general fascination with the technological world, and the illusion of autonomy it provides.[33]

Disillusioned with history and divorced from tradition, we have abandoned the implicit but unquantifiable qualities of ancient belief structures and set out to build our own truths (or simulations thereof). The tendency toward idealization and disembodiment in modern thinking is inevitably reproduced in building – transparency is perhaps the only modern metaphor. This psychology of architecture recognizes a rupture in contemporary building, inherent to the atomic fission of other wholes such as mind/body, thought/feeling: as physical bodies we live in the real world, but the aspirations of our culture are fundamentally aspatial. Our reality does demand a new architecture, because we cannot inhabit this conceptual divide.

*** The previous pages of this chapter provide only a cursory overview of the complex 'optical revolution' and other paradigm shifts between harmonious ancient certainties and the fractal, uncertain modern condition. The focus here is archetypal spatial concepts and how they apply to contemporary considerations; Dalibor Vesely's *Architecture in the Age of Divided Representation* provides an in-depth exploration of the transitions between them.**

The utopian Modernist movement promised to rescue society: rebuilding from zero to emancipate mankind (an Enlightenment project), and constructing a transparent society (German Idealism).[34] 19th century fears of darkness and secrets were swept away by the Heroic Modernists, emphasizing light and transparency to abolish myth, erase suspicion and irrational emotion.[35] Modernism attempted to reconcile man with his world via simplicity, paring down to essences in hopes of restoring truths and certainties … until all that remained was emptiness (Postmodernism would attempt the opposite, restoring depth via complexity, until all that remained was ambiguity – swept away by Deconstructivism, finally declaring the futility of language and impossibility of order). This poverty of semantic content is a primary critique of Modernism. The critical flaw of the Modernist idiom is the fully modern problem Vesely describes (facing and below): faith that the scientific method could make truth, meaning and identity visible through rigorous rational clarity.

"The belief in the autonomy of the new representation of reality – based on the assumption that its identity and meaning can be established, as long as one follows the rules of formal logic, respects the principle of noncontradiction, and uses sufficient reason as the main criterion of truth – has many problematic consequences. The first is the separation of ideas and concepts from the body of language, followed by a separation of language itself from the practical world."[36]

The utter confusion of symbols and purposes left Modernism to rediscover the ordinary, seeking honesty in simplified forms and streamlined functions[37] – to "reconquer the most primitive (in the sense of original) things as if nothing had happened till then."[38] Attempting to remove architecture from the context of tradition, the Modernists advocated a new architecture for the machine age: praising the logic of the engineer and the beauty of mechanized production.

CASE STUDY: THE PROBLEM OF THE HOUSE

"The problem of the house is the problem of the epoch. The equilibrium of society to-day depends upon it. Architecture has for its first duty, in this period of renewal, that of bringing about a revision of values, a revision of the constituent elements of the house."[39]

– Le Corbusier

The emphasis on the house is a particular feature of Modern architecture, a primary target for the Modernist program of renewal: changing how we live in order to correct our values. Conventional forms – however intuitive – were exorcised in a typological house-cleaning, with curative intentions.[40] The modernist building cast off the mantles of tradition and stepped forth from the shadows, exposed, like a being reborn: its valiant intention was no less than the improvement of human nature, starting from a blank slate to reinvent what we build and who we are.

Le Corbusier's 'Five Points on Architecture' itemize the breakdown of traditional building, enabled by new technology and materials: structural *pilotis* render load-bearing walls obsolete, freeing the plan and the façade from the vertical constraints of gravity, opening to horizontal space. The façade becomes a permeable membrane, breaking down the formerly solid interface between interior and exterior. The building is released from the ground (which is given over to the automobile) and the garden is raised to the roof. Architectural conventions symbolizing the human figure and its natural contextual frame – forging connections to earth and sky – are replaced with an abstract language for the machine age: deliberately asymbolic, disconnected from the ground and ignoring the sky. The machine for living in is a logical, purposeful formulation – and a thorough reinvention of our most intimate forms and spaces.



[7.3] VILLA SAVOYE, LE CORBUSIER (POISSY, FRANCE)

"On the level of the house, too, – its roof removed and replaced by a garden, its cellars filled in and its first floor open to the park, its horizontal windows and terraces encouraging the ceaseless flow of light and air – modernism proposed to consign the cluttered interiors and insalubrious living conditions of centuries to oblivion. By these means it was thought that disease, individual and social, might be eradicated once and for all and the inhabitants of the twentieth century rendered fit for the marathon of modern life."[41]

"The fact that the modernist idiom has not generally been able to penetrate the surface of popular taste and values seems to be due to its one-sided intellectual and visual emphasis; modernist design at large has housed the intellect and the eye, but it has left the body and the other senses, as well as our memories, imagination and dreams, homeless."[42]

The Machine for Living

In its clean lines and prismatic form the Villa Savoye captures the earnest – and sadly fleeting – hope so characteristic of the Purist Style (figure 7.3). It tiptoes above the site on slender *pilotis*, the receding mass of its ground floor painted green to be 'invisible' from three sides. In spatial terms, its altitude expresses that uplifting hopefulness … but this expression of verticality is short-lived. It has, in the symbolic dimension, nowhere to aspire to: it rises to a higher plane and hovers there, extending into lateral space. The Villa's elongated rectangular form, banded by strip windows and capped with a flat roofline, reinforces its horizontality – but not in connection to the ground (see Vidler, quoted at left). The new architecture establishes a new human realm, somewhere between the archetypal conditions of earth and sky, but without any real attachment to either – like an existential assertion of modern man, freestanding, making his own realities and his own place in the world. Western domestic conventions are therefore turned upside-down and inside-out, reorienting the house and its former connections.

Any vestigial earth-orientation is annulled, divorcing the house from the ground plane, and sky-orientation – typically expressed in the rise of the roof – is likewise cancelled. The habitable roof garden is a sky platform, giving the longstanding precinct of the gods over to ordinary man. The stilt-like *pilotis* permit no allusion to the primitive, nurturing bond between man and nature: the damp and dirty surface of the earth is no place for human inhabitation. Instead, the emphasis is on salubrious light and air, flowing freely around and through the house as a hygienic space for body and mind. Le Corbusier's Villa Savoye presents a fundamentally different view of what the house should be: a machine for living, shaped by the logic of its function rather than symbolic representation. In Summerson's synopsis:

"Now, one way of putting Le Corbusier's architectural achievement in a nutshell would be to say that he completely reversed modern architecture as he found it – he turned it upside-down."[43]

The traditional house is hierarchic, firmly grounded and vertically oriented, with a contained interior punctuated by framed openings like eyes onto the world. Frontality is another anthropomorphic correspondence; the analogy between façade and face is self-evident. The Modern house challenges these familiar conditions, extending the boundaries of architecture beyond historical types to propose, physically and psychologically, a new way of living. The rigorous discipline of purged ornament and simplified structure extended from the house to its interior fittings and finally its inhabitants, denying lower comforts to maintain a minimalist aesthetic. The charge of 'uninhabitability' is a post-modern critique often raised against Modernist housing, in its deliberate refusal to accommodate the more primitive needs of house and home – indeed, it was the modernist mission was to unfetter humanity from these very traditions, permitting a purer way of life. The Surrealists rejected this sterile rationalism as a negation of dwelling: in the words of Tristan Tzara, "modern architecture, as hygienic and stripped of ornaments as it wants to appear, has no chance of living."[44]

The reinvention of the conventional house was the supreme revolution of Modern architecture, abolishing the archetypal primitive-hut or temple-form typology so ingrained in the human imagination. Human space is clearly defined as horizontal space: this is an a-spiritual architecture, intent on the moral elevation of humanity but contained within the human realm. Pallasmaa (quoted facing, below) notes the problems inherent to this intellectual emphasis: housing the mind and pleasing the eye, but leaving the sensory body and unconscious imagination homeless. The 'hard clarity of modern life'[45] demands no less than rational self-sufficiency, overcoming our primitive roots, elevating and empowering the human spirit. Like a straight horizon line between earth and sky, in all their symbolic associations and complexities, Modern architecture does not implicate other worlds.

The Villa Savoye seems to float on air, denying the ancient realities of the earth to emphasize light and purity. Rational, clean and crystalline, it rises to overcome our basic humanity, instinctive and unreasonable, animal and earthly. The house extends laterally in space, wrapped in a continuous windshield of strip windows. Still, its contained interior maintains a delicate balance between spatial freedom and domestic order.[46] Spatial liberty requires the discipline of geometry to keep it from chaos; Corb applied his Modulor and *traces regulateurs* to ensure this necessary order.[47] Corbusier was a revolutionary, but remained sensitive to the archetypal associations and 'spiritual' value of a corporeal architecture – born between archaic language and modern aesthetics, his works are exceptional but sadly not the rule.

Right:
[7.4] FARNSWORTH HOUSE, MIES VAN DER ROHE (PLANO, ILLINOIS)

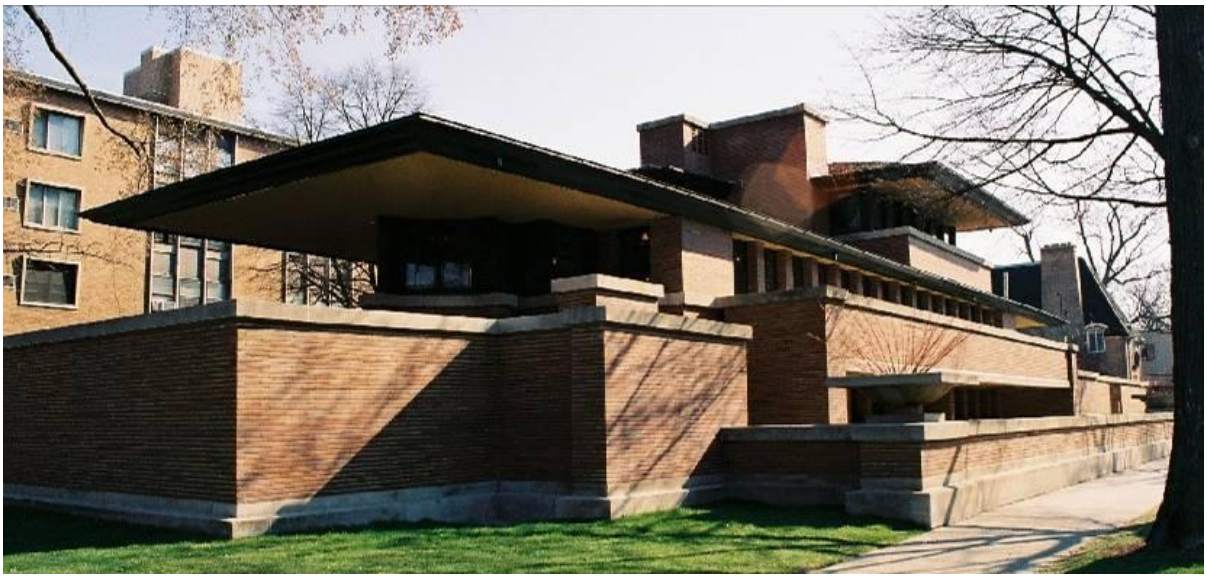
Facing:
[7.5] ROBIE HOUSE, FRANK LLOYD WRIGHT (CHICAGO)



*** Despite the rhetoric of free plan and free façade, Corb would not abolish the wall entirely (although his Maison Dom-Ino typology permits exactly that). He says:**
"A wall is beautiful, not only because of its plastic form, but because of the impressions it may evoke. It speaks of comfort, is speaks of refinement, it speaks of power and brutality; it is forbidding or hospitable; – it is mysterious. A wall calls forth emotions."[48]

The solid wall is definitively absent in the work of Mies van der Rohe, master artist of steel and glass.* His iconic Farnsworth House eliminates even more vestiges of the earth-bound home (figure 7.4). Likewise elevated, this house is distilled to frame and transparent skin with no body at all – only a compulsory privacy core provides any weight or solidity. Mies reduced the Corbusian *pilotis* to minimal steel sections, his enormous attention to detail rendering their connections almost invisible. Two superimposed rectangular planes float between these eight refined supports, gathering around the horizontal frame with no apparent effort. Painted pure white, the frame is an exquisite skeleton.

Floor-to-ceiling glass creates an invisible envelope around the house, interior space dissolving into exterior. This is the epitome of the free façade: self-effacement, eliminating the face entirely. Mies effectively liberates the house from being a house at all, denying enclosure to inhabit the limitless expanse of horizontal space. This is not a house to inhabit (as its client later objected), nor even a machine for living in: it is an image of freedom, which cannot be contained. The expanding interior of the Farnsworth House is a pure expression of the dynamic, placeless independence and soaring autonomy of the Modernist spirit. This, along with the ubiquitous Miesian office tower, marks the apotheosis of the Modernist notion that transparency would eliminate myth, suspicion, and the irrational.[49] This is the stoic and virtuous ideology of the International Style: expressing the hard clarity of human existence, autonomous and free.[50]



Earth House, Sky House

Modernism is characterized by the International Style, but not all Modern architects took the same approach. Frank Lloyd Wright (a self-described 'child of space and earth'[51]) countered International Style dogma, advocating the destruction of the box rather than the rejection of history.[52] His work transposes archetypal traditions into modern materials and technology, no less inventive, but maintaining an orientation to earth and attachment to place that the International Style aims to transcend. His residential works, particularly the Shingle Style houses, assert their belonging to the ground: low roof profiles and lateral forms emphasize the horizontal (figure 7.5).

Wright uses monumental mass to anchor the extension of continuous space: Scully describes this as a synthesis of the American impulses for movement, in horizontal flow, and security, in fixed verticals like the chimney of the Robie house (recalling Melville's chimney as backbone of the house, the 'one permanence' of the dwelling).[53] This massive vertical fixes an impermeable sacred centre point, like an ancient pyramid. Even without such a strong vertical element, sheer horizontal heaviness invokes vertical force: gravity grounds these houses with a stabilizing permanence. Low and richly dark interior spaces carry an earthly orientation through the house, honoring domestic tradition in the archetypal comforts of home.[54] Organized around a hearth (sometimes sunken into the ground) the house partakes in the primal symbolism of the earth and its forces – the archetypal comforts of *home*.**

**** In *The Psychology of Children's Art* Rhoda Kellogg states that children all over the world draw houses that look alike (figure 7.6). She writes, "Each makes a square to form the walls, a smaller square to show a window, and elongated square for the chimney, a curly scribble to indicate smoke. Indeed, the houses are so much alike that the national origin of the young artists might well be the same." Elliot W. Eiser likewise considers the first five years of life - when nationality in children's drawings cannot be distinguished - to be the "universal years," in which specific culture has little or no influence.[55]**



[7.6] HOUSE BY A CHILD



[7.7] 'HIGH NOON', EDWARD HOPPER
House by a painter
"(The painter) makes them (houses), that is, he creates an imaginary house on the canvas and not the sign of a house."[56] **– Jean-Paul Sartre**

"Finally, the house Bosco describes stretches from earth to sky. It possesses the verticality of a tower rising from the most earthly, watery depths, to the abode of a soul who believes in heaven. Such a house, constructed by a writer, illustrates the verticality of a human being. It is also oneirically complete ... "[57]

"Verticality is ensured by the polarity of cellar and attic, the marks of which are so deep that, in a way, they open up two very different perspectives for a phenomenology of the imagination. Indeed, it is possible, almost without commentary, to oppose the rationality of the roof to the irrationality of the cellar. A roof tells its raison d'être right away: it gives mankind shelter from the rain and sun he fears. Geographers are constantly reminding us that, in every country, the slope of the roofs is one of the surest indications of the climate. We "understand" the slant of a roof. Even a dreamer dreams rationally; for him, a pointed roof averts rain clouds. Up near the roof all our thoughts are clear. ... As for the cellar, we shall no doubt find uses for it. It will be rationalized and its conveniences enumerated. But it is first and foremost the dark entity of the house, the one that partakes of subterranean forces. When we dream there, we are in harmony with the irrationality of depths."[58]

The Archetypal House

"We transform space into containers of our desires and fears. Whatever the specifics of our own experience, from the country dwelling, to densely stacked urban apartments, or to suburban sprawl, each of us carries an archetypal image of the house."[59]

– Gaston Bachelard

The emotional means of the conventional house have a basis in architectural form: the ubiquitous dwelling fixed to the ground and pointed to the sky, engrained in the human imagination (figure 7.7). The archetypal house as microcosm is a recurring pre-modern theme, relating to the structure of the body and of the universe. The rise of the roof and depth of the cellar, with levels of inhabitation between, operate according to the three-part hierarchy of upperworld-middle earth–underworld or base-shaft-cap, bound to the earth and addressing the sky as we do. Bachelard draws an example from Bosco's *L'Antiquaire* (quoted at left) to illustrate the multiple metaphors embodied in this archetypal house, at once body and cosmos.[60]

Analyzing the phenomenology of the house, Bachelard states that the built work is both an analogy and an actual extension of human memory. The oneirically complete house creates a personal axis and centre, concretizing the structure of our inner and outer worlds – an 'instrument with which to confront the cosmos'.[61] It accommodates the whole human being, past and present, conscious and unconscious: a cellar, to hide dark things better forgotten; one storey or more, as a middle place for everyday living; an attic, to store pleasant memories and dreams. Bachelard describes the importance of this microcosmic relationship between earth below, sky above and axis of movement between them, re-created in the excavated cellar, pitched roof and connective stair – a primary image of dwelling. Moving upward and downward, *being* above or below, are opposing but vital phenomenological conditions of thought as well as of space.

"It is evident that the characteristics of the Oneiric house are culturally conditional but, on the other hand, the image seems to reflect universal constants of the human mind. Modern architecture has forcefully attempted to avoid or eliminate this oneiric image. ... Modern Man's rejection of history has been accompanied by the rejection of psychic memory attached to primal images. The obsession with newness, the non-traditional and the unforeseen has wiped away the image of the house from our soul. We build dwellings that, perhaps, satisfy most of our physical needs, but which do not house our mind."[63]

The therapeutic Modernist program to abolish the oneiric house is psychoanalytically potent, as Pallasmaa describes above: a symbolic eviction of sentimental reminiscence and buried secrets. It aimed to represent the revitalized states of a healthy body and mind, renewed and hopeful – but for all its poetic purity, this architecture of amnesia creates an overwhelming feeling of emptiness. The modern house or housing block, free of dark corners, cannot be haunted by tradition.[64] Contemporary housing eliminates cellar and attic, denying archaic associations to natural earthly roots and divine skyward orientation (figure 7.8). Leaving no place for dreams or unconscious memory, this housing typology can only live day-to-day – it provides necessary shelter but remains abstract, with no intuitive grounds for identification or connection. Vidler describes this existential disruption in collective memory:

"Yet, inevitably, this house-cleaning operation produced its own ghosts, the nostalgic shadows of all the 'houses' now condemned to history or to the demolition site. Once reduced to its bony skeleton, transformed out of recognition into the cellular fabric of the unité and the siedlung, the house itself was an object of memory, now not of a particular individual for a once-inhabited dwelling, but of a collective population for a never-experienced space: the house had become an instrument, that is, of generalized nostalgia.[65]



[7.8] HOUSE VI, PETER EISENMAN (CONNECTICUT)
House by an architect



[7.9] CONTEMPORARY APARTMENT BLOCK
'House' by a developer

In contrast to the passages cited facing, Bachelard also provides a description of oneirically incomplete houses in urbanized Paris (figure 7.9):
"In Paris there are no houses, and the inhabitants of the big city live in superimposed boxes. 'One's Paris room, inside its four walls,' wrote Paul Claudel, 'is a sort of geometrical site, a conventional hole' ... our abode has neither space around it nor verticality inside it. The houses are fastened to the ground with asphalt, in order not to sink into the earth. ... They have no roots and, what is quite unthinkable for a dreamer of houses, sky-scrapers have no cellars. From the street to the roof, the rooms pile up on top of the other, while the tent of a horizonless sky encloses the entire city."[62]



[7.10] HOUSES IN LEVITTOWN

Post-war realities demanded a new urbanism, supplying housing to the masses cheaply and quickly: developers such as William J. Levitt (credited as the creator of the American suburb) were quick to comply. The mass-production house was born, making the American dream - one's own home on one's own land – a reality. Traditional architecture promised traditional happiness (*Mr. Blandings Builds His Dream House* cemented this association[66]), escaping from the ills of the city into the idyllic countryside. However, as Kunstler describes, the reality of the suburban house was "less a dream than a cruel parody. The place where the dream house stood – a subdivision of many other identical dream houses – was neither the country or the city. It was no place. ... except for some totemic trees and shrubs, nature had been obliterated by the relentless blocks full of houses."[67]

"In the mass movement into suburban areas a new kind of community was produced, which caricatured both the historic city and the archetypal suburban refuge: a multitude of uniform, unidentifiable houses, lined up inflexibly, at uniform distances, on uniform roads, in a treeless communal waste, inhabited by people of the same class ... conforming in every outward and inward respect to a common mold, manufactured in the central metropolis."[68]

The Mass-Production House

"We must create the mass-production spirit. The spirit of constructing mass-production houses. The spirit of living in mass-production houses. The spirit of conceiving mass-production houses. If we eliminate from our hearts and minds all dead concepts in regard to the house, ... we shall arrive at the 'House-machine,' the mass-produced house, healthy (and morally so too) and beautiful in the same way that the working tools and instruments which accompany our existence are beautiful."[69]

- Le Corbusier

While the International Style house effects an inversion of traditional domestic form, the suburban house presents its illusion. Its external shape and internal structure comply with the conventional typology discussed on previous pages: a hierarchic cellar, living space and attic, planted on the ground and pointed upward (figure 7.10). However, the suburban house cannot be considered in isolation; it is only a cell within a much larger organism, spreading like an oil slick across empty fields. It too exists in abstract space: the quintessential Modern house denies connection to its surroundings, while the suburb simply obliterates landscape altogether (figure 7.11). Marching in formation across bulldozed plains, armies of identical suburban houses effectuate the same triumph of horizontal over the vertical – a lateral expansion into blank, featureless space, with no connection to the natural earth or spiritual sky. The International Style house presents a skeleton, while the suburban house is a shell: both empty of the archetypal symbolic content that connects body, building and world.

The devastating monotony of the suburbs Mumford describes at left - so contrary to the vision of individual freedom that prompted their creation - is partially a condition of their own lack of history; they often mature into more identifiable habitats. Still, the nature of the modern suburb denies essential spatial concepts of centre and focal point – an



[7.11] AERIAL VIEW OF LEVITTOWN

The suburb was conceived as a modern utopia, offering salvation from the moral and hygienic ills of the city. Levittown, PA is an iconic example of the standardized and regulated 'ideal' suburb: 17,000 efficient and economical, nearly identical boxes, planted in neat rows across razed potato fields. This sprawling banality stretches over 25 square kilometers, all nearly identical single-family units (with only 6 models to choose from).

"Modernism did its immense damage in these ways: by divorcing the practice of building from the history and traditional meanings of building; by promoting a species of urbanism that destroyed age-old social arrangements and, with them, urban life as a general proposition; and by creating a physical setting for man that failed to respect the limits of scale, growth, and the consumption of natural resources, or to respect the lives of other living things."[70]

Kunstler (quoted below right) maligns modernism for the creation of unlivable human habitats: the hard plazas and bland 'green spaces' devoid of character are uninhabitable, the streets are unwalkable, the buildings are unapproachable … and as this new urban form spread throughout the city, the suburbs spread around it.[71] He calls these places without authentic urban character 'places not worth caring about', spelling eventual decline into places not worth living in.[72] Modern architecture effectively liberates the house, providing salubrious and efficient living conditions without concern for the eternal themes of construction Pallasmaa (quoted below) describes – without regard for ancient concepts of dwelling, of *home.*

"By rejecting tradition, architecture drifts toward a deadening uniformity on the one hand, and towards a rootless anarchy of expression on the other. Architecture, as with art and language in general, can only progress meaningfully through an accumulative tradition, one that balances both reforming and preserving elements in one expression."[73]

The Price of Freedom

"Manifestos and histories of Modern architecture speak frequently of 'liberating' architecture. Le Corbusier's well-known and influential 'five points of architecture' of 1926 exemplify this tendency to see the evolution of architecture as 'liberation'. ... The obsession with freedom in the name of liberating artistic expression has however, led architecture to the unfortunate rejection of its timeless rules and its disciplinary structure. The 'liberation' of architectural expression has most often meant the mere denial and rejection of its deepest emotional means."[74] - Juhani Pallasmaa

In their optimism to improve the world, Modern architects took different approaches but shared the goal of redefining architecture in order to redefine the age. Like Frank Lloyd Wright, Alvar Aalto sought a closer connection to 'earth' – the humanistic and natural, with reassuring mass and enclosure – while Corbusier's early works or Mies van der Rohe's steel and glass masterpieces sought the ethereal, idealistic perfection of 'sky', transcending earthy comforts to expand into higher realms. CIAM hoped to restore a grounding in experience and restoration of the authentic to architecture[75] – the *goal* of Modern architecture was to reinforce a meaningful human place in the world.

At its best, Modern architecture remains an optimistic expression of freedom, embracing a new era of technical progress and great possibilities. Corbusier's conviction remains tangible, in his written and built works. The Villa Savoye makes us believe in the fusion of reason and beauty, ethics and aesthetics.[76] In the hands of its masters, Modernist typologies like the Miesian steel-and-glass space frame or Corbusian concrete Maison Dom-Ino are extraordinary structures: powerful and beautifully simple, produced with exquisite attention to detail. The International Style can be placeless, faceless, weightless – these are all post-modern critiques of Modernism – but still persuasive, as a vision of human aspirations. Shifting the realities and relationships of traditional building, the new architecture asserts a moment of triumph in a bold new world. The message conveyed is that modernism can change everything, *be* anything: a new aesthetic, a new architecture, a new world is ours for inventing. Among the debris of devalued symbols, there is truth in the machine: reason and logic (however cold) are the held up as the keys to infinite possibilities. For all its practicality of approach, Modernism is wildly optimistic – blinded by the vision of a brighter future that would never be realized. These icons may lack language, but not hope or feeling:

"Decades after [the masterpieces of early Modern architecture] were conceived they still evoke and maintain these positive sensations; they awake and bring forth the hope sprouting in our soul."[77]

Like those of each era, Modern icons embody an aspiration to higher life and remain compelling as such. Unlike traditional models, however, this dream distanced man and environment rather than bringing them into closer contact and harmony. Denouncing traditional forms, styles and compositions, the Modernists proclaimed the liberation of architecture … but their revolution aimed too high. Modernism asserts the perfectability of man, without compromise, as if an uncorrupted built environment could make us equally rational and pure of purpose. The 'problem of the house' is a case in point, exploring how the most intimate of architectural typologies was revolutionized in order to revitalize humanity. Corbusier's machine-age solution to the ills of the traditional city was super-urbanization, the notorious towers-in-a-park scheme to be put into practice across North America after the Second World War. The pervasive form of Modern architecture became a housing block, rather than a house, but the ideology is the same: liberation from the conventional relationships, meaningful symbols, and deep emotive structures that have grounded architecture since time immemorial.

Pallasmaa (quoted at left) explains this critical flaw in modern architecture, devoid of symbolism and therefore of any deep emotional exchange, incapable of identification.[78] The problem of the house is really a problem of inhabitability, of enabling dwelling through meaningful connections between our inner and outer worlds.

At its worst, Modern architecture is dehumanizing and negative, from the banal to the brutal (figure 7.12). It was envisioned as a fresh start and executed with strict rationality, but the results are too often cold and unfeeling, communicating only a loss of identity – the price of its freedom from traditional symbolism. The glorious Modernist outlook was tainted by the uncomfortable fact that – as suburbs sprawled and Radiant Cities rose all over North America – people simply didn't like them very much.[79] Even the Modernists became disillusioned: Le Corbusier himself lost optimism for the salvation of cities, becoming deurbanist.[80] Modernism's inflexible principles and practice have been charged with damages to society at large, even if they did have theoretical (as Summerson says, at right).

Thus, despite the best of intentions, Modernism defeated itself: defying the archaic essences of our humanity, and thereby denying any possibility of emotional connection. Modern architects and artists declared a naïve autonomy, as if only what is seen could be there: a self-contained beauty unto itself like Corbusier's forms brought together in light.[81] The new architecture did not accommodate the basic 'comforts' we need in our environment, denying connections to our inner or outer worlds. Mantras of 'less is more' and 'ornament is a crime' produced an architecture of austerity, economy and sometimes beauty, but rarely of inhabitability. The Modern promise of utopia was never realized in the suburbs, nor in towers in the park. Instead, they created their own social, environmental and political ills.

"Modernism emerged initially as a healthy, vigorous and apt critique of the Beaux Arts and historical revivalist movements. It was not long before the consensus shattered into many divergent directions and architectural dialects, if not languages. In hindsight, we can now see that, despite its vision, fresh concerns and vigor, Modernism, at least in many of its diverse manifestations, particularly in the hands of its most intellectual and doctrinaire practitioners, lost sight of or rejected some very important issues and aspects of architecture. These included history and historical reference, symbolism, the "street', respect for neighboring buildings, detail, color, complexity and drawing. The inevitable reaction, criticism of Modernism's excesses and limitations arose."[82]

"This ruthless discipline was immensely important at the time and is still one of the aspects of the Movement which cannot easily be shrugged off as an obsolete puritanical fad. But it did have one devastating side-effect. This was the damage it inflicted on the image of modern architecture in the public mind. … The humane intentions of the Movement touched nobody's heart. To all except an informed few, architecture communicated nothing but boredom."[83]



[7.12] BRUTALIST APARTMENT BLOCK



Rules and Exceptions

"These buildings, the marvelous structures we hail as the masterworks of the epoch, such as Le Corbusier's Villa Savoye, Mies van der Rohe's Haus Tugendat in Brno, Gerrit Rietveld's Schröder Huis in Utrecht, Adolf Loos's Haus Müller in Prague or Alvar Aalto's Villa Mairea in Finland are actually the exceptions; even though their influence in shaping the canon of modern architecture as well as the notion of modern architecture in general cannot be underestimated."[84]

– Anne-Louise Sommer

The revolution of our times is not only what the Modernists built, but the kind of building they made possible. This highly standardized type of construction embraced industrial technology, resulting in buildings that could be produced cheaply and quickly and be placed almost anywhere, and indeed they were. Mies van der Rohe's steel and glass high-rise typology, applied to both office tower and residential construction, has appeared in every city of the expanding Westernized world. Philip Johnson admits that "the International Style did sweep the world because it came along at the same time developers wanted to make cheap buildings."[85] Reproduced ever more cheaply and quickly, the Modernist message has been lost: only the shape remains.

The Modernists rejected traditional architectural language, proclaiming the freedom to strive for an expression of their own time; the further breakdown of that language into isolated fragments strips architecture of any deeper meaning, which is the state of contemporary development. This architecture of alienation – the faceless, sealed-glass towers and tracts of mass-produced identical housing – is still the pervasive form of contemporary urbanism.

The pseudo-romanticism of Frank Lloyd Wright's ecological architecture is one trend which attempts to resolve this disjuncture between urban man and environment. His architecture in distinct relationships to landscape "has been the inspiration for much modern architecture in the struggle to identify and humanize itself in a mass-produced world."[86] Connection to the ground and orientation to the sky endure, if slightly flattened to express the dynamic lateral flow of Modern life. Wright's use of stabilizing mass anchors the horizontal extension of his houses, perpetuating traditional domestic forms in modern design, but the pervasive forms and language of modern architecture bears no such relationships. With no spirituality in landscape or sense of connection to the cosmos, modern man struggles to define his relationship to the world without grounding permanence, centrality or axiality to give meaning to space.

[7.13] VILLA MAIREA, ALVAR AALTO (FINLAND)

Promises & Failures

Eisenman's passage at right describes diametrically opposed ideologies, both action – the hopeful Modern revolution – and reaction, in Postmodern disappointment when that revolution failed to deliver the utopia it promised. This bitterness of 'paradise lost' and the impossibility of return incited Postmodern architects to turn on their fallen heroes, rejecting the founding principles of the Modern movement – including hope for the future. Royston Daley, in an address at Boston College, compares the Modernist and Postmodernist (more aptly 'antimodernist') movement in architecture, summarizing the reversal of ideologies. Where Modernism was idealistic, Postmodernism movement is ironic and self-mocking: the Socratic 'simulation of ignorance.' The Modernists were utopian in their vision of man and his potential to shape a better world, while the Postmodernists were highly skeptical. The Modern movement was deeply socially engaged, whereas the Postmodernism movement was largely socially neutral. These contrasting attitudes naturally resulted in opposite architectural concerns: Post Modernism focuses on the aesthetics of the skin, the 'decorated box', but Modernism focused on inner workings and structure.[88] Most essentially to this discourse,

"The modern movement was focused on the real, the humanistic and the practical. As we read these days in the architectural press there is a strong element of the surreal in Post-Modernist work; one of its professed aims is to be unsettling. Post Modernism and De-Constructivism does not aim to clarify or resolve. What was stressed most often in the modern movement was simplicity, in the post-modern movement what is striven for is complexity. Where the Modernists desired and worked for forms and solutions which were clear and unambiguous, the Post-Modernists search for ambiguity of form."[89]

"For the architects of the early twentieth century, the appropriateness of the act of intervening clinically into the city's historical and natural evolution was beyond question. Supported by the enormous moral impetus of social and technological necessity (which had replaced the model of natural evolution), they attempted from the stronghold of their 'castle of purity' to storm the bastions of evil identified with the nineteenth-century city. To them the stakes appeared higher than they had ever been. In the heroic climate of modernism the city of modern architecture, supposedly born out of a rupture of history, was progressively propelled by that very history toward the vision of a sanitized utopia.

The perceived failure of modern architecture to realize this utopia – either to supersede the nineteenth-century city or to mitigate its destruction after the bombings of the Second World War – became the primary condition confronting the architects of a generation which matured in the early 1960s. Their disillusionment and anger were in direct proportion to modernism's failure, as much as its unrealized aspirations – its castle of purity – as with their own sense of loss and the impossibility of return; these feelings were directed at the heroic fathers of modern architecture, both for having been and also for having failed. For Rossi's generation it was no longer possible to be a hero, no longer possible to be an idealist; the potential for such memories and fantasies had been taken away forever. No other generation had to follow such a sense of expectation with such a sense of loss. Cynicism and pessimism came to fill the void created by the loss of hope." [87]

- Peter Eisenman
(Introduction to Rossi's *Architecture of the City*)

The New Classicism

"The result of the discovery of sudden impoverishment produced in architecture by the adoption of technologies and morphologies separated from places and traditions has been the reemergence of architectonic archetypes as precious instruments of communication ... The Postmodern in architecture can therefore be read overall as a reemergence of archetypes, or as a reintegration of architectonic conventions, and thus as a premise to the creation of an architecture of communication, an architecture of the image for a civilization of the image."[90]

"There is a widespread belief that there has been a failure to bring meaning to architecture. There are two distinct currents in this critique: "postmodern historicism" and "neofuturism." The former has reverted to the revival of architecture of the past to cloak today's technologically complex buildings with historical styles. The latter derives its imagery from the expressionistic unraveling of form to suggest the collapse of scientific and cultural meaning. Both trends represent cynical views toward the present: postmodernism escapes to the past, and deconstruction escapes toward the future."[91]

"At its best, however, Postmodernism at least re-introduced the possibility of memory and connectedness and by so doing, put the spotlight back onto the primacy of the relationship between the individual and the place, both temporal and physical, which he or she inhabits."[92]

The devaluation of symbols, impoverishment of semantic content and incomprehensibility of current architectural communication are often blamed on the Modernists,[93] who discarded history in search of their brave new world (see Portoghesi, quoted at left). Rejecting the traditional language of representation and ignoring the links between architecture and culture has earned much post-modern critique: meaning cannot be separated from form, nor reassigned at the will of the artist.[94] As quoted earlier in this work, "critics cite the poverty of architecture's semantic content, due to the abstractness and rootlessness of the language of Modernism, as the main reason for its demise."[95] Where the Modernists had tried to simplify the language of architecture, producing pure and unambiguous expressions, the Postmodernists embraced the chaos their predecessors had bravely aimed to resolve. Modernism expressed the hard clarity of our new world, without subtlety or hidden meanings; Postmodernism strives for complexity, even ambiguity of form, in order to restore the layers and dimensions of meaning Modernism had effaced. Two tendencies emerged to escape the difficult present state of architecture, as McGrath & Navin describe at left: one looking to 'golden ages' past, the other to the untarnished future.

Amid manifold Postmodern objections to Modernist ideologies, semantic content is the primary focus here: the search for some part of our history that has enduring relevance in our time, and the attempt to re-establish meaningful architectural symbols (as Phillips describes, at left). Considerations of place, identity and memory – necessarily complex, even ambiguous – could return to architectural discourse, tinged with cynicism and irony as Eisenman has described. The expressive poverty of abstract buildings and cities prompted Postmodern architects to reconsider what Modernism had discarded, returning to archetypes and symbolic forms along with conventional typologies of the house and the city. Postmodern Neoclassicism offers an

"architecture that is based on the critical knowledge of its own history",[96] in marked difference to Modernism's architecture of amnesia. Rossi says our memory is our culture and calls the traditional city – once rejected in favor of Radiant cities and monotonous suburbs – 'a repository of history', thus 'the human creation par excellence'.[97] Krier and Colut echo "we must begin by rediscovering the forgotten language about the city which achieved formal perfection in the eighteenth century."

The idea of an archetypal architecture is developed in Aldo Rossi's *Architecture of the City* and explored in his works. Rossi employs archetypal forms in an attempt to re-establish a connection with the collective memory of the urban environment: his buildings are abstractions of typological architectural elements (towers, columns, gables etc.) drawn from his own memories. Archetypes are likewise cited as the basis for architectural practice among such post-modernists as Michael Graves, Rob & Leon Krier, and Mario Botta. The symbolic value of architectural elements has been widely discussed in post-modern expressionist theory, but as Lewis Mumford says (describing the counter-monumentality of the Postmodern), "an age that has deflated its values and lost sight of its purposes ... can no longer produce convincing monuments."[98] The modern problem of the house endures: Postmodernists raised the complaint of uninhabitability against the Maison Dom-Ino typology, but have not proposed any authentic alternative. Vidler describes the paradox of Postmodern culture, suffused with nostalgia for something that *isn't*: not present or absent, past or present-day (see below). He calls this the triumph of image over substance, which is the state of much contemporary architecture:

"In its aspiration to recover the past, Postmodernism has generally substituted the signs of its absence ... it remains to be seen whether the mere image of 'houseness' provides a sufficient substitute for what has been lost ..."[99]

Complexity & Contradictions

"Meanings have rather become infinite and in becoming infinite lose their meaning. This is the unsettling anarchistic message that the Deconstructionists leave with us. A set of contradictions and tensions are raised which cannot be resolved ... This is, I believe, an accurate reflection of an age which can no longer find its center. While a strong center of belief existed for "Modernism" there is no discernible center for "Post-Modernism" or "De-Constructivism" as it is now termed."[100]

- Royston Daley

Modernism attempted to start from zero and rebuild a better world, but the Postmodern movement aimed simply 'away' – escaping from dogmatic Modern truths, from the past as well as the industrial present, but not towards any new center. The objective is less defined than the lofty aspirations of its predecessor: Postmodernism is characterized by a marked pessimism about the possibility of finding future coherence and direction. The struggle to establish meaningful connections outside of any meaningful order takes shape in the 'absent' architecture of Rossi and Krier, or the fragmentary figures by Venturi and Moore: "pieces weighted with historical significance but not yet assembled into a meaningful message."[101] The fragmentation of order and meaning is a critical theme in Deconstructivist architecture, where no center is possible.

Modern Constructivism aimed to purge traditional architecture of excess and purify form, creating honest and rational architecture with crystalline meaning; Deconstructivism in turn asserted its freedom from Modernist strictures by defying logic and denying meaning. With the same anti-historicism, but also rejecting Modernist rules and rationality, Deconstruction aims to further liberate architecture from order itself – breaking old as well as new rules like 'form follows function,' 'purity of form,' 'truth to materials'.



[7.14] WEXNER CENTER FOR THE ARTS, PETER EISENMAN (OHIO STATE UNIVERSITY)
"Some of the grid's columns intentionally don't reach the ground, hovering over stairways creating a sense of neurotic unease and contradicting the structural purpose of the column. The Wexner Center deconstructs the archetype of the castle and renders its spaces and structure with conflict and difference."[102]

"The form is distorting itself. Yet this internal distortion does not destroy the form. In a strange way, the form remains intact. This is an architecture of disruption, dislocation, deflection, deviation and distortion, rather than one of demolition, dismantling, decay, decomposition and disintegration. It displaces structure rather than destroying it. What is finally so unsettling about such is precisely that the form not only survives its torture but appears all the stronger for it. Perhaps the form is even produced by it. It becomes unclear which came first, the form or the distortion, the host or the parasite…"

- Mark Wigley
(MoMA exhibition catalogue on Deconstructivism)

Deconstructivist projects operate by bodily distortion and alarm, breaking the form into fragments, but also by subtler dissolution and ambiguity, recombining and rearranging those fragments into incomprehensible objects.

As Tschumi says: "I have never been very interested in architecture per se, but I have also enjoyed deconstructing it."[103] He reveals in his writings that he *intends* to evoke an interrupted, even violent feeling (and has been criticized for this lack of sensitivity, sacrificing human needs to his own spatial ideologies). His theories articulate this focus on *disconnections* between form, use and social value in contemporary society, rendering any relationship between them both impossible and obsolete. His work bears reference to Derrida's philosophy: singular meaning is impossible in any language, once deconstructed to its foundation where multiple meanings are found.[104] His declared objective is non-meaning: dissolving *a priori* meanings using non-contextual forms, without history or precedents, in order to mean nothing at all. Ignoring the basic tenets of architecture – composition, hierarchy, and order – in process and in product, Tschumi contests the inherent order and meaning of architectural language.

Frampton describes Eisenman's work in the same terms, as a "derivation of form from more or less arbitrary overlays of different grids, axe, scales, and contours, irrespective of whether these happen to have any correlation with the real context'.[105] The dialectic of presence and absence, solid and void occurs in many of Eisenman's projects, both built and unbuilt (figure 7.14). Avoiding any distinct reference to 'traditional' form, this language is also foreign to architectural norms of human scale: "this anti-humanist play with varying scales, for which Eisenman would later coin the term 'scaling', was meant to subvert any received ideas as to an appropriately anthropomorphic scale or civic dimension."[106] Wigley (quoted at left) notes the existential confusion that results from this disruption and disconnection, rather than total and definitive destruction.

Summary: Form and Language

"[Modernism] reached its highest pitch of innovating vigour in the late twenties and, after World War II, exploded like a delayed action bomb, filling the huge vacuum the war years had created. Its effects spread and spread until by now there is no corner of the industrialized world in which the thin, high, glossy blocks, the perspectives of concrete posts and the punched window patterns are not typical and familiar.

Such is the architectural revolution of our century – the most radical and universal in world history. In the course of it, questions of form have tended to recede, giving place to questions of technology and industrialization, large-scale planning and mass-production for social needs, questions of building rather than architecture. Where, in all this, is the 'language' of architecture?"[107]

- Sir John Summerson

Modernism focused on primary sensations, seeking some archetypal *a priori* meaning in with permanent and collective value. The abstract vocabulary of Modern architecture is based on these elemental geometries, supposedly stripped of all former symbolic connotations: the intention was to construct an unambiguous, universal language of forms in their simplest possible states. The synthetic 'pure forms' of industrial products were considered innocent of metaphor, like blank slates ready for new meanings. To the Modernists, their new building elements were entirely objective; their product is therefore self-sufficiently a work of art, 'an unvarnished statement of things as they are'.[108] The aim was not to deny meaning, as Colquhoun notes below, but to rewrite it:

"The Modern Movement in architecture was an attempt to modify the representational systems which had been inherited from the preindustrial past and no longer seemed meaningful in the context of a rapidly changing technology."[109]

The building typologies modern architecture made possible originated within a complete ideology, but reduced to the repetition of parts, Modern icons are the exceptions rather than the rules they tried to establish. Abstract and rootless, modern architecture became cold, isolated and unrelatable "concrete jungles removed from nature and devoid of human feeling."[110] Norberg-Schulz denounces the degeneration of Corbusian language to isolated phrases, like the horizontal window, as separate motifs rather than consequence of the dynamics of space. He accredits the post-war theme of meaning in architecture largely to Le Corbusier, who insisted on the importance of semiology: architecture must be a language, in order to transmit meaning.[111] The architect, in Le Corbusier's own words, must give us "the measure of an order which we feel to be in accordance with that of our world".[112] The Modernist masters produced iconic works with great emotional intensity, perfecting their simplified language in restrained expressions. Honest materials and tectonic spaces make the act of construction comprehensible to the senses, Pallasmaa's criteria for authentic architectural experience. But a fundamental problem lies in the Modernist treatment of neutralized form and space, stripping the architectural semiotic of richer symbolism.

Scully explains that the International Style aims to express the separateness, not unity, of man and nature[113] – the moral message is clear, but the resulting spaces rarely succeeded in becoming habitable human places. Severing architecture from its traditional ties to earth below and sky above, it is always out of context, as if hovering above the ground. It is deliberately indifferent to its surroundings, which is part of its ethereal aesthetic, but this separation does not produce the salvation that was promised.

"The effect of static solidity, hitherto the prime quality of architecture, has all but disappeared; in its place there is a neglect of volume, or more accurately, of plane surfaces bounding a volume. The prime architectural symbol is no longer the dense brick, but the open box. Indeed, the great majority of buildings are in reality, as well as in effect, mere planes surrounding a volume. With skeleton construction enveloped only by a protective screen, the architect can hardly avoid achieving this effect of surface, of volume, unless in deference to traditional design in terms of mass he goes out of his way to obtain the contrary effect."

- Henry-Russell Hitchcock and Philip Johnson (MoMA catalogue *The International Style*, 1932)

The Modern aesthetic strove for a sense of eternity within flux, but with no anchor to hold on to: the purity and stillness of Modern icons is beautiful, but cannot ground us. At its best, the rigid and removed International building offers a defense against chaos, but has lost the potential to fix and define a place against the continuity of time and space, connecting man and environment in a meaningful relationship – the conditions of dwelling.

Postmodern Neoclassicism returned to embrace (often slyly or ironically) the historical references that modernism shunned, but too often the result is a superficial 'wallpapering' to suit popular taste rather than authentic architectural expression. Form and language are further confounded in Deconstructivist terms, resisting identification and negating dissecting architectural language until communication is lost. This too is a mirror of culture: "an architecture that responds to the disjointed nature of the contemporary world to upset the conventions that have been passed down through history."[115]

As Frampton describes, "Another form of 'disappearance' is to eliminate the building altogether, to bury it in the earth so that it becomes an introverted interior rather than a testament to civic virtue."[114] (figure 7.15) The experience of the earth is denied, creating artificial worlds like Fritz Lang's ominous Metropolis – an expressionist portrait of the dystopian future. Identifying mass and spatiality are confounded in the underground building or city, denying orientation in space as well as time under a thousand fluorescent suns that never set, against a flat rectangular sky.

The symbolic language of architecture is obscured in contemporary environments, whether whitewashed over as a fresh start (the Modernist project), or handled with cynicism and ambiguity (the Postmodern condition), or simply dismantled and disfigured to reject meaning altogether (the Deconstructivist approach). Denying expressions of gravity, solidity and stasis, celebrating movement and flux rather than grounding mass and defined space, contemporary buildings have come to express the free-floating isolation of man in a fractal world – the open box is ultimately an empty box.

[7.15] CANBERRA PARLIAMENT HOUSE, MITCHELL/GIURGOLA (AUSTRALIA)



Presence and Absence

Sola-Morales describes a protracted shift in contemporary architecture (passage at right): Modernism strove to incorporate mobility, making containers for movement rather than static solid forms. As an architecture that operates in the negative, the sense of vacancy it procures is unavoidable. This is a space waiting to be occupied and animated, open to infinite possibilities – a stage for human events.[117] Modern architecture was concerned with space, but the Postmodern movement is described as aspatial:[118] the void to be filled becomes the vacuum, where the only possibility is emptiness. In a sense, where the negative molds of Modern architecture enabled mobility, Postmodern architecture simply departed. All possible definition is effaced, 'embodying' the conditions of transparent, interconnected, unlimited space: a negative presence. This is a true expression of our reality, drifting in a relative universe without connections, or convictions:

"Never before has architecture been interpreted as the testimony of an emigration, as the abandoned precincts of gods and men who are no longer with us. The intimacy, loneliness, and the reality of the void are no longer papered over; instead, the Nietzschean philosophy of desertion, abandonment and twilight seems to find a clear echo in the most sensitive works of our age."[119]

A critical distinction must be made between non-presence, as expressed in the most poetic and sensitive works of our time, and mere absence. The architecture of non-presence remains spiritually charged (figure 7.16), but the architecture of absence is spiritually empty. Its presence bears no meaningful consequence – an existential void we cannot interact with.

"Among the ideals of modern architecture, one of those most celebrated by its exegetes was its incorporation of movement into what had been, throughout its history, by definition static and immovable. The architecture of this era of Einsteinian relativity was defined as embodying movement … architecture became a space for all mobility, a container in which movement was prefigured. One consequence of this theoretical construct was that architecture generated an inevitable sense of void. The architectures … of the critical situation following World War II invariably present themselves as voids, negative molds for our experience of permanent mobility.

…

The spatiality that seems to have established itself as a hegemonic category in the fifties has been radically transformed in our time, converting the vacancy of its lines of virtual construction into pure absence. While the void promised possibility, today it reflects the emptiness of everyday life. Rather than providing a stage upon which a drama is played architecture has become a documentary window, revealing our own reality. Terms employed in the description of contemporary practice – transparency, dilation, absence of limits, spatial interconnection – suggest that architecture acts more as a negative form than as the proposition of any precise figurative content."[116]

- Ignasi De Sola-Morales

[7.16] BLOCH ADDITION TO THE NELSON-ATKINS MUSEUM OF ART, STEVEN HOLL (KANSAS CITY)





[7.17] MEDIATHEQUE, TOYO ITO (SENDAI)



[7.18] CANTILEVER HOUSE



[7.19] TAMA ART UNIVERSITY LIBRARY, TOYO ITO (TOKYO)

Anti-Gravity

"Architecture has to deal with the challenge of gravity; that's something that hasn't changed in the course of history. However, by changing the structure we have to create a quality of space that matches the present times. Before, I tried to hide the price of withstanding gravity. ... We architects have to provide bodily experiences through our creations. In the past I tried to construct something that's weightless. Like society is becoming increasingly weightless. Nowadays, I feel that even in this information society we still have gravity, we still have to feel it, so we have to reopen and establish the awareness of gravity again."[120]

- Toyo Ito

We live an increasingly 'weightless' existence, as Toyo Ito describes: our technologies allow us to supersede many of the limitations of the physical body, suspending the realities that we wish to escape. Global culture is ever more weightless, placeless, ageless, and our new 'facts of life' are rewritten every day. In figurative terms, we live an increasingly insubstantial existence – our interactions are digital, taking place on animated screens in virtual space.

Contemporary aesthetics defy the primal physical realities of body and building in mass and form, structure and surface. Instead, what we make expresses the exciting possibilities enabled by technology: the bodily experience Ito describes is weightlessness, delightful and impossible (figures 7.17 & 18). Our cultural aspirations are fundamentally aspatial, and this is what our architecture reflects. But gravity remains a constant condition of our own bodies, and of the architectural body also – articulating ancient forms like the structural arch in new, lighter materials is an example of how archetypal spatial concepts can apply to contemporary building (figure 7.19). The objective is not to replicate historical styles, but to recall what we need in our built environment: gravity and structural integrity are metaphysical as well as physical conditions.

Anti-Architecture

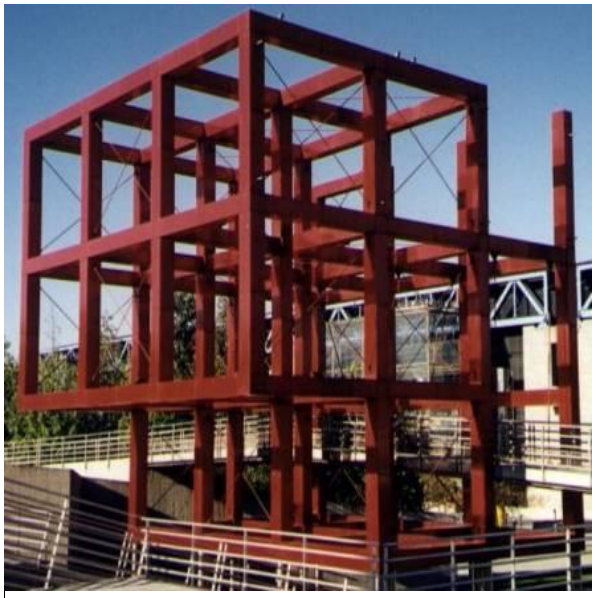
"Derrida...asked me why architects should be interested in his work, since, he observed, 'deconstruction is anti-form, anti-hierarchy, anti-structure – the opposite of all that architecture stands for.' 'Precisely for this reason,' was my response." [121]

– Bernard Tschumi

Consulting with Derrida, Tschumi created the Parc de la Villette – anti-form, anti-hierarchy, anti-structure, anti-architecture in any recognizable sense (figure 7.20). This award-winning project fundamentally challenges architectural form, as a series of non-functional cubes, arbitrarily "deconstructed, according to rules of transformation (repetition, distortion, super-imposition, interruption and fragment-ation), without any functional consider-ations."[122] It is something that architecture has never been before, negating architecture itself. Tschumi asserts: "architecture only survives where it negates the form that society expects of it. Where it negates itself by transgressing the limits that history has set for it."[123]

In his Video Pavilion, Tschumi challenges architectural tradition with transparent walls and tilted floors, producing an intense dislocation of the subject in relation to spatial norms like wall, interior and exterior, and horizon (figure 7.21). It is a successful experiment in architectural non-being, de-stabilizing convention and social expectation. The seismic, disrupted planes of Eisenman's Garden of Lost Steps are another example of this new approach in architecture, negating functional norms to address the fractal nature of contemporary culture (figure 7.22). Distorting the *idea* of form as well as its realization, Johnson and Wigley describe Deconstructivism as a fundamentally different (and distressing) way of thinking:

"... a different sensibility, one in which the dream of pure form has been disturbed. It is the ability to disturb our thinking about form that makes these projects deconstructive."



[7.20] 'FOLLIES' at PARC DE LA VILLETTE, BERNARD TSCHUMI (PARIS)



[7.21] VIDEO PAVILION, BERNARD TSCHUMI (GRONINGEN, NDL)



[7.22] 'GARDEN OF LOST STEPS' AT CASTELVECCHIO MUSEUM, PETER EISENMAN (VERONA)

Synopsis

'The world of the machine endures, if suspect now in subtle and tragic ways. We cannot relinquish its comforts, nor do we wish to. Yet a crisis in modern architecture has arisen from the disquieting realization that basing our architecture on a belief in material causes was never a matter of fact but always a question of faith – faith that because science had drastically altered the world, its method could be meaningfully applied in architecture.'[124] - Gavin Macrae-Gibson

In recent centuries architecture has undergone major physical and conceptual revolutions: the way we think about, represent and realize buildings is drastically different than any age before.[125] The new architecture is abstract, inverting or contorting traditional symbolism via various technologies. Modern typologies have eliminated expressions of verticality in the façade, denying the weight of gravity and disconnecting the building from the ground - as Pallasmaa notes, "vertical elements creating spatial foci and giving rise to a sense of place have also withered away. Housing means inhabiting merely the horizontal plane."[126] Conventional symbols relating to the human figure and its natural contextual frame – forging connections to earth and sky – are fragmented, stripped or absent altogether.

Macrae-Gibson (above) considers the inevitability of modern architecture as a fulfillment of the scientific method, held up as a means to reveal universal truths – but as he says, "we now see that the faith in the scientific method on which modern architecture was originally based was a myth…"[127] Our society is dominated by this faith in technology's infinite potential,[128] but - in architecture at least – the machine has not produced the utopia that was promised. Idealizations and disembodiments have not succeeded in simulating an integrated whole, making the world comprehensible:

"The loss of faith in the original meaning of preestablished harmony left behind no more than mathematical laws of reality, the promise of universal knowledge, and isolated perceptions. The result, as we know too well, is modern pluralism, the fragmentation of scientific knowledge and human experience." [129]

Deconstructed anti-forms confront this difficult reality, refusing the traditional role of architecture as conciliator and imploding its symbolic language. The definitive rupture between form and meaning is the final frontier in these discussions of architectural symbolism, from ancient assertions to this ultimate breakdown of order and meaning. A new way of thinking has emerged, as Tschumi describes, setting architecture against its own history in order to survive in contemporary culture – incompatible with traditions of anthropomorphic unity, vertical hierarchy, balance and permanence.[130]

Abstract shapes with non-representative rules deny bodily identification or imitation, because they need not comply with the physical realities of our own traditional construction. The age-old feedback loop between body and building is severed: instead of reinforcing the harmony of man and his environment, we encounter the existential void of the deconstructed universe. The body is lost, decomposed beyond recognition. The stratified cosmos is lost, superseded by scientific advancement. Empty space conquers place, in the conceptual drift toward abstract Cartesian uniformity: the earth as endless extension loses tangible qualities, until only openness and transparency remain.[131] Hierarchy, structure and center are no longer valid metaphors for architecture where mass is denied, form is disrupted, and space is devalued. We are left alone in a world with no real possibility of orientation or identification, understanding or exchange. Abstracting form and space from symbolic meaning - breaking down the archetypal language of architecture - engenders meaningless places, where human beings cannot feel at home.

Augé explains (at right) that "non-places serve the purpose of exploding the normative singularity of place"[134] – our scientific reality does not grant fixed points or spatial order, undermining any possible sense of place. Orientation and identification are disabled in a world of non-places, populated by non-bodies with no physical presence to relate to. Contemporary buildings and cities reflect our existential lack of order, but architecture today does not lack meaning: the shape of the built environment is an indicator, in any age, of the state of civilization. These aspatial and asymbolic forms are not meaningless, despite their own efforts otherwise: their message, (as Pallasmaa points out, below right) is the estrangement of modern man.

"Place and non-place are rather like opposed polarities: the first are never completely erased, the second never totally completed; they are like palimpsests on which the scrambled game of identity and relations is ceaselessly rewritten. But non-places are the real measure of our time."[132]

In every age, the content manifested in architecture comes from outside itself – "architecture immortalizes and glorifies something. Hence there can be no architecture where there is nothing to glorify."[135] As Vidler describes in *The Explosion of Space,* our new architecture asserts new cultural realities: the miracle of the instantaneous, the standardized, the virtual.[136] But as the heterogeneous is standardized into the homogenous and the virtual replaces the real, something critical has been lost. The contemporary built world creates a paradoxical sense of void and absence, fragmentation and inconsequence. Pallasmaa pronounces a final judgment on architecture in the aesthetic and asymbolic, with no aspiration to deeper meaning or higher order:

"But are the town centers and housing areas ... those monuments to industrial welfare and reason, really devoid of message? Do they not speak involuntarily, but pleadingly, of the alienation of industrial man, of the history of materialism and objects, and of the shattered interaction between the ego and the world? To borrow the title of Richard Sennett's book, do they not testify to 'The Fall of Public Man'?"[133]

"The buildings and townscapes of our time commonly lack a spiritual and emotional content. The sense of emptiness, distance, and rejection they do possess derives from the inability of modern settings to resonate with the unconscious sensibilities of the human mind. ... A work of architecture can touch our soul only if it touches something familiar in our collective memory. Technical ingenuity, novelty, formal inventiveness, or mere aspiration for aesthetic pleasure cannot move us."[137]

CHAPTER VIII

PERCEPTIONS IN CONTEMPORARY ARCHITECTURE

"Fragmentation is a distinctly modern phenomenon. Today, it happens almost everywhere, even where we are unaware of it. Its manifestations can be misleading and obscure; a fragment can appear as an object, a structure or a complete and coherent system. A building or large development, for example, may appear complete, well-integrated, and unified, when in reality it is only a large fragment, unsituated and empty of any particular meaning."[138]

- Dalibor Vesely

In previous chapters we have followed the evolution of architectural language through continuity – 'twenty-five thousand years of cultural memory'[139] – to rupture in recent centuries.* We have witnessed the shifting core of civilization, from belief in external powers imparting some higher meaning toward an internal focus on power itself, as the chaos in our outer worlds becomes irreconcilable with any absolute model of order. Collective power in belief was the impetus behind ancient architectural icons, concentrated at a spiritual focal point, connecting the individual to larger systems. With the breakdown of belief systems that greater power is likewise fragmented, like a nuclear reaction triggering exponential internal ruptures. The center is divided, internalized in individual spheres.

That paradigm shift encompasses many smaller revolutions: we have explored the critical transition from absolute to abstract space; the breakdown of hierarchy and structure in our inner or outer worlds; the rejection of history and tradition; the dismissal (and potential revival) of archetypes and architectural conventions. The symbolic role of architecture has been denied, dismantled or deprecated in search of purity – even ambiguity – of form, and therefore of language. The body has been distanced from building, and the horizontal has all but conquered the vertical – modern architecture, like modern man, is 'condemned to freedom'. But as in any language, 'freedom' or 'anarchy' have the same effect: the breakdown of order promotes an explosion of creative potential, and the confusion of conventional meaning.

After the break, the fragments cannot reconstitute the whole. We can salvage pieces from the debris, even collage them together – these are common Postmodern trends – but revivals will always be missing something, and juxtapositions will always create something else. In an uncertain world the age-old role of art, as intercessor between humanity and reality, has lost its hold: former models of wholeness and harmony don't address our reality. 'Embodied' architecture today presents two possibilities: testaments to our alienation, carelessly or deliberately denying meaningful exchange, or alternative realities – more comfortable, but artificial – that offer evasions and distractions rather than reconciliation. We have abandoned the symbolic language of architecture, and forgotten its eternal role: even the icons of our own time have lost the capacity to communicate higher truths or deeper meaning, intensifying our relationship to the world. We have also inherited the problems of place and identity, order and meaning that have yet to be resolved in our modern world without a prevailing centre, structure or hierarchy.

*** Modernism took hold for only an instant in that collective history, but it was a watershed moment: it marks the fault line, defining everything severed as 'before'. We are now in the 'after', and always will be – Postmodernism was a counter-movement in itself, but all contemporary architecture is born into the post-modern. Within that reality there is a certain nostalgia towards the past, uncertainty about the present, and reserved excitement – without idealism or agenda – regarding the future.**



Power and Imagination

"Since man learned to build, he constantly has aspired to greater heights. Starting with the Hanging Gardens of Babylon, he reared the Pyramids of Egypt and the Gothic cathedrals of Europe. Finally he realized his ultimate ambition with the soaring skyscrapers of America."[140]

- Charles Moore

What we must believe in, in order to survive the world, is basically ourselves: we believe in our own power, in the strength of human logic. We believe in knowledge, and knowledge is *power.* Our only uncontestable certainties are quantitative, proven human facts: in data we trust. Symbols give way to signs, privileging intellectual rather than sensory or intuitive information. We read two-dimensional surfaces and screens, forgetting the wordless power of three-dimensional communication and qualitative experience. Space becomes a meaningless commodity, but the vertical index can still mark the core values of a society, in built form: our icons testify to the formidable forces of economics and ego (figure 8.1). The vestigial value that our culture associates with verticality is quantifiable – in real-estate dollars, or storeys, or maximum height – rather than qualitative, but this is the enduring spatial concept that orders our world. The towering icons of our age manifest our belief in power, rather than any power in belief: we reach ever higher not because we *must*, compelled to make meaningful connections to the world around us, but because we *can*.

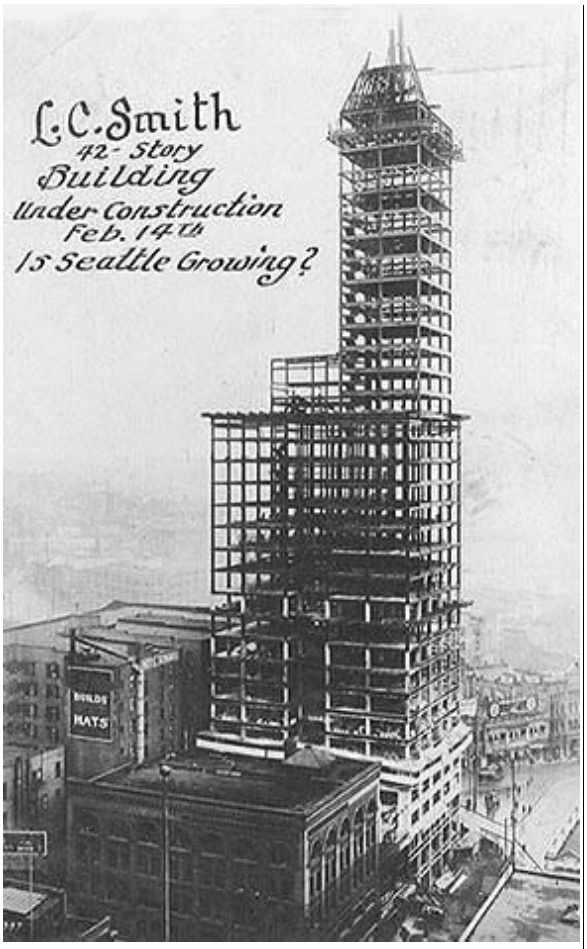
[8.1] CHICAGO SKYLINE



The title of Lauro Martines's treatise on medieval towers aptly summarizes this spirit: *Power and Imagination*. Asserting a secular structure in symbolic verticality, the competing turrets and campaniles of the Middle Ages are ancestors of our own icons (figure 8.2). The same striving for ever-greater heights creates our contemporary cities, bristling with skyscrapers. We are driven by the same impulse, to concretize our aspirations in built form – that instinct is deeply ingrained in the human imagination – but what do our towers represent? City skylines stretch around the globe, bristling with skyscrapers, but what are they aspiring to? The tall building is an archetypal expression of status, but its role as a connection between worlds is obsolete – the prototypical modern man isn't seeking any order greater than his own. Indeed, this is the innate appeal of the skyscraper: it represents our social reality, independent and democratic, where anybody can aspire to the heights formerly reserved for the gods. Civilizations of the future will recognize the steel-and-glass tower as our iconic, defining image, declaring a new social and cultural order and making its values clear. As Mumford describes below, the verticals and horizontals of our cities tell the story of how we understand the world and our place within it:

"Mind takes form in the city; and in turn, urban forms condition mind. For space, no less than time, is artfully reorganized in cities: in boundary lines and silhouettes, in the fixing of horizontal planes and vertical peaks, in utilizing or denying the natural site, the city records the attitude of a culture and an epoch to the fundamental facts of its existence. The dome and the spire, the open avenue and the closed court, tell the story, not merely of different physical accommodations, but of essentially different conceptions of man's destiny."[141]

[8.2] MEDEIVAL TOWERS of SAN GIMGNIANO, once numbering 75



[8.3] SMITH BUILDING UNDER CONSTRUCTION (SEATTLE, WA)

"A long tradition ... grants the ceremonies of human life to architecture. ... The skyscrapers of the twentieth-century American city were dramatic in their arrival and equally dramatic in their visual and spatial presence, changing the physical and social spaces of everyday life and giving the city its visual signature – the skyline."[142]

"... the Tower attracts meaning, the way a lightning rod attracts thunderbolts; for all lovers of signification, it plays a glamorous part, that of a pure signifier, i.e., of a form in which men unceasingly put meaning (which they extract at will from their knowledge, their dreams, their history), without this meaning thereby ever being finite and fixed: who can say what the [Eiffel] Tower will be for humanity tomorrow? But there is no doubt it will always be something, and something of humanity itself."[143]

America has always been obsessed with towers, springing from the earth like so many declarations of independence. The skyscraper is to the American city what the arcades were to Paris: a physical and conceptual frame for modern everyday experience, representing the potential for human accomplishment. Since the birth of the skyscraper in 1885 Chicago every city and town aspired to one, across North America and throughout the Westernized world. These symbols of the modern spirit were celebrated on picture postcards, affirming urban life and civic identity (figure 8.3). Early skyscraper imagery proclaims the victory of engineering and economics, announcing a proud new era of human power and achievement. These exuberant structures were born into the city, experienced as events rather than objects, making urban man a participant in the symbolic act of building (see Moudry, quoted at left).[144]

Extraordinary and eminently hopeful, early skyscrapers were social rather than individual or professional acts: they asserted collective beliefs and became the 'signature' of the city. They were true embodiments of human aspirations, communicating the physical challenge of their growing heights and conquering human limitations: in an age without gods, skyscrapers were superheroes. They engaged the collective imagination in their mythic conquest, creating a secular center of gravity and focal point. Though the use of the monumental tower is practical, it serves the same spiritual function as the primal post or any other embodiment of the vertical: proclaiming an identity, defining the urban landscape both vertically and horizontally. The secular tower need not aspire to 'cosmic' or divine axial connections, but the primal power of the vertical grants it a symbolic dimension: earth and sky are called into communication by the singularity of the embodied axis.

The iconic tower exists as a 'pure signifier' between earth and sky (see Barthes, quoted facing). The clearer that relationship, the greater its symbolic impact: the Eiffel tower provides a perfect example, its verticality unchallenged against the Champs de Mars (figure 8.5). As identical towers rise uniformly in the contemporary city, however, this symbolic identity is obscured: our icon becomes the norm, losing specificity. The datum of the figurative ground plane rises ever higher, until individual identities are lost from the cavernous street below and can only be distinguished from afar (or on high). The uplifting verticality of the distant skyline can sometimes be seen, but not felt from within this collective field – its consistent heights are in contrast with the grounding experience of the street. Barthes describes this 'static paradox', explaining that New York is a not a high city but a deep one (figure 8.5):

"It is not up, toward the sky, that you must look in New York; it is down, toward men and merchandise: by an admirable static paradox, the skyscraper establishes the block, the block creates the street, the street offers itself to man."[145]

Crowded together in urban canyons, the tower becomes part of a larger system (like the suburban house) that cannot be isolated for critical attention – Northrop Frye's definition of a symbol. Vertical orientation is defeated by horizontal scale, a uniform extension without exceptions at street level. The rising datum of buildings in general creates a figurative ground plane that we cannot occupy, suspended high overhead; their height emphasizes the ground rather than the sky, making the street into a sort of underground city. Even from within these towers, the effect is an abstracted horizontality: detached from the earth but somehow no closer to the sky.



[8.4] EIFFEL TOWER at CHAMPS DE MARS (PARIS)



[8.5] NEW YORK CITY STREETSCAPE



Above: [8.6] VIEW FROM THE TOP: SHANGRI'LA (VANCOUVER)

Facing: [8.7] TOWERS AS VISUAL FIELD (VANCOUVER)

"Our cities are stacked up in layers which bear testimony to the skills of the surveyor and the engineer in manipulating precise Cartesian coordinates, but they exhibit no connection with the body-centred, value-charged sense of space we started with (although there is some experiential bonus for getting up to the top)."[146]

The Problem of the Tower Block

"Problem: How shall we impart to this sterile pile, this crude, harsh, brutal agglomeration, this stark staring exclamation of eternal strife, the graciousness of those higher forms of sensibility and culture that rest on the lower and fiercer passions? How shall we proclaim from the dizzy height of this strange, weird, modern housetop the peaceful evangel of sentiment, of beauty, the cult of a higher life?"[147]

- Louis Sullivan

At the turn of the nineteenth century, Sullivan addressed the issue of reconciling the modern office building with human sensibilities in Lippincott's magazine. He defines the matter in axial terms, describing a paradox between greater heights and higher meaning. Sullivan names the 'lower passions' as a critical foundation for meaningful cultural life and poses the tower as a problem, in this regard. A higher building cannot, by virtue of pure verticality, communicate a higher life; this is the contradiction of the modern city. Meaning does not exist in material form: it must be recognized to become real. We can read it through surface structures, by cultural association, but connection to these 'lower passions' – the foundation of higher life, as Sullivan describes – depends on deeper structures, surpassing the intellect.

This is the paradox of verticality: heights are always symbolic, but height alone does not make the object a meaningful symbol (figure 8.6). Like an electrical charge, meaning exists in the *connection* that vertical axis can articulate – a lightning rod between earth and sky. The tower, or post, or mountain is not a symbol unto itself: it must be recognized as such, in order to resonate. Without that spark of recognition, the tower is just a pile of concrete and steel. In contemporary culture the symbolic dimension has been obscured; in contemporary architecture, therefore, the tower block no longer articulates its verticality. The modern tower – in fact, the modern built world – exists in a state of 'virtual horizontality'.



THE VIRTUAL HORIZONTAL

"Bachelard has noted the total disappearance of verticality from present day urban inhabitation and its transformation to pure horizontality. We have become Joë Bosquet's 'one-storied people who have their cellar in their attic'. The disappearance of hierarchical composition and the standardization of space have promoted the disappearance of the experience of place."[148]

– Juhani Pallasmaa

We continue to build skyward, reaching greater and greater heights, but without the belief system that gave those heights symbolic value: we extrude our buildings upward from a typical floor plan, projecting two-dimensional space rather than engaging the third dimension. Our buildings and cities take shape within the abstract space we have invented, homogeneous and infinite: verticality is no longer a virtue, or even a distinguishing characteristic (figure 8.7). The archaic hierarchy of sacred, earthly and profane has been abolished; Pallasmaa calls this the flattening of space, with no depth of meaning.[149] The eternal verities of earth and sky endure, but the middle place we occupy no longer seems to bear relationship to either. We aspire to the vertical more than any culture before us, insatiably seeking the sky with ever-taller structures – projecting our aspirations into the void, as if we may finally arrive at some level of higher order and meaning that we have long ceased to believe in.

Contemporary architecture suffers from a lack of meaningful metaphors; we tend to pursue novelty instead. Breaking down the symbolic value of conceptual structures like the body or 'cosmos', we have also lost the age-old interest in replicating their construction – whether in hierarchy, composition or proportion – in the physiognomy of the built object. We cannot identify with their lateral verticality, rising in stacked horizontal plates. Without grounding manifestations of weight and gravity, uprising force or skyward orientation, the average tower is just a building block:

"The roof-shape signifying the end of a building, its upward directionality, or the more general articulation of such outlines has disappeared, and the vertical and horizontal profiles of a building have become identical. This homogenizing embodies the notion of extending the building elements in an undifferentiated structure, piling them beside, and on top of, each other."[150]



[8.8] ONE WALL CENTER HOTEL /APARTMENTS (VANCOUVER)

"But the height of city buildings is a purely exterior one. Elevators do away with the heroism of stair climbing so that there is no longer any virtue in living up near the sky. Home has become mere horizontality. … a house in a big city lacks cosmicity. For here, where houses are no longer set in natural surroundings, the relationship between house and space becomes an artificial one. Everything about it is mechanical …"[152]

[8.9] CAPSULE TOWER, KISHO KUROKAWA (TOKYO) Modular Modern Construction (before demolition)

[8.10 JENGA CONSTRUCTION





Value-neutral space negates spiritual or 'cosmic' hierarchy, but vertically-neutral form likewise denies physical identification. The lack of differentiation between the top and bottom of a building is fundamentally disorienting. Rather than planting its feet firmly and defining a fixed relationship to earth and sky, the typical modern building hovers uncertainly between. How architecture articulates the force of the earth, resisting gravity to stand upright as our own bodies do, is a powerful assertion – but today's towers reach formerly unfathomable heights, seemingly without any exertion at all. (figure 8.8) Our experience of them is not commensurate to their vertical scale: the elevator ensures that, focusing inward on the individual, even while moving to god-like heights.[151] The critically symbolic stair is hidden away, making every floor experientially the same. Bachelard (quoted at left) notes the artificiality of heights in contemporary buildings, mechanically replicating the experience of the horizontal plane upwards into empty space.

Modern construction has revolutionized the way we build, but also the way we experience the built environment: structural engineering enables the standardized section, requiring no articulation of gravity.[153] Vertical and horizontal are interchangeable in the regular geometries of modern architecture, piled indiscriminately atop and beside each other (see Pallasmaa, quoted at left). Instead of defining a solid base, in connection with the earth, and a lighter cap to encounter the sky, the structural innovations that enabled the stackable Dom-Ino unit creates a sort of vertical horizontality – in Pallasmaa's terms, a *virtual* horizontality, stacked up indiscriminately with no true orientation (figures 8.9 & 10). Our reinforced concrete towers and steel frames seem to defy corporeal logic, denying the expressions of solid strength and grace that can engage us in what the building does.

Unreal Cities

"Cartesian and perspectival, the city has gradually eliminated the specificity of place and detached verticality from horizontality. Instead of joining seamlessly to give rise to a plasticity of landscape, there two dimensions have become separate projections; the plan has been detached from the section. The visual city leaves us as outsiders, voyeuristic spectators, and momentary visitors, incapable of participation."[154]

- Juhani Pallasmaa

The contemporary city is an awe-inspiring and bewildering human accomplishment. Here we have realized an impossible dream: millions of flat planes suspended far above the ground, wrapped in millimeters of insubstantial material. Urban creatures are mechanically transported between them in seconds, living their lives between these hovering layers of concrete and steel. The eternal forces of gravity and resistance have been conquered: ethereal towers rise effortlessly, presenting only a skeletal framework and translucent skin. Corporeal limitations like presence, mass and substance are rendered obsolete by the miracles of modern construction. We experience the unreal city like a fantastic dream, but we are spectators – not participants – in its drama.

Literally and figuratively, we have no grounds to identify with these wonderful, improbable urban forms. Spineless, fluid or fractal, we cannot exchange our essence for theirs; our limited bodies cannot imitate their inversions and implosions, weightless forms and translucent surfaces. Pallasmaa says, "instead of experiencing our being in the world, we behold it from outside as spectators of images projected on the surface of the retina."[155]

Heidegger proclaims that "the fundamental event of the modern age is the conquest of the world as picture."[156] Images replace objects; signs replace symbols, flattening our perceptions of the world into two dimensions. Translation, projection and reflection turn their non-façades into screens of moving images, overwriting the object with a picture of something else. The body is pre-empted by the eye, and by the mind's eye, detached from the tangible, physical world.[157] Baudrillard asserts that everything in post-modern culture *is* image, a world of signs where real and un-real are indistinguishable: we are what we see, and we are in what we see.[158] Eisenman describes Michael Graves' later houses in these unaccomodating terms, removing dimensionality (and therefore inhabitability) from built form: "a house, for example, is no longer conceived as a house (a social and ideological identity) or as an object (in itself) but rather as a painting of an object".[159]

This world of images is quickly becoming a world of screens, which further confounds the senses. We observe many alternate, animate worlds as entertainment – not reality – on a passive, purely visual level of interaction. The visual city is itself a cinematic projection, rather than an assertion of reality or embodied truth.



"The city is the art form of collage and cinematic montage par excellence; we experience it as an endless collage and montage of impressions. The contemporary obsession with collage reflects a fascination for fragment and discontinuity, and a nostalgia for traces of time. The incredible acceleration of speed – of movement, of information, of images – has collapsed time into the flat screen of the present, upon which is projected the simultaneity of the world."[160]

"I am a kino-eye. I am a builder. I have placed you, whom I've created today, in an extraordinary room which did not exist until just now when I also created it. In this room there are twelve walls shot by me in various parts of the world. In bringing together shots of walls and details, I've managed to arrange them in an order that is pleasing and to construct with intervals, correctly, a film-phrase which is the room."[161]

Our growing alienation, detachment and solitude within the technological world is a consequence of these brilliant displays of art and engineering, celebrating what architecture *can* do but neglecting its most imperative function: not to entertain or amaze, but simply to domesticate space by making inhabitable human places. Bodily orientation or empathetic identification are pre-empted in a two-dimensional world, abstracted from place or permanence (see Pallasmaa, quoted left). Instead, we occupy what Vidler calls the filmic imaginary: fragmented and collaged together in a fabricated sequence of images (like Dziga Vertov's 'film-phrase' – see below left).

David Harvey notes the loss of temporality in lieu of instantaneous impact in contemporary architecture.[162] Many contemporary buildings either efface themselves or are packaged as something else; façade culture is about attractive containers, without great concern for content. Private or public, much modern architecture is more billboard than building: whitewashed blank and blind to the world, or wallpapered in a popular style. Architectural advertisements make up the built environment of popular culture, programmed like TV channels, providing screens for surface entertainments without substance or endurance. "Call it digital architecture. Architecture and media become one. It's a horrifying prospect for the future of human life."[163] (figure 8.11)

Robert Campbell explores this phenomenon for *Architectural Record*, referring to buildings that are very attractive visually, but frightening in what they portend for the future of architecture – designed to engage only one of our senses. An example is the WGBH building where the most public part of the façade ceases to be architecture and becomes an LED mural (figure 8.12). Campbell asks whether architecture is becoming a purely visual activity (like a virtual-reality video game, without the noise). What Guy Debord dubbed the 'spectacularisation' of the Western world makes us spectators on the world around us, even on own lives: advertising effectively sells us images of ourselves, as alternatives and enhancements to what we are.[165] The narcissistic or nihilistic eye relegates architecture to the personal realm, as self-expression, or the inconsequential: architecture as embodiment is incompatible with a world of instants and moving images.[166]

Facing: [8.11] TIMES SQUARE (NYC)

Below: [8.12] WGHB HEADQUARTERS, POLSHEK PARTNERSHIP (BOSTON)

Mobility is a critical consideration in contemporary architecture, where we ourselves are projected across the landscape at high speeds. We live among larger-than-life icons and signs never intended to relate to the upright human figure, but meant to catch the eye of the high-speed passerby, like the undeniably auto-centric landscape of the Las Vegas strip: what Chester H. Liebs calls 'Architecture for Speed-reading'.[167] Kevin Lynch proclaims this the new world view: "it may be asserted that the moving view is the primary way in which we experience our environment today."[168] Margaret Crawford (quoted at right) goes on to suggest that at the bottom of car culture is a culture of unreality, like Disneyland or television. This is the reflection of our spectral civilization, the 'rainfall of images'[169] which we have created – the true nature of an era inevitably shows through in its architecture, despite any attempts to the contrary. This is how we build, in order to survive the world: by escaping into surface amusements and surreal preoccupations, constantly flowing around but never through us.

"Like television, another individualized medium, the automobile distances us from the world outside our sealed capsule while restricting it and abstracting it. The world, through a television screen or windshield, becomes strictly two-dimensional, and substance is reduced to the level of an image, a strictly visual event that does not invite participation."[164]



Right:
[8.13] LAS VEGAS STRIP (NEVADA)

Facing:
[8.14] MAIN STREET, USA (DISNEYLAND)



"And this spectral form of civilization which the Americans have invented, an ephemeral form so close to the vanishing point, suddenly seems the best adapted to the probability – the probability only – of the life that lies in store for us. The form that dominates the American West, and doubtless all of American culture, is a seismic form: a fractal, interstitial culture, born of a rift with the Old World, a tactile, fragile, mobile, superficial culture ..."[170]

Perhaps, as Baudrillard suggests (at left), this is the only possible architecture for our *culture* of unreality. Fractal, mobile and superficial architecture presents an illusion, a phantasm or mirage (figure 8.13). The city of images eclipses our natural means of orientation and identification. The mimetic faculty fails to connect us to their reality, because they exist in other spheres: the inanimate mechanical, the impossible virtual, and the unbelievable surreal. They exist in abstract space, where we can visit but cannot dwell – we simply can't experience that world on any deeper level than the surface, the visual, the image. Lefebvre discusses the paradigm shift from the natural 'absolute space' of the ancient world – a limited and comprehensible system of heterogeneous places – to the synthetic and homogeneous 'abstract space' of the modern Western world:

"Abstract space is not defined only by the disappearance of trees, or by the receding of nature; nor merely by the great empty spaces of the state and the military – plazas that resemble parade grounds; nor even by commercial centres packed tight with commodities, money and cars. It is not in fact defined on the basis of what is perceived... it operates negatively."[171]

This is a critical definition: abstract space is defined by what is *not* perceived. From a phenomenological perspective, contemporary architecture can be defined the same way: by what isn't felt, what doesn't resonate, what hasn't connected us to anything meaningful within it. This is no discredit to all that contemporary architecture *is*, but it provides a different (and disturbing) perspective. The preoccupation of this thesis is the negative messages that our asymbolic cities communicate: the lack of emotional connections or sense of place, the loss of memory and identity, the impossibility of creating order and the inability to express meaning. Contemporary built environments produce a paradoxical sense of silence, absence, even inconsequence – the unreal has replaced the real as an appropriate expression of our age, as so many isolated entities in empty space.

Alternate Realities

"In our profane and profit-seeking culture, art has been given the task of creating alternatives for everyday reality, instead of awakening an awareness of the metaphysical dimensions outside everyday consciousness. Building has become sheer technique and no longer provides a connection with the spiritual world through architectural symbols."[172]

- Juhani Pallasmaa

Experiencing the world with no recognition of self, no grounding familiarity or reassurance of what we know, is the ultimate estrangement – our reality is an uncomfortable one. The urban environment excites and overwhelms us with chaotic change, fragmentation and ephemerality;[173] we escape to the suburbs' anesthetizing banality, only to be stifled by seemingly infinite sameness. As substance becomes image, space invades place, and vertical heterogeneity collapses into homogeneous horizontality, architecture has taken on an unusual position: offering consolation and distraction, however inauthentic, from our existential frustrations (figure 8.14). What was once the primary conciliator between humanity and cosmos, intensifying our spatial experience and bringing us into connections with the world, can now permit an escape from the expanding universe and its challenges. We live with deeply disturbing existential conditions and environmental threats that somehow don't enter our realities, cocooned inside our personal spheres and all too willingly distracted by surface entertainments.

Unreal architecture is a disturbing prospect because it allows us to inhabit our illusions, numbing the senses into compliance with the patently inauthentic. Venturi notes the contemporary role of the architect – reduced to a purveyor of signs – and separates form, space and structure from meaning, offering the decorated shed as a valid typology for our times.[175] Kunstler (quoted below) addresses America's 'Capitals of Unreality' - like Las Vegas and Disney World – but architectural caricatures are ever more common, venturing outside the precincts of the theme park and into everyday context. Baudrillard emphasizes that Disneyfication permeates Los Angeles, for example, surrounded by imaginary places: "a town of fabulous proportions, but without space or dimensions."[176] The cinematic or cartoon city offers excitement and escape from the abstract banality or brutality of average architecture, but as Vesely notes, "the simulated integrity of an artificial setting (Disneyland, for instance) creates a fragment rather than a theatrical stage set."[177] This architecture does not assert any authentic way of life, disabling any real participation.



"As the places where Americans dwell become evermore depressing and impossible, Disney World is where they escape … a cartoon capital of a cartoon republic enshrining the falsehoods, half-truths, and delusions … that we are a nation of families; that we care about our fellow citizens; that history matters; that there is a place called home."[174]



[8.15] DUCK BUILDING (LONG ISLAND)



[8.16] GRAND LISBOA HOTEL, DENNIS LAU (MACAO)



[8.17] SAGE GATESHEAD BUILDING (GATESHEAD, UK)



[8.18] CINEMA (DRESDEN)

Foreign Bodies

The body used to be dignified in architectural form, asserting our place in the world and concretizing our reality – instead, the architecture of the un-real substitutes novelty and wondrous impossibilities. 'Embodiment' in contemporary architecture is anything but noble: Venturi upholds the Long Island duck as a genuine work of architecture, subordinate to a symbolic form that is appropriate to its purpose, and so it is (figure 8.16). This is the new 'speaking architecture', an unlikely shred of authenticity in a Disney-fied architectural environment, where tangible certainties are too rare. Or is any comprehensible embodiment a welcome diversion, amid deliberately meaningless abstractions and glass boxes that abstain from saying anything at all?

Anthropomorphism cannot be wholly absent in architecture, but the lateral extension of the human metaphor to any state of the body - and outwards to any potential body at all - weakens its former symbolic role (figure 8.17). The human figure used to be honored in architecture, dignifying the building in turn; now the referent inspiration of a building can be anything or nothing at all, and commendably so. Any three-dimensional entity is a body, after all, like buildings themselves: a plain box, a crumpled piece of paper, a ruin of twisted metal … or a bubble, or crystal, even an invertebrate cell with no knowable form at all (figures 8.18 & 19). They stimulate the imagination with images of life in other dimensions, microscopic to macroscopic: we can experience the fluid world of the amoeba, or the refracted world of the geometric prism, like visitors in a weird wax museum of form.

We have a natural fascination, to be sure, with these amorphous shapes and bodily distortions (like our own deformations in funhouse mirrors). They offer entertaining parodies of the physical realities we know, providing a different outlook on our world – like the image of Chicago in a drop of mercury, figure 8.20 – or else the exotic alternative realities of bodies quite unlike us. They do involve the empathetic body, in contortionist twists and folds, and capture the curious mind by their very otherness (figure 8.21). Perhaps this *is* the image of man in the post-modern world, diversifying himself with unlimited possibilities, role-playing in multiple virtual dimensions.

Entertainments have their own vital place, but not at the expense of our own place in a genuine and meaningful environment. Surface occupations and distractions merely reinforce the boundaries of our personal spheres, diverting our attention – via various tech-nologies – to somewhere else. Isolated in our personal cocoons and numbed by artificial reassurances, have we given up the eternal human search for truth and meaning? Pallasmaa (quoted below) challenges us to reconsider the hidden depths of potential experience, behind surface entertainments and media screens, creating more meaningful embodiments that intensify our own experience in a humanized world.



[8.19] 'CLOUD'S GATE' , ANISH KAPOOR (CHICAGO)



[8.20] DANCING BUILDING, FRANK GEHRY (PRAGUE)

"As our technological means multiply, are we growing – or being stunted – perceptually? We live our lives in constructed space, surrounded by physical objects. ... Architecture holds the power to inspire and transform our day-to-day existence. ... To advance toward these hidden experiences, we must penetrate the omnipresent veil of mass media. We must fortify our defenses to resist the calculated distractions, which can deplete both psyche and spirit."[178]

Summary: Orientation and Identification

"Architecture and urban design is a concretisation of this space in which we exist, providing not just orientation but also identification: in contrast, bad architecture confuses and disorientates. … Good architecture allows us to dwell because we can both orientate ourselves within and identify ourselves with an environment. In other words, we experience both the environment and its relationship to our culture as meaningful."[179]
– Rhys Phillips

The contemporary built environment is a paradoxical experience: built forms everywhere but no relatable substance or identity, signs everywhere but no comprehensible semiotic, infrastructure everywhere but no sense of a higher order or deeper meaning. In secular culture, we have cast aside symbolic language and flattened the symbolic dimension into signs and images. With no deference to any system of order, is this ultimate freedom or architectural anarchy? Surveying the range of its expressions, one can only concede that it is both: a strange and marvelous wonderland of fictional characters, terrors and delights, fantasies and nightmares.

Fractal, weightless and placeless built objects may delight the imagination, but too often deny orientation and identification – the *a priori* conditions of dwelling. Broken into planes and fragments, form loses significance; deployed in value-neutral space, tectonic archetypes lose their symbolic message. In our towering cities of virtual horizontals, vertical hierarchy and centrality do maintain some vestigial meaning but only in quantifiable, real estate terms – we remain aware of the primal power of 'central location' and 'penthouse' – but without any reference to a greater order. Replaced by value-neutral coordinates and abstract forms, the concrete and heterogeneous 'world of life' loses tangible qualities.

Contemporary architecture is faced with the challenge of meaningful representation, escaping too often into cartoon figures and cinematic surfaces.* The role of architecture, Pallasmaa says, has gone from concretizing our lived realities to providing alternative realities and distractions rather than authentic commentary. Is this what we wish for, what gives meaning to our lives: the possibility of escape from our realities, and the promise of entertainment? Or are these architectural diversions merely offering welcome refuge from violent and disturbing Deconstruction, and relief from the average building whose mechanical banality cannot engage the body or the mind?

An architecture of disconnection and disorder, disembodiments and distractions can satisfy our desire for novelty and fascination with destruction, but ultimately it will not sustain us: as Heidegger reminds us, a comprehensible and meaningful ordering framework is a crucial human need. Imitation and identification is our nature, a condition of 'finding ourselves' in the world. Where the built environment bears no relationship to the physical or spatial realities we know, therefore, our natural impetus to identify with our surroundings becomes an instrument of isolation and alienation.

**** "Nowadays it is possible to identify two different types of architecture: the architecture of essence and the architecture of [shape]. The architecture of essence perceives the metaphysical and existential problem of being a human and tries to reinforce man's foothold on earth. The architecture of [shape] aims at capturing the viewer's attention and approval through its voluble language of expression or through an appeal to indolence. The first type of architecture questions, arouses and stops, whereas the second conceals the problems of life by dulling the senses with pleasure."***[180]

Facing: [8.21] DOWNTOWN CONDOS (TORONTO, ON)



CHAPTER IX

CONCLUSION: ARCHITECTURE AND AUTHENTICITY

"Authentic architecture is always about life. Man's existential experience is the prime subject matter of the art of building. To a certain degree, great architecture is also always about architecture itself, about the rules and boundaries of the discipline itself. But today's architecture seems to have abandoned life entirely and escaped into pure architectural fabrication. Authentic architecture represents and reflects a way of life, an image of life. Instead, today's buildings frequently appear empty and do not seem to represent any real and authentic way of life."[181]

- Juhani Pallasmaa

Human experience – human *life* – is the fundamental subject of architecture. The world man makes for himself can concretize essential qualities of human understanding, illuminating and sustaining a certain grasp of the universe and our place within it. This is the timeless task of architecture: to make embodied existential metaphors that affirm our being in the world, engaging us as participants in a larger paradigm. Architecture has the potential to articulate meaningful connections between humanity and the world - as it has throughout history - but contemporary Western man is disconnected, individualized and estranged from his environment, and even himself. 'Spiritual homelessness' is a complex modern condition which architecture cannot fully resolve, but responsibly must address and attempt to repair. Instead, much of the contemporary built environment abdicates from meaningful existential expression, and often from meaning altogether.

Pallasmaa says that the authenticity of architectural experience is grounded in the tectonic language of building, rendering the act of construction comprehensible to the senses.[182] Engaging the body and the imagination, this is the 'intensification of being' that this discourse seeks – the universal, bodily experience of an environment that speaks meaning to us. Exploring the range of deep structures that engender common human experiences, we have found that the world we perceive and project is fundamentally universal. Our senses shape that interface, and we interpret the world via our own corporeal realities. Our 'first language' is spatial, naturally drawing its vocabulary from intuitive archetypal and anthropocentric systems. This thesis is situated in the relationship between our intuitive language of space and the archetypal nature of form, coming together in architecture – the point of contact between mass and space – to shape strong sensory experiences of the built world.

A SYMBOLIC LANGUAGE

We have approached architectonic terms as a symbolic language, shaping stories about man and his universe. Empathetic imagination and spatial vocabulary are integral to each other: in vertical rising or horizontal reaching, resting mass or dynamic motion, we engage in the existential expression of the building. This exchange between our inner experience and outer world is the basis for orientation and identification, the *a priori* conditions of dwelling. We vitally need order and meaning in our environment; we seek it by mapping our own experience onto the world, in search of a familiar resonance. When we find an external expression that rings true to our internal perceptions, we effectively 'find ourselves' in the world – only then can we build. The meaning of the building is therefore beyond architecture: it directs our attention through it to the world, strengthening our sense of being, and permitting us to dwell.

Within this work, we have returned to the earth and the primal cave: it speaks of intimacy and secrets, protection and confinement. Earthly qualities – like darkness, solidity, mass, gravity, concavity, sinking – all invoke this archetypal shelter and sanctuary. We have also revisited the mountain peak, at the opposite end of the spatial spectrum, and its intuitive associations: light, air, void, openness, convexity, power, rising, and the exhilaration of flight. These are the boundary conditions of our tectonic experiences, and the primary elements of architecture: all of the spaces we inhabit exist in the balance between them, and manipulating that balance makes architecture powerfully symbolic. Architecture is a mediator between man and the world: positive, negative or neutral, the built environment is a constant and powerful influence.

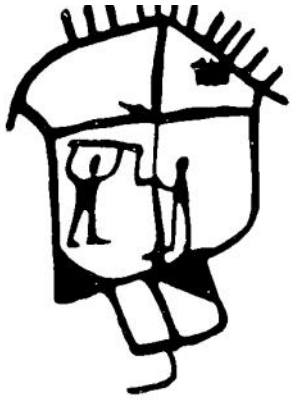
The simplest terms of relationship between earth and sky are the horizontal boundary, establishing 'above' and 'below', and the connective vertical axis. Architecture is the art of horizontals and verticals, framing the conditions of relationship between these basic dimensions – and therein, framing human relationships to our surroundings. The value-charged symbolic vertical is the armature of the work, imparting order and meaning within natural hierarchies. Along that axis, a natural hierarchy orders space in three dimensions: the under-, middle- and upper-world, like our own standing bodies between earth and sky. We project these models onto the world as ordering frameworks, replacing the unknown with the known. The tectonic vocabulary of body and space, earth and sky, imparts a stratified hierarchy with intuitive value — common to body, building and world.

We have explored a broad range of these expressions – macrocosm, mesocosm and microcosm – in traditional architecture, within overlapping realms of metaphor: the stratified cosmos, and the upright human figure. The lived reality of the unchanging cosmos – sky above, earth below, horizon around – shaped an image of the world, and of man's place within it, that was reflected in built form. The embodied axis, raised mass or sunken space engages this symbolic dimension; any manifestation of vertical motion has the same potential. The simple stair element has an enormous expressive range, even at the domestic scale, because it is fuses vertical and horizontal and shapes our physical interaction with them. The architectonic plateau or base is another archetypal element, articulating a place distinct from continuous horizontal space. Mass and void, center and axes, gravity and flight are powerfully symbolic, all referencing the fixed vertical.

The image of man also pervades ancient cities. Embodiments of vertical form, forces, feeling or function engage the body, and therefore the imagination, through our mimetic nature. Articulating the characteristics of base, shaft and capital expresses the affinity between body and building, just as earthly and skyward references reinforce the connections between building and world (as in the oneiric house, embedded in human imagination: see figures 9.1 & 2). Vesely provides an encapsulating description of the human metaphor, relating to the body and to the world:

"An obvious example is the long tradition of the architectural orders, exemplified in the vertical structure of the column, which stands on its foot (base) and culminates in the head (capital), while the body plays the role of the mediating link between the celestial and terrestrial layers of reality. The verticality of upright posture removes us from the ground and thus contributes to development, which requires freedom; at the same time, it points toward the earth that pulls us downward to the ground that caries and gives support to everything achieved in the fulfillment of our freedom."[183]

These are the essential terms of our spatial vocabulary, relating to architecture and beyond the building to the world. This language of form and space has archetypal associations, but the stories it can tell are diverse: like poetry, the meaning of architecture is not in isolated terms but in their relationship to each other, and our own 'reading' of them. Surface structures like religion, social convention or cultural education shape the superficial levels of interpretation, but the first principles of architecture are deep structures rooted in our essential humanity, with universal implications. Ancient architectural icons speak to us on this level, immortalizing an eternal human drama that we can still participate in regardless of time, religion or culture.





Top:
[9.1] HUT DRAWING at BEDOLINA ROCK from RYCKWERT, *IDEA OF A TOWN*

Bottom:
[9.2] HOUSE WITH STAIRS DRAWING at NAQUANE ROCK from RYCKWERT, *IDEA OF A TOWN*



Reading the City

"You can tell what's informing a society by what the tallest building is. When you approach a medieval town, the cathedral is the tallest thing in the place. When you approach an eighteenth-century town, it is the political palace that's the tallest thing in the place. And when you approach a modern city, the tallest places are the office buildings, the centers of economic life."[184]

- Joseph Campbell

Traditional cultures make their belief structures clear. In site and height, the most important institution – on a square, in a district, a city, or an entire region – asserts its role within an overarching hierarchy. Whether religious or secular, the tallest building on a traditional city skyline marks the seat of the highest power, presiding over its domain. It leaves no doubt as to its authority, and therein, to the priorities of the social body it represents. Its importance is often articulated on the horizontal plane as well, opening a space before it, and acting as a centre of gravity to order the community around it. Declaring itself from afar, any vertical element becomes a natural focal point. The bell tower or steeple is an object of urban identification, acting as a landmark against the horizontal extension of the landscape. But the identity it proclaims is more than geographical: it is a cultural, social, or even personal statement of values. Articulating a vertical axis is not always associated with height, but always associated with meaning. (figure 9.3)

[9.3] BRUGES (BELGIUM)

Spatial and social hierarchies of medieval Bruges, from the guild houses to local churches, culminating in the Cathedral Sint Salvador.

Chaos to Cosmos

Conceiving a cosmic model, giving order and meaning to events and environment, pre-modern man assigned values to form, space and place within common frameworks: a three-level hierarchy united by a vertical *axis mundi* at the crossing of the cardinal axes, marking the centre of our world and line of connection to those beyond. Whether the model for this ubiquitous cosmography is the shape of the cosmos or the human figure doesn't change its form or organizing principles: any vertical manifestation establishes an axis between underworld and upperworld, earth and sky. These 'cosmic' conceptions take shape in our cultural constructions, making our visions manifest in our environment.

Architectural icons embody the qualities man wishes for, corresponding to his cosmological beliefs. In deep structures – mass, motion and substance – they represent an ideal relationship between man and his world. The forms they choose for their architectural icons are drawn from natural models, with deliberate symbolic analogy. The cave is associated with birth, death, the generative forces of nature and the mysteries of mortal life; the mountain is a symbol of permanence, divinity, enlightenment and transcendence. Primitive cultures worshipped in nature and through nature, honoring and re-creating its symbolic forms. In ritual landscapes of caves and mounds, posts and circles, they constructed images of cosmic order to invoke the co-operation of forces beyond their understanding. Their earth- and sky-orientation was paramount, clearly articulated from the earliest painted caves to monumental earthworks like Stonehenge and cosmic geometries like the Nazca lines.

Constructed caves and mountains re-create the topological extremes of the stratified cosmos: this is a manifestation of the hierarchy of the world, central to manifold primitive belief structures. These people aspired to spiritual transcendence, ritual rebirth, and re-creation of order out of chaos, aligning themselves physically and spiritually with the powers of the universe. The ancient Babylonians wished to pacify their gods, prolonging the life of their city: what they built is a manifestation of permanence, in mountain-mimicking mass and form. The plateau atop the ziggurat is a place of exchange, a sanctified ground plane between worlds. The architectural mountain rises from the cosmological model of the temple complex to mark an axis mundi and anchoring the surrounding city with its dominant mass, as a powerful and sacred place. It is a symbol of the centre of the world, and a model of the order of the cosmos. The Egyptian pyramid is likewise a world mountain: a megalithic and absolute assertion of its own intransience. Fusing the corners of the earth with the axis of the sun in a precise geometric relationship, the pyramid is an intermediary joining earth and sky, mortality and transcendence. Set to the quarters of heavens, its mass, motion and substance make its intentions clear: the pyramid stands to conquer eternity.

These world mountains established a religious connection to the sun, sky and higher powers, just as the cave is a spiritual link to deep primal forces and our 'lower' selves. The axis inferred by the *nansipu* hole or the apex of the pyramid is the same: the centre of the world, fixing a natural place for man in direct correlation to the powers that control his fate. Human societies have settled the earth through these acts of centering. The embodied axis, from the primal post to roland and totem poles, gives physical form to the line of movement cave and mountain imply – placing man between the earth and the gods. Surveying the chosen forms of primitive and ancient architecture, it seems that the qualities of form and space we imitate in our constructions give shape to we aspire to: borrowing characteristics from the idealized body, or from the cosmicized landscape, mimetic architectures create an image of the world as we wish it to be.

"The perfect temple should stand at the centre of the world, a microcosm of the universe fabric, its walls built four square with the walls of heaven. And thus they stand the world over, be they Egyptian, Buddhist, Mexican, Greek, or Christian, with the greatest uniformity and exactitude. When the world has become circular and spherical, the squareness is retained almost universally as a characteristic of the celestial earth, the four-square enclosure on the top of the world mountain, where the poplar tree or column stands…"[185]

"As a form, [the temple] expresses the ways common in that period for existing between earth and sky and certain anthropomorphic situations. It is in fact the structural form that has ensured the classical language should have maintained its relevance over the centuries … Indeed, the anthropomorphic column is constitutive, and like the classical statues, it a synthesis of universal ideals and concrete everyday experience."[186]

The ancient Greeks were less concerned with physically relating their city to the cosmos or building an *axis mundi* within the polis (they had established the *omphalos* at Delphi, marking the birthplace of the world within their territory) than with developing an accord between man and the gods, within the natural landscape. Their architectural emblem is the temple, based on classical orders: dignifying the image of humanity in the individual male or female figure, standing upright, in harmony with their anthropomorphic gods. Their desire to *know* the geometric order of nature, and to represent it in a perfectly tuned harmonious unity, is evident in the refinements of the temple's every detail.* Mastering the proportional relationships of the body, like the order of the larger cosmos, the Hellenic aspiration to harmony and unity could be realized in built form. Norberg-Schulz (quoted at left) explains that the Greeks wanted to concretize a multitude of existential meanings, true to the complexity of human existence in the world: the order and beauty of the cosmos, the human role and realm between earth and sky, the rebalancing of forces and the fundamental unity of man and nature.[187] Heidegger also describes this function of architecture, reinforcing our being in the world (quoted facing).

*** The temple combines the basic geometries of plateau and peak, with columns between: a complete image of earth, sky and the middle realm of man. The raised crepidoma establishes the area of the temple as a separate place, signaling its belonging to a higher realm. The columns spring straight upright, bodies in action, to meet the resting entablature that caps their motion. The triangular pediment's gentle, even pitch gathers the uprising motion beneath it in a slow, smooth line, drawing it to a protracted point of release skyward.**

"The articulation of the architectural symbolism of a temple exploits both the horizontal and the vertical dimension; the primary function of both is to set the temple apart from the outside world."[188]

The pediment fuses structure with sky, but the upward motion it embodies is lesser than its downward force; the temple is a sacred place, home to an immortal god, but still an earthly one. It exists *between* mortal and immortal, between earth and sky. Thus, the pediment bears down from the heavens with a stabilizing weight, rooting the columns to the stylobate and the structure as a whole to the solid earth beneath it. The eternal fascination of the Greek temple is in this perpetual tension, grounding and uplifting, at once dynamic and constant.

Facing: [9.4] TEMPLE OF CONCORDIA at AGRIGENTO (SICILY)

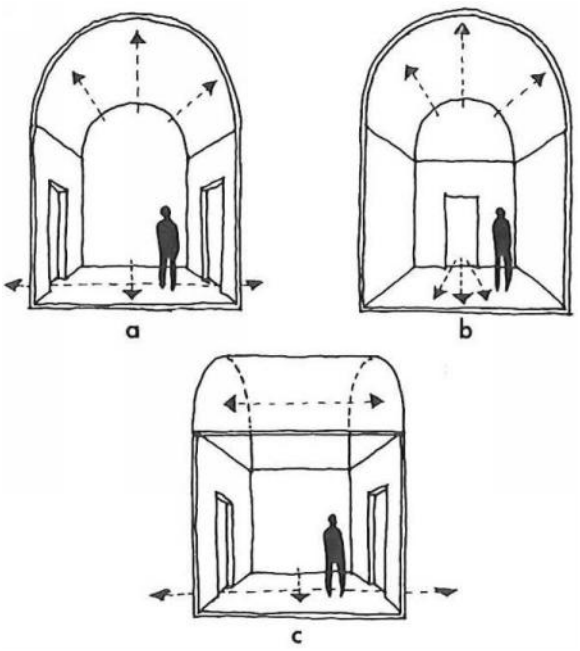
"The temple-work, standing there, opens up a world and at the same time, sets this world back again on earth, which itself only thus emerges as native ground. ... The temple, in its standing there, first gives to things their look and to men their outlook on themselves."[189]

The Classical tradition has endured through various adaptations and revivals, from the Roman to the Renaissance and beyond – and it still has enormous impact, dignifying the human figure in relationship to the earth and the gods. Even where they are unnecessary as structure, post and beam naturally express that eternal condition of *being* upright against the surface of the earth, between earth and sky. In base, shaft and capital the column embodies universal human truths, placing man's earthly realm between 'pure dwelling place above' and underworld – the spatial concept of a stratified cosmos endures throughout Greek and Roman culture.

The Romans established the same vertical focus, in interior space rather than exterior form, abstracting man from nature to present the sky viewed from underground. The contained, vaulted interior typical to Roman architecture opens views upward, fusing the experiences of earth and sky into one space. The Pantheon offers a singular example, concentrating powerful spatial experiences – vertical and centre, enclosure and opening, concave and convex – to present a cosmos in miniature. MacDonald cautions, "to say with any precision what the Pantheon meant to Hadrian and his contemporaries will probably never be possible"[190] – but the enduring value of the Pantheon is what it means to the universal human being, making it the temple of the whole world.

Walking the *cardo* and *decumanus* or standing within the Pantheon, Roman architecture – and Roman rule, by association – is presented as a fact of nature, in universal terms. It speaks to the eternal truths of being human, through our natural readings and responses to the world. Even today, we engage physically in the story it tells – noble, stable, bringing the universe and humanity within it into natural order – and fall bodily subject to Roman space.





[9.5] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE*: relating roof form and room form, a) 'motion' of vault and room correspond, openings contrast b) vault, room and openings correspond c) vault and openings correspond, form of room contrasts



[9.6] BASILICA MAXENTIUS (ROME)

The ancient Romans were fluent in the tectonic language of architecture, sensitive to its sensory effects and masterful in its compositions: Roman buildings embody the principles of Roman rule, and we cannot help but participate in their expression. The simple shelter of the arch, grounding and uplifting the space it describes, is a dialect in itself: rising or sinking, expanding outward or upward, or in perfect equipoise. In three dimensions, the vault or dome can direct or still motion, horizontally as well as vertically (figure 9.5). Roman architecture intensifies our natural spatial responses, becoming a force of nature itself: unquestionably powerful and universally legible, using the language of mass, form and space to communicate the core ideologies of the Roman empire (figure 9.6).

In the Middle Ages hierarchy was critical in every aspect of life, spiritual and practical, individual and collective. The vertical as status symbol is emphasized in secular structures, declaring the power of a family or *contrada*, monarch or government, in unambiguous vocabulary.[191] Mumford uses the term 'axial man' to define the state of mankind in this era, at the emergence of axial religions such as Christianity and Islam – "axial religion was in the line of growth: it projected a destination far beyond that of archaic or civilized man, and conceived a new kind of person …"[192] Religion was paramount, and the Church formed the heart of the city both conceptually and physically. "Medieval ideas in Europe find their most exalted architectural expression in the cathedral. The vertical cosmos of man is dramatically symbolized by pointed arches, towers, and spires that soar."[193]

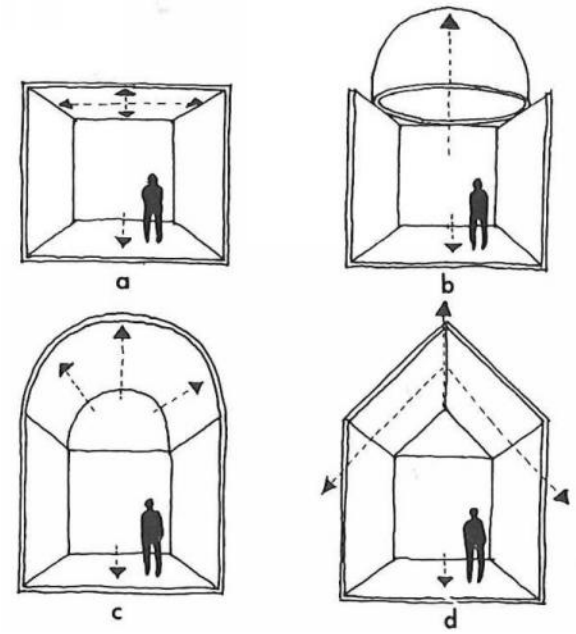
The stalwart medieval basilica or soaring Gothic cathedral demonstrate the very different characters that mass, form and space articulate. Solidly grounded, the medieval basilica – like the social hierarchy of the Middle Ages – is firmly fixed in place between heaven and hell, enduring its time on earth patiently and quietly. The Gothic cathedral, conversely, sends piercing shrieks into the sky: it stretches and reaches, shaping space into sharp arrows upward. Its structural lightness and openness create an ethereal, uplifting, ecstatic interior – Norberg-Schulz simply states that the Gothic cathedral *is* heaven, in symbolic space.[194] Concretizing spiritual elevation in architectural form, it declares its purpose and compels us to rise along with it.

"Gothic builders were excited by verticality. It is hardly surprising, therefore, that the preference which was developed in their soaring cathedrals extended also to pointed windows on houses and pointed tops on boxes and chairbacks. No surprise, either, that it was taken over by nineteenth century romantics, who were able to read moral rectitude and spiritual enlightenment into the verticality of pointed architecture, and only worldliness into more horizontal shapes."[195]

'Cosmic' design principles and references to the vertical are evident in plan, as well as section or elevation. The early Christian church (unlike other medieval constructions) adheres to precise geometry as an expression of heavenly order. The centralized plan and ordering geometries of the Renaissance church present a humanist cosmos, asserting the dignity of man and situating humanity at the centre of the universe.[196] The Gothic cathedral is likewise a cosmic model, according to the spatial concepts of its era.

"Designed in an attempt to reproduce the structure of the universe – not unlike the great scientific experiments of our time in this respect – the [Gothic] cathedral is perhaps best understood as a "model" of the medieval universe. It is the theological transparency of this universe that transformed the model into a symbol."[197]

In general, pre-modern architectural icons are built to consistent vertical models: they engage the symbolic dimension deliberately and artfully, in an expression appropriate to the core beliefs and values of their time. The power in their beliefs prompted all of these cultures to create meaningful architectural works, out of compelling spiritual (rather than physical) necessity. All of the belief structures and principles discussed thus far are rooted in the conviction that there *is* order in the world around us, even as that order is reinvented for each new age – but as Ryckwert says, we have lost that beautiful certainty about the world and our place within it.[198] The age of cosmic certainties is over: ours is an age of revolutions.



[9.7] from THIIS-EVENSEN, *ARCHETYPES IN ARCHITECTURE*: qualities of spatial motion,
a) neutralizing space
b) centralizing space
c) directional space
d) directional and closing space

The Problem of Neutrality

"In modern design, space is divided for the desired purposes as if a meaningless, valueless commodity. The modular grid of industrialized construction extends homogenously and without differentiation in all directions. But, as the philosopher Viktor von Weizsäcker has pointed out, 'Homogeneity of space kills sense of place."[199]
- Juhani Pallasmaa

In the ancient world, the idea of a stratified cosmos – corresponding to the hierarchy of the human body – gave order and structure to space. The symbolic vertical created a clear focal point and center of gravity, defining a place against the lateral extension of space. But revolutionary astronomical observations disproved ancient spiritual cosmological notions; new scientific cosmologies emerged from Kepler's elliptical orbits, Copernicus' heliocentrism, and Galileo's telescope. Descartes' cosmology is based on these principles, proposing space as infinitely divisible and all movement as a straight line. Infinite extension is thereby the essence of both space and matter … but this loss of definition presents difficult existential consequences for man, and drastic challenges to architecture.* The axial transformation of the European world view replaced the focused, vertical cosmos with new scientific models, setting man adrift in infinite non-specific place – negating verticality, centrality, hierarchy, and therein any specificity of place, or potential for orientation.

As an art of permanence, representing eternal certainties like the order of the universe and therein, the place of man, architecture could no longer serve to transform chaos into cosmos. The built world used to serve as a mediator and metaphor, replacing unknown disorder with a knowable model of order, but ours is a *known* disorder within a logical but value-neutral world. Thus, as Alberto Perez-Gomez describes in *Architecture and the Crisis of Modern Science,* architecture has lost the poetic and metaphysical content by which it could ''explain the inexplicable and state the unutterable."[200] The 'death of architecture' as a symbolic art has been discussed for centuries – the mirror of our civilization, like culture itself, is broken into fragments and divergent ideologies. Without consensus, without a valid model or recognizable metaphor to concretize and sustain, what is architecture to represent?

"In this scheme, architecture, as the founding art, holding a privileged place as the essential manifestation of the symbolic mode, not only came first but also, deservedly and inevitably, died first. The section on architecture in the aesthetic ends abruptly with the architecture of the Middle Ages, the full flowering of the 'Romantic' mode and spiritual counter to the 'Classical'. After this, architecture seems to find no place in the descent of art (or the ascent of the spirit) through sculpture, painting, music and poetry."[203]

*** Nicolas de Cusa first proposed the theory of value-neutral space in the Renaissance, negating the hierarchic cosmology – as described in Dante's Divine Comedy – so integral to the ordering models of medieval and Gothic architecture. Classical rules of proportion, carefully drawn from nature, were now subordinated to the rules of perspective.[201] Abandoning the archetypal circle as symbol of perfection, and the notion of the earth as a perfect sphere, centralizing geometries no longer held any higher significance. The evolution from centrally-planned churches to complex baroque plans – like Borromini's San Carlo alle Quattro Fontane – reflect these new less-than-perfect cosmic orbits, in an attempt to resolve our need for place and meaning within an infinite and abstract universe.[202]**

Losing the Body

"The idea of an architectural monument as an embodiment and abstract representation of the human body, its reliance on the anthropomorphic analogy for proportional and figurative authority, was, we are led to believe, abandoned with the collapse of the classical tradition and the birth of a technologically dependent architecture."[204] - Anthony Vidler

Architecture is always an embodiment, but form and space relate to the human body in different ways. The global metaphor presents a frame, shaping a human place in the universe in negative space to be occupied. The body metaphor is a positive figure, showing man how he belongs like a primal post, upright between earth and sky. Human beings have built according to the structural logic and natural harmony of the body since time immemorial, in more or less literal representations. The hierarchy of form and relative functions of the body informs architectural typologies from tribal huts through the High Renaissance, with the apotheosis of anthropomorphic architecture in the Classical Greek orders. Harmony is achieved through the proportional unity of the figure, dignifying the image of man and the relationship between earth and sky, mortal and divine (gathering the Heideggerian 'fourfold', enabling dwelling). The enduring joy of identification immortalizes the Classical orders: resounding with human characteristics, they speak across time and culture to every body.

The loss of the Renaissance body as a model of divine harmony broke down these potential relationships between body and building, building and world. Distancing the body from art or architecture represents a paradigm shift, prioritizing the intellectual and scientific over the spiritual, emotional or even corporeal. This changing focus is evident in the transition from Classical embodied form to Romantic representations of feeling, to intellectual Enlightenment abstractions and Modern moral idealizations. Pallasmaa says "the dominance of the eye and the suppression of the other senses tends to push us into detachment, isolation and exteriority"[205] – the 'inhumanity of contemporary architecture' is a consequence of neglecting the body and senses, making a world by the eye and for the eye.

The body has history and identity, natural needs and limitations, but Modernism aimed to supersede this basic humanity: the modern architectural body is purified to its skeletal frame, liberated from memory and stripped of emotion. Tschumi says "any relationship between a building and its users is one of violence, for any use means the intrusion of a human body into a given space, the intrusion of one order into another"[206] - engaging but alarming Deconstructivist expressions dramatize this breakdown of conventional order by turning architecture inside-out, dismembering the architectural body (and therein, the language of architecture) in definitive rupture. Any vestigial engagement between body and building, even disoriented or disturbed, is finally dissolved in the contemporary built environment where positive or negative statements of renewal or shock value tend to disappear, just as the architectural body does, into dematerialized absence and silence.

Articulating the constituent parts of our own hierarchic body communicates a meaningful affinity with man and the world, but buildings today seem to exist in a state of virtual horizontality, without base or cap or orienting expressions of verticality. We have explored the illusions that have supplanted the architectural body, and how this impacts the eternal human being still bound to gravity, place and time. These inescapable conditions of being human may be the greatest frustration of modern man. It may also be his salvation: a final vestige of reality in an increasingly intangible universe.

Losing the World

"Architecture is a powerful tool of adaptation, but it has become an instrument of alienation. Most contemporary architecture, with its sealed windows, emphasis on façade and ignorance of landscape, divorces us both from the intimate processes of living and from nature, our fundamental habitat. Our power to transform the Earth has promoted the illusion that we are somehow separate from it …"[207]

- Anne Whiston Spirn

Vidler's analysis leaves the human metaphor for dead, in its post-modern condition; Pallasmaa claims that the *authenticity* of architecture – and therefore of human experience – is likewise endangered. The breakdown of recognizable human metaphors in architecture makes identification more and more implausible. The scientific explosion of the stratified cosmos renders orientation likewise obsolete, in an abstract Cartesian universe. As scientific knowledge dismantles conventional hierarchies of order and meaning, the language of architecture – fundamentally an art of permanence and solidity – is challenged. Our contemporary crisis of meaning makes it clear that we have not yet found a meaningful semiotic for our time.

Secular architecture expresses new relationships between humanity and cosmos (such as Boullée's cosmic model for Newton's cenotaph).[208] The shift from static and stable to dynamic conceptions of the universe became evident in the free plan, like Corbusier's Villa Savoye, or Mies Van der Rohe's Barcelona Pavilion. Traditional typologies, like the domestic model, are turned upside-down. The icon of heroic Modernism – and the object of its harshest critiques - is the blank, slick box of the International Style: flat roof, strictly regularized forms, no relationship to context. Encountering the building, we experience the same sense of placelessness: a building that could be anywhere, that indeed *is* everywhere, ceases to exist as a singular object[209] – it dissolves against a background of identical figures, like a crowd of faceless strangers. Our inborn faculties of orientation and identification are superseded by the new architecture: it defies the old realities of building (and therefore of body), replacing the eternal earth-sky hierarchy with hovering habitable planes.

This ethereal state of virtual horizontality is asserted not only in spatial orientation, but also in physical form: structural columns eliminate the need for load-bearing walls, freeing plan and façade – eliminating those stabilizing expressions of mass and gravity that ground traditional buildings, fixing them firmly to the earth. Freedom from the weight of history and the confines of tradition is embodied in spatial terms, oriented laterally rather than vertically, expressing the mobility and flux that characterize our weightless civilization. At best, the Modern idiom can communicate a sense of uplifting and expanding freedom. At worst, this new style of building simply denies conventional expressions of hierarchy, place or identity, cutting off communication altogether. As Spirn describes above, we no longer dwell in meaningful reciprocity with the natural or even the man-made environment.

The contemporary built environment offers alternate realities, comforting or disturbing – Deconstructivism opens new expressive potential for architecture, but at the cost of conventional orientation and identification. Arie Graafland suggests that the Deconstructivist sensibility is born of the recognition that global modernization is pushing order beyond its limits, where the possibility of meaning is ultimately lost. Perhaps this is an accurate representation of the spirit of our age and the condition of modern man, certainly more authentic than the anesthesia of banality or escapism of patent artificiality. The two trends that have emerged in architecture – difficult expressions of the fractal, or denial and escape into alternative occupations and artificial distractions – are inarguably valid existential expressions, but neither brings us into closer connections or greater understanding.

Whitewashed over, reinterpreted or dissected and discarded altogether, the archetypal language of architecture no longer serves to reconcile man and environment. Modern architecture is charged with the impoverishment of symbolism, but Postmodern disposable styles don't offer convincing alternatives: renewing historicized forms within an anarchistic framework severs any cultural comprehension of the language of architecture. Contemporary buildings have become isolated images, whose value is novelty and entertainment … but the nature of architecture is permanence and continuity, not momentary images. The body is alienated, the intellect is distracted, the built world is incomprehensible and the larger universe is inexplicable: these are the issues facing architecture today.

Drawing their design references from the microcosm that is man or the macrocosm of the whole universe, older societies sought to connect body and building, building and world through architecture as mediator and mesocosm. Frank Gehry's works can be read as attempts to represent our uncertain universe in spatial terms, but these exhilarating expressions are like the hopeful Modernist icons: exceptions to the general rule. The Western world has largely given up building mesocosms, escaping into fabrication instead – stripped of its former symbolic role, architecture can no longer operate as chief conciliator between humanity and the larger universe.[210] These are the paradigm shifts between the old world and the new architecture: from intentionally meaningful buildings in structured 'absolute' space, to deliberately or carelessly meaningless buildings in abstract and empty space. Architecture remains didactic: each style, primitive to present, adds a chapter to the story of how man understands the world and his place in it. Like every architectural age before, contemporary architecture expresses the nature of our civilization – disconnected from higher order or deeper meaning – and the existential conflict between our inner and outer worlds.





[9.8 & 9] SCULPTURE GARDEN, CANADIAN MUSEUM OF ARCHITECTURE (MONTREAL, PQ). The collisions and fractures of contemporary form and modern architecture are represented in sculptural form, mounted on posts high above the ground: divorced from earth, seen only against the sky.

Summary: Losing Hope?

"The disappearance of beauty from the environment cannot mean anything else but the disappearance of the capacity for idealization, of reverence for human dignity, and of the loss of hope. Yet, man is able to construct only if he has hope: Hope is the patron saint of architecture."[211]

The symbolic dimension of architectural experience has been obscured, in recent centuries, as has its archaic role. Architecture has the capacity to show that life has meaning in relationship to a greater continuity, through cultural symbolization[212] – but not without the human aspiration to make it so. Iconic architecture is always an act of visioning, concretizing the world as we know it and as we wish it to be, but we no longer approach building as an existential art or an expression of human dignity. Architecture immortalizes a quality of being in the world, but our built environment speaks of fragmentation rather than integration. Where older cultures built to reinforce the order and meaning of their reality, dignifying the image of man in relationship to his universe, what we build presents alternative realities and potential for escape. Ours is an architecture of effacement, recomposition, non-representation and non-*being,* where man cannot be at home.

Dissociation and disintegration, paradoxically, are the conditions of an increasingly globalized culture.[213] We no longer feel ourselves to be part of a greater order: while our disembodied reach becomes ever wider, our personal realms become smaller and smaller. Without understanding or being understood in the larger world, we must withdraw. The external world loses substance, becoming a stream of fragmented images with neither order nor meaning to include and involve us in. The numbing banality of that external blur forms a welcome barrier, anesthetizing our senses into ever more comfortable detachment and indifference to the world beyond. Meanwhile, the effects of our disengagement are evident everywhere: ecological crisis, social strife and personal alienation come from the breakdown of reciprocity with the world outside ourselves.

Paradoxically, the worlds we make for ourselves no longer accommodate the full human being, affirming what and where we are and making our reality habitable. This spiritual homelessness results in conflicting desires: the desperate need to find something to belong to, and the will to assert our individuality.[214] We search for meaning on a personal or social level, and rarely find any tie solid enough to hold against the relentless tides of our changing times.

I believe that the estrangement of man in the modern world is self-evident, because so much of the contemporary built environment is made for other priorities. The modern city is designed to transport the body rather than move the spirit. Disposable architecture pursues profit rather than presence and permanence, resulting in buildings that 'embody' their own abandonment, speaking of absence and ephemerality. Ryckwert says that the insistence on architecture as no more than an aesthetic supplement to the economical rationality of building has restructured Western thinking, changing expectations about beauty in a work of art, finally positing the decorated shed as "the only possible architecture of the late 20th C – an argument that can serve as the 'artistic' correlative and justification of a developer's design policy."[215] Indeed, most of our buildings are commercial products rather than collective art: producing income is their primary function, while design just adds appeal. This mute decoration of the developer's shed relegates design to an exterior application, focusing on surfaces rather than depths. Thus, as Ryckwert observes,"the buildings of the late twentieth century have become raw commodity disguised in gift wrapping."[216]

Incriminating designers or developers, cultural commercialism or industrialization at large for this outcome would be misdirected, confusing cause and effect. Those factors enabled and executed our situation, but what we build is *who we are*: architecture is inevitably a mirror of culture, and a model of our aspirations. The social atomism of modern culture, whatever its origins, results in an architecture of dissociation: isolated structures, whether banal or beautiful, in essentially empty space. In this sense, they are consistent with the motives of all creative works: what we build is who we are, and - existing everywhere and nowhere - we have forgotten how to dwell.

Not all buildings have to be iconic (they never have been, in any culture) but I believe that our lack of existentially satisfying architecture is partially due to the replication of modern typologies - tower and suburban house in particular. Contemporary Western society is characterized by the cult of the individual, but what we build is alarmingly consistent. Preoccupied as we are with our own personal expressions, we don't seek true identities in the objects around us. We may be intrigued by the latest tallest tower, but towers are so commonplace in our urban lives that new heights don't really matter - we seldom engage in monumental collective feats of construction, as older cultures did, to elevate society as a whole. Our overall built environment is not designed to include or involve us in any larger order … no doubt because our culture is not generally concerned with unity. Here is the paradox of our global civilization, as Paul Ricoeur states:

"There is the paradox: how to become modern and to return to sources; how to revive and old, dormant civilization and take part in universal civilization… That is why we are in a kind of lull or interregnum in which we can no longer practice the dogmatism of a single truth and in which we are not yet capable of conquering the skepticism into which we have stepped. We are in a tunnel, at the twilight of dogmatism and the dawn of real dialogues."[217]

Our rejection of history and tradition has already proven untenable, in disposable architecture as in culture overall. Given the unsustainable habitat – ecological, social and individual – that we have created, it is evident that our approach needs to change. The challenge facing contemporary architecture is two sided, as I see it: the re-engagement of the architectural community in didactic building is vital, but even more critically, architecture's symbolic role must be resuscitated in contemporary terms. We must create reminders that architecture can (and should) try to make a better world for being in – and protest when we are given short change, as Ryckwert says (discussing the communicative power of Classical architecture). This thesis does not suggest a neoclassical style, but rather a neohumanist approach: mimetic standards and techniques of old need to be reinvented for our time (Corbusier's Modulor presents the most convincing attempt yet, although it didn't gain popular acceptance).[218] It is firmly rooted within what Vidler calls the 'third typology' -

"… born of a desire to stress the continuity of form and history against the fragmentation produced by the elemental, institutional, and mechanistic typologies of the recent past. The city is considered as a whole, its past and present revealed in its physical structures … In this sense, it is an entirely modern movement, and one that places its faith in the essentially public nature of all architecture, as against the increasingly private and narcissistic visions of the [1970s]."[219]

Our society today does not expect or demand meaningful existential built environments; we need to cultivate this faith in the capacity of architecture, and sensitivity to human needs from an architectonic perspective. Modernism left behind many timeless aspects of architecture, but conviction was not one of them – the capacity for idealization is the eternal foundation of design. Only when we *hope* can we build.

LESSONS LEARNED

"...the city is a machine for thinking in. It is a place to construct the mythology by which we come to know [ourselves]... without which the modern city will continue as the lifeless container of merely material existence that it has sadly become."[220] - Gavin Macrae-Gibson

In the course of this thesis work we have explored two overlapping realms of metaphor which have been applied to give meaning to human environments: how they were formed and articulated, how they were dismantled and discarded, and how critical their reconsideration is to meaningful architectural expression. Even within a disordered cosmos with no fixed center, the simple fact of standing between earth and sky means that architecture is always symbolic: it is an existential gesture, giving shape to some state of being in the world.

As the point of contact between mass and space architecture is always a 'cosmic' metaphor, mediating between the macrocosm of the universe beyond and the microcosm that is man. In relating the building to the world, traditional buildings inevitably articulate man's place within that world also: a participant in a larger order with meaning far beyond himself, in relationship to his total environment. As Scully states, "the relationship of man-made structures to the natural world offers the richest and most valuable physical and intellectual experience that architecture can offer"[221] – we need more than shelter from our built environment, in order to dwell.

As a means of connecting us to larger spheres, architecture must accommodate the whole human being – primal instincts, past memories, present sensations, and future dreams – to reconcile man and the world. There is no stylistic resolution to this challenge, since each person's relationship between inner and outer world is "peculiar and private to that soul,"[222] but architecture has the capacity to communicate universal human truths, in deep structures and archetypal language. What this thesis examines is the question of 'relatability' on some fundamentally human level, in the basic tectonic principles of being in the world.

As a medium of communication, architecture is in constant dialogue with the human body, its eternal occupant. The architectural body has the capacity to engage us, empathizing with the conditions of mass and space that it expresses. Grounding and uplifting, centering and stabilizing, expanding and contracting are conditions of external space but also of internal thought and feeling, amplified in the synchrony between our inner and outer worlds. The power of the symbolic vertical lies in its likeness to our own state of being, paralleled in other forms and conditions of space. Articulating a meaningful hierarchy of base, body and cap, meeting earth and sky, it embodies the natural order of the cosmos and of the body itself.

Archetypal expressions of form, forces, feeling or function are largely ignored in contemporary building, because we have forgotten the symbolic impact of architectural language and how it acts upon us. The sacred topography of cave and mountain, concave and convex can still speak to us bodily, intensifying the psycho-physical characteristics of earth and sky. Opening or enclosing, ascending or descending are emotional as well as spatial characteristics, which we respond to intuitively – by reinforcing or confusing their intuitive associations, architecture either enhances or frustrates human experience. Wholeness, balance and harmony (or lack thereof) are meaningful expressions, asserting or denying the world as we know it, in any age:

"Buildings and cities provide the horizon for the understanding and confronting of the human existential condition. Instead of creating mere objects of visual seduction, architecture relates, mediates and projects meanings. Significant architecture makes us experience ourselves as complete embodied and spiritual beings. In fact, this is the great function of all meaningful art."[223]



[9.10] KAMPPI CENTRE, JUHANI PALLASMAA (HELSINKI)

Discrediting the underlying human truths articulated in historical forms, the language of architecture becomes an incomprehensible Babel: here and there a clear expression, but disjointed overall. Turned against traditional, recognizable terms of identification in architecture – the unchanging order of the body, seeking its own familiar resonances in the outside world – our built environments become tools of alienation rather than integration. The breakdown of symbolic thought, language and structures undermines the primacy of the vertical, and therein the potential for identification and exchange between body, building and world.

Our contemporary world lacks clarity – the beautiful certainties of the ancient world have been lost – but authentic architecture can still resonate with deeper meaning and higher truth, as an existential metaphor. Within the culture of the fragment, the moment, and the image, architecture has escaped into unreality and expressed our disconnection, alienation and confusion. These are faithful mirrors of the modern condition, but we cannot inhabit those worlds. Our culture of unreality is all the more reason for architecture to find something real to communicate, rather than abdicating its ancient symbolic role and dissolving into non-meaning. If there is any hope in reconciling modern man and environment, we must remember the age-old language of form and space: how to think, feel, and build in the fullness of three dimensional, qualitative experience (figure 9.10). The symbolic dimension, and specifically the value-charged vertical, is an essential instrument in the creation of meaningful human places, with enduring and collective resonance.

The Importance of Symbolism

"Our age has lost the awareness that the act of building inevitably involves a metaphysical message, a reflection of a view of the world and man's relationship to the world."[224]

Abrams, Blier, Campbell, Levitt, Norberg-Schulz, Pallasmaa (and no doubt others) all assert that we need to live in a world with meaning, and that meaning is communicated through symbols. But in the Western world today there is no consensus, no contemporary mythology to reconcile earth, man and gods.[225] The symbolic dimension of architectural experience has been obscured, in recent centuries – the entire symbolic world has collapsed, breaking down the interpretive frameworks man has created since time immemorial to make order out of chaos. Not only have we cast aside our age-old connections to that deeper realm, but we have forgotten why we need a symbolic world: to validate our own experience within some greater continuum, beyond the transient individual life. Symbols are the base units of language, by which we can construct larger realms of meaning. In architecture, symbolic form and qualities of space combine to create existential metaphors, telling the story of the world and how we relate to it.

"Through giving a visual expression to the constitutive ideas of a community or to the social structure, architecture becomes symbolic or 'monumental. "In other words, one tries to make manifest a common basis which may counteract the loneliness of modern man and the separation of the artist from the public."[226]

As Norberg-Schulz explains above, architecture shows that life has meaning through cultural symbolization and continuity. But symbolic form and space are not the conscious first principles of contemporary architecture, because we ignore the world beyond the image or screen – we have forgotten the third dimension of experience, the silent world of sensory communication. In the tectonic mode, most of our cultural constructions serve to transport us rather than move us emotionally. Shifting our focus away from the physical, intuitive world toward visual communication, we have abandoned the subtle richness of qualitative experience in favor of the empirical correctness of quantitative knowledge. Value-neutral spatial co-ordinates standardize the 'concrete and heterogeneous world of life', homogenizing the hierarchies of form and space that give our environment structure and significance.

Architecture, like every language, depends on a comprehensible symbol-system in order to communicate – without recognizable symbolic qualities, the built world loses dimension and degenerates into surfaces and signs. Today we look to those signs rather than symbols, reading meaning in ciphers and images rather than experiencing the built environment as expressions of living truth. Even in the printed world, Paul Ricoeur explains that, "the meaning of a text is not behind the text, but in front of it. It is not something hidden, but something disclosed." In any language, any 'text' or composition of terms "speaks of possible worlds and of possible ways of orienting themselves in those worlds".[227] Symbols and meanings cannot be separated as long as we know how to read them. They never lose the capacity to communicate, but when we ignore or forget their implicit values and assemble them without comprehension, meaning is obscured and the language is confused. The architectural semiotic is not lost, but needs to speak more clearly now than ever to recall our attention to its message: our own state of being in the world. Architecture remains a symbolic art – our task is to strengthen its expression.

"Thus, the meaning of architecture, like the meaning of texts, is not hidden. ... it is there in the language through which architecture and its parts are given concrete definition. Architecture, as a living art form, continually discloses the meanings that are defined within it."[228]

The Value of Metaphor

"Today's constructed settings most often do not seem to have a meaning; these circumstances speak closely of our disturbed sense of 'being-in-the-'world.' An architectural metaphor, a highly abstracted and condensed ensemble, fuses a multitude of human experiences into a singular image. The most potent of these images continue to structure the course of civilization, and to make history comprehensible. The necrophilic architectural images of today are explicit, even if alarming, metaphors as well."[229]

- Juhani Pallasmaa

Revisiting archaic origins demonstrated that verticality, centrality, hierarchy, and even gravity are integrated spatial concepts, all reinforcing a value-charged organization of the world. Historic human constructions articulated this heterogeneous space, mimicking and concentrating the characteristics of the natural world to partake of the same symbolism – architecture had a symbolic role, as mediator and metaphor of the human condition. The cosmic metaphor gives meaning to mass, form, space and movement in reference to our human environment, in the grounding enclosure of the primal earth or the uplifting expansion of the immortal sky: the interior space of the cave and the dominant mass of the mountain are powerful archetypal forms. The upstanding column supporting the heavens is another prevailing spatial concept, like the representative bowl of the sky itself. All of these are replicated in built form as images of the cosmic order. The human figure is likewise interpreted as an inviolable pattern of divine order, in societies throughout history.

Fundamentally, all building is like a body: through representation or embodiment, corporeal realities are manifest in any architectural construction. Conversely, any order is in some essential sense a cosmic order – the cosmic order and the body metaphor are really an integrated concept, choosing different models to interpret and express the same natural order. The human metaphor is about human experience: whether architecture draws its imagery from the internal experiences of the body, or the external experiences of the cosmos, it engages its human user as an active participant in a larger paradigm.

Powerful historical icons express a state being in world, between earth and sky. The Egyptian pyramid, Greek temple, Roman dome, or Gothic arch provide examples: despite the diversity of their articulation, all of these iconic forms speak universally through the same fundamental symbolism. Each one acts as a centre of gravity, a focal point that draws earth and sky into an intensified connection. Each engages the vertical axis as an expression of transcendence, giving higher meaning to earthly life. Each is an existential expression, situating man in a distinct relationship to his world. The greatest human constructions can intensify the experience of the body and its environment: architecture can provide the frame through which we understand our place in the world.[230]

Much of the modern urban environment, to the detriment of our cities, achieves the opposite result: rather than aiding our integration, it makes us feel detached from our context and outside ourselves. Artfully applied, the body's natural ability to respond to architecture can be a means of connection: the humanizing potential of great buildings actively engage us in space, strengthening our sense of reality and our sense of self. Largely ignored, as in many of our contemporary spaces, the dialogue between body and world becomes confused, one-sided … and then mute, when our only possible 'exchange' with space is a mutual ignoring. We are becoming desensitized to the world around us, isolated within personal spheres with no connection to larger systems.

The Role of the Body

"Human persons, too, are shaped by the places they inhabit, both individually and collectively. Our bodily rhythms, our moods, cycles of creativity and stillness, and even our thoughts are readily engaged and influenced by shifting patterns … [an attunement] thwarted by our ever-increasing intercourse with our own signs. Transfixed by our technologies, we short-circuit the sensorial reciprocity between our breathing bodies and the bodily terrain. Human awareness folds in upon itself …"[231]

- David Abrams

Recognizing ourselves as a body in space, we naturally identify with other bodies in space. Any manifestation of the symbolic vertical becomes a body, and we take its part bodily, standing upright between earth and sky. Mapping our own bodies onto the world, we naturally assign a value system of earth and sky, foot and head, gravity and flight – the eternal dichotomies that define our experience of the world. Projecting corporeal logic onto the world and describing space in its terms, all objects in space must bear some relationship to it. We project our sensations onto forms and spaces, receiving impressions and empathizing with their state of being. This is the feedback loop that Kunstler describes, in the exchange between body and building: ultimately, "the fixed dwelling with its feet (its base) on the ground becomes the particular place we call home."[232]

The world, natural or constructed, makes its imprint on us; in turn, we make our mark on the world: what we build is an outward expression of our internal impressions. It is a response to what the world has told us is real, and a statement of what we ourselves hope to realize. Our existing environment acts upon us, and we react in kind – each generation of ideas is shaped by those before, and shapes those to follow. In this sense, the architectural experience is subject to two (sometimes opposing) forces: the eternal impressions we acquire in the world, and the evolving expressions of those realities around us. Where these two frequencies coincide, our entire being is amplified – architecture, like art or music, can intensify our experiences. Even an intangible idea can strike the imagination and make sense of the entire world, if only for an instant. When that sudden clarity emerges in form and space, its impact is even stronger because we can inhabit it, touch it and understand it to be real (tangibly, if not always rationally).

At their highest intensity, our imaginations align with the intentions of iconic works of architecture: we *feel* an intimation of immortality at the foot of the pyramid, or a moment of reverence and rapture in the Gothic cathedral. At the Acropolis in Athens, there is accord between man and the universe; in the Roman Pantheon, the entire cosmos presents itself to man. Standing in these powerful places, one can affirm that there *is* some order and meaning in the world, because it stands tangibly present before them.

Where projection and reflection collide, however, there is discord between our internal and external worlds. When our few human truths are ignored – even invalidated – by what is reflected back at us, we are necessarily alienated and uncertain. These incompatible images create an inevitable identity crisis: either the world is wrong, or our impressions are. We shape our environment, then it shapes us; what are we to make of the molds we don't fit into? Great architecture can capture human identity, human aspirations – but what of the ideals we can't share on a human level, that capture *us* in a built environment we can't identify with? Where architecture becomes faceless, placeless, weightless, how are we to place ourselves in relationship to such a foreign, fundamentally inhuman environment?

Embodiment in Architecture

"A building is encountered – it is approached, confronted, related to one's body, moved about, utilized as a condition for other things … We are in constant dialogue and interaction with the environment, to the degree that it is impossible to detach the image of the Self from its spatial and situational existence. 'I am the space, where I am' as the poet Noel Arnaud established."[233]

For better or worse, we participate in everything we encounter: we naturally identify with the inanimate forms around us and endow them with human characteristics. As upright bodies, we experience a particular empathy with other upright forms: we feel at home when we encounter the hierarchy we know – from our experience of the body and the natural world – in our built environment. We appreciate the basic articulation of bottom, middle and top of things, in correspondence with the structure of our own bodies. Empathizing with the base, shaft and capital of external objects, we give them the attributes of our own feet, body and head. By affirming, inverting or ignoring these basic premises architecture can underline or undermine our sense of self and of being in the world.

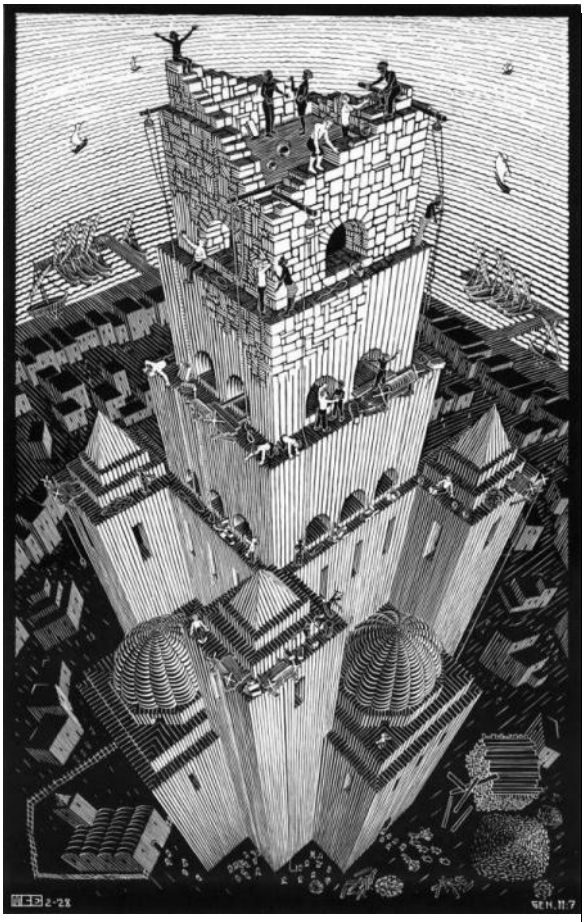
The embodied existential metaphor is always a *human* metaphor, making sense of our world in vocabulary that we cannot help but understand. How architecture asserts and denies the force of the earth, gathering strength and reaching upward as our own bodies do, is a tangibly powerful statement. How it meets the sky is also symbolic: piercing the heavens like a Gothic spire or rising to resist it like a dome, sheltering a space below, opening to the sky with an oculus or balancing flatly below it. The ground plane and roofline, downward weight and upward flight of the architectural body define its relationship to earth and sky, embodying the axis of the world and the upright figure that is man.

St. Augustine offers an example of corporeal logic and sense of natural hierarchy: ***"If anyone were to hang upside-down, the position of the body and arrangement of the limbs is undoubtedly perverted, because what should be on top, according to the dictates of nature, is underneath, and what nature intends to be underneath is on top."***[234]



[9.11] 'SINGLE I', LOUISE BOURGEOIS

"All the while Louise Bourgeois's headless but gendered doll is hanging from the ceiling. Has art been turned upside down, or inside out? The fact is that the 20th century has challenged every form of humanism."[235]



[9.12] TOWER OF BABEL, M.C. ESCHER

**** "Hence we might speak, among men, of a true Babel complex: Babel was supposed to serve to communicate with God, and yet Babel is a dream which touches much greater depths than that of the theological project … this great ascensional dream …"*[236]**

Experts believe the ziggurat of Ur (90 meters high) to be the biblical Tower of Babel. Gothic cathedrals rose as high as 125 metres, "like rugged mountains into the sky."[237] Even today, king-of-the-castle competition for highest in the city, or even the world, drives buildings ever higher into the sky … but without the belief structures that made those heights meaningful. Vertical priority is less spiritual today but still manifest in language and thought ('climbing the corporate ladder' or 'working my way to the top'). We still understood superiority in spatial terms, within a vertical hierarchy. Architecture translates these power structures into built form, giving social or corporate hierarchy a physical identity.

The Primacy of the Vertical

The conceptual structure of a stratified cosmos is humanity's most pervasive idea of the universe. The primacy of the vertical is likewise reinforced in the natural order of the upright body, standing between earth underfoot and sky overhead. Mapping the seven spatial coordinates of the body onto the external world, space takes on implicit polarities and priorities. Our inner thoughts and outer constructions alike are shaped by these deep structures, giving order and meaning to the world through spatial or conceptual hierarchy. We are eternally oriented skyward, aspiring to the vertical in social structures as well as in space: hierarchy is a basic structuring principle of human thought, and therefore of building. Ancient mythologies and past visions of utopia underscore the frequency, perhaps universality, of vertical aspirations or 'Babel complexes'* in architecture: the towers of our dreams have always surpassed those of our reality.[238]

The vertical axis is the armature of manifold value systems, expressed in various tectonic terms: stratification and hierarchy, centrality, weight and solidity, axial composition or movement. Vertical symbolism is manifest in primary dichotomies, as the line of relationship between earth/sky, mass/void, gravity/levity, light/dark. Any break in the horizontal is conceptually exceptional, distinguishable from undifferentiated extension, and therefore significant. The dominant vertical is also part of our own physical being in the world, upright and active, or prone at rest. Verticality is tied to orientation, identification and expression, and therefore to place and dwelling as well as identity itself. All of these vital concepts are aligned with that singular, symbolic dimension, imparting order and meaning: eternal, universal, and critical to human experience.

Fixing verticals and horizontals, architecture has inherent symbolic value and enormous expressive potential – but buildings today seem to exist in a state of virtual horizontality, disorientated from any higher order and alienated from deeper meaning. Without the

essential armature of a symbolic dimension, orientation and identification are impaired. Our culture has endeavored to strip the mystical, spiritual, symbolic dimension from the world: manifold technical and scientific advancements have shed light on life's mysteries, claiming control of the forces of nature, promoting man as an intelligent and independent entity, but in spite of these advancements something vital has been left behind. Norberg-Schulz calls this "a consequence of the loss of the poetic, imaginative understanding of the world."[239]

Architecture has been re-invented in modern terms, where fragments and ambiguity have replaced the certainty and wholeness of things that characterized the ancient world. Body or cosmos no longer serve as relevant models, unless they too are deconstructed and distorted. Still, the structures of our bodies and the condition of our world have hardly changed. There is enduring validity to these archetypal concepts, despite modern scientific and technological revolutions, which this thesis work pursues as the prerequisites of dwelling.

Mountain and cave, head and foot, post and dome … the definition of top, bottom and middle places between are still the most potent terms in our architectural vocabulary. Hierarchy, structure, balance, weight, wholeness and harmony – whether affirmed or denied – remain powerfully symbolic, because we experience architectural bodies through identification with our own. We have a natural and intrinsic relationship to earth and sky, axis and center, rooted in our physiological bodies – unchanged for millennia – with deeply psychological and even spiritual connotations. These eternal human truths are at the very core of our symbolic life: the sacred vertical is the armature around which our ancient mythologies and archetypal associations are wound. The breakdown of the symbolic vertical, therefore, destabilizes the entire structure of our symbolic world; we must re-establish this vital third dimension if we are to re-connect man and environment through meaningful exchange.



[9.13] TRUMP TOWER (NYC)

Cities still brand themselves by their towers, a cultural pattern imitated by many universities. High-rise buildings vie for the evident prestige - individual as well as global - of being tallest in the city or even tallest in the world, like the twenty-five (and counting) versions of Trump Tower.

The original Trump Tower in New York City (pictured above) was too tall for its small site, but approved through spatial bargaining. The building stands at 58 stories, but the Trump Corporation has marketed it at 68 stories in order to price the upper apartments higher, corresponding to the perception of greater physical height. At completion, it was the tallest building of its type in New York City; Donald Trump has built towers in other cities that have also aimed for that title.

Summary: Reason and Reconciliation

"In recent times, the rational character of architecture has been customarily blamed for the gloominess of our present environment. Rationalism, however, is one of the foundations of architectural thinking, and has by no means lost its importance or become a reason for environmental poverty. The reason for the atrophy of architecture in our industrial culture is the separation of rational thinking from the spiritual realm of the arts. Rational architecture ceases to be architecture when it relinquishes its function as the interpreter of the spiritual, unconscious essence of culture. Or perhaps, indeed, at this point it truthfully reflects the anti-humanism of our culture."[240]

- Juhani Pallasmaa

Modern life is quantitative, not qualitative: we place our faith in abstract and scientific, rational intellect rather than instinct or imagination. This is not a critique of empiricism, rationalism, capitalism, or any other social or economic condition – our new ways of life are related to, but not created by, these factors – but rational scientific reality is at odds with our deeper psychological (or mythological) experience today.

Traditional expressions of the 'natural order' were founded on common, comprehensible spatial concepts, inherent to the way we experience that world: standing at the centre of a flat earth, seemingly stable, upholding the bowl of the sky which seems to rotate around us. That their cosmic or divine models can now be proved inaccurate is irrelevant to architecture, because architecture is an assertion of belief: we build what we think and feel and know about the world most deeply, because that is our conceptual 'material'. Through identification and expression man makes his own habitable world, dwelling amid those desires made tangible. Pre-modern human societies throughout history have drawn on the same fundamental human truths to articulate the same existential issues: the need for order and meaning, for permanence and transcendence, for connection to the world and a place to belong. Belief structures are built up to meet these needs, and the power in those beliefs holds the system together. The physical form these belief structures take tells their story, and this is what we read and respond to in architectonic terms.

For all our modern scientific knowledge we still *live* in that stratified cosmos, vertically oriented and spatially ordered around the body and its axes – the rational world undermines this experiential space. Man is always the centre of his personal universe: we can't experience space in any other way. The places we dwell are between earth and sky, brought into closer contact to shape a human space. The tangible certainty of where we stand is the foundation of an anthropocentric universe, giving value to place. Historically, buildings have articulated this vision of man in the world – but ours is an alienated state, as Guy Debord says, in which people are only connected to the world by images created by someone else.[241] As Pallasmaa says above, the separation of intellectual mind from considerations of the sensory body and unconscious spirit inevitably detaches rational architecture from deeper meaning. We've attempted to design through reason alone, and are left with buildings and cities that lack a symbolic dimension – precluding bodily orientation or identification.

Much of the contemporary built environment not only distorts the image of the body, but also belies its corporeal realities: we simply cannot experience mass, space and materiality the way our buildings express them. We cannot recognize ourselves or even the 'world' around us, and this is no tragedy where novelty rules supreme. Disconnected from any larger sphere of awareness, we are realizing an architecture of dreams, nightmares, fantasies (and sleep-walking development) – simply because we can. In the constant flux of our global, consumer culture, *anything* can – and will – be added or

taken away, with no fixed reference points or absolute values. This world view is fundamentally incompatible with our own deeper nature: man cannot exist in chaos, and the declining state of contemporary civilization attests to our lack of a conceptual core to anchor anything to.

The energy of the fragment, the transient moment, the intangible image, are all undeniably part of contemporary experience – but we cannot inhabit them and feel comfortable with where and who we are. To live as whole beings in balance with our environment, we need wholeness and equilibrium in our inner *and* outer worlds. This is where architecture has the greatest potential impact, as eternal mediator between body, building and the larger universe: we need not deny the fragment, but integrate it within a balanced whole. Dalibor Vesely writes of the rehabilitation of the fragment (quoted at right), restoring the memory of its original situation as happens through poetry and art, rather than suppressing it as happens in science. He says, "while science has discovered the instrumental analytic meaning of the fragment, it is to poetry that we have to turn to 'discover' its restorative and symbolic meaning."[244]

"It is not difficult to recognize that fragmentation is one of the main characteristics of our modern predicament. There is a tendency to see fragmentation as a result of isolation and disintegration and thus as potential chaos. Yet we must also account for the fact that in so many areas of culture apparent fragmentation has played the opposite role, contributing to the formation of meaning and a sense of wholeness. We need think only of … the art of collage or of similar tendencies and achievements in contemporary literature, poetry, art, music, and to some extent architecture."[242]

Reconciling modern science and psychology - the intangible, unknowable, unpredictable world of a known chaos - with the possibility of order, meaning, *dwelling,* is its timeless function of architecture: "built examples ranging from Stonehenge to the Barcelona Pavilion have acted as conciliators between humanity and the universe, and between science and myth."[245] I believe that architecture, via the very same nature that undermined its symbolic role in the modern world - wholeness, permanence and continuity - can provide what we need most in the world today (see Colquohoun, quoted at right): a world of recognizable wholes.

'It seems, indeed, that man has an ineradicable urge to extract from the flow of events a token of stasis, a fixed point against which to measure himself. And indeed, although a constant state of flux may be the nature of the world as it is presented to us, the concept of continuous change, considered as an object of factual experience such as technical development, is itself an abstraction. We must set against it the palpable tendency of the senses to see the world in the form of recognizable and nameable wholes."[243]

THE TASK OF ARCHITECTURE

From ancient influences to contemporary Western culture, something of the 'wholeness' of human experience has been lost. Instead of asserting what we feel and know about the world, architecture today supplies alternate realities and distractions from our alienated state, from reassuring Disneyfied artificiality to disturbing Deconstructed surreality. We welcome the diversions, but they cannot provide that fundamental sense of a higher order and deeper meaning that we need to survive the world: our built environment does not teach us how to dwell. In an increasingly placeless society of virtual communications, the role of architecture is more marginal *and* more critical than ever, an anchor to place and permanence in a constantly changing world. We must remember that at its foundations, "architecture is the art of reconciliation between ourselves and the world and this mediation takes place through the senses."[246]

***"The great psychological task of architecture is to create a sense of cultural continuity. Thus, in its deepest significance, the art of architecture is ever on the side of preservation, not of change as an end in itself."*[248]**

Some argue that difficult or surreal architecture is justified as the only authentic expression of our time, reflecting our reality in our built environment as ever before. Frank Stella says, "architecture can't fully represent the chaos and turmoil that are part of the human personality, but you need to put some of that turmoil into the architecture, or it isn't real."[247] Ours is undeniably an age of fundamental uncertainty and constant change, but I argue for a both/and approach to architecture and our own existential condition: we *also* need architecture to show us what remains stable, eternal, and meaningful, restoring hope for integration (as Pallasmaa emphasizes, at left).

In contemporary culture, there is no collective expectation for architecture to deliver a coherent, unified and meaningful environment. There is little awareness of the meaning implicit in form, or the effects of space on our tectonic senses. Even architects seem to forget that every act of building is significant in shaping the containers and content of human *experience*, more fundamental than any manipulation of material. We need some kind of reconciliation between man and environment if we hope to reestablish equilibrium with our ecological surroundings or our own inner nature, remembering the sensory body and lower intuitions that enable us to experience the world to the fullest. Now more than ever, we need a mediator to create order out of chaos and make the world habitable.

***"As our existential experience continues to drift towards placelessness, insignificance and the absence of hierarchy, one of the most demanding tasks of architecture is to resist this erosion of mental value and experience."*[249]**

The task of architecture remains the same today as it has ever been, even while the terms of our reality are changing (as indeed they always do).[250] In any age, the built environment is critical because it supports and reflects a way of being in the world; we need to restore order and meaning to our way of being in the world today. Modern man is confronted with crises of difference and change, and the task of architecture is to guard against this erosion of order and meaning: showing us where to belong, and how to relate to the modern world.

The Role of the Architect

"All art forms share the same existential basis, yet the specific task of architecture is to structure and frame our very lives and actions, and to make the world conceivable and acceptable. Architecture domesticates the world and turns it into a human domicile. The fact that the architect is engaged in his personal experience does not necessarily lead to egocentricity or narcissism. On the contrary, the involvement of one's personality and life in creative work forms the basis for existential sincerity."[253]

- Juhani Pallasmaa

Amid the myriad of concerns and interests in contemporary construction, the role of the architect seems marginalized among other specialists: we design in the spaces between budget and schedule, building codes and marketing principles, focusing too often on real estate instead of real experience. Still, despite these surface preoccupations, the root function of architecture is everywhere and always the same: to shape human places, manipulating mass and space to make the world habitable. Consciously or not, the architect has a vital role because his medium is the frame for human experience: in fixing horizontals and verticals, the architect defines the conditions of relationship between man and his world.

In first principles, we are always designing between earth and sky. In manipulations of mass and void, we are shaping primary elements with archetypal significance. The architect has to be engaged in the inherent spirituality of this process, investing the work with meaning in order for that meaning to be communicated. In today's built environment, this requires a cultivation of sensitivity to experiential space, recalling the first principles of mass, motion and substance as a universal tectonic language. The role of the architect is ultimately not to create meaning – an impossibility, as Karsten Harries explains below – but to shape a space for its discovery: "meaning cannot finally be made or invented; it has to be discovered, where such discovery will also be a self-discovery."[254]

Digital Space and the AutoCAD Universe

***"It's hard to remember, when you're sitting at a screen, that there's more to the world than the visual."*[251]**

- Robert Campbell (*Architectural Record*)

This thesis work, and indeed much of my experience in architecture, has been achieved within the realm of the unreal: the digital world, where we live so much of our modern lives. The screen presents a paradox, giving us a restricted window onto a seemingly boundless virtual universe. We forget all too often that it is an artificial realm, animated and extinguished at the flip of a switch, and have largely come to prefer the amenities of the virtual to the restrictions of the real.

Digital space presents is an unlimited Cartesian grid, without character or boundaries – within it, we design buildings by describing the translation of points in space, via numeric co-ordinates. In more sophisticated applications we can make these lines into planes, even extrude them into the pretense of 'solids', but this simulated third dimension is an illusion: an infinite number of two-dimensional planes, projected onto two-dimensional media. The eye may be fooled into participating in the virtual world, but the body remains largely disengaged.

We know that non-thinking, non-verbal 'body language' accounts for at least half of our communications, particularly in emotions or convictions. Despite our deliberate expressions, the body exchanges spontaneous cues with other bodies – intimating a deeper message, which we ourselves may not be conscious of. Reciprocally, we perceive the true meaning of other messages and react instinctively.[252] I suggest that, in order to realize a more existentially substantial built environment, we need to involve the sensory intuition of the body in the design process long before encountering its final product – the same personal involvement as Pallasmaa describes at left. As architects we need to learn the language of form and space, manipulating composition and proportion in physical terms, before we trust the mind's eye to re-create those qualities in model space or paper space.

Architecture and Technology

"The wholes established by technology do not make us feel complete or satisfied, they are still experienced as splintered wholes. Here and there man recognizes a fragment of his former universe, integrated in a functional but alien and anonymous whole, in which he nevertheless must live. There is no other. Against that feeling of splintering, modern man feels a keen desire for all-inclusiveness, for synthesis. But, alas, any synthesis produced by technology fails and comes to naught."[255]

- Jacques Ellul

In the real world there is no such thing as value-neutral, *empty* space: it is itself an abstraction. Rationalized space can standardize and equalize all spatial dimensions, but we cannot experience the world that way. Just as front and back have separate values, the vertical and the horizontal cannot be conceptually equal. But by designing in two dimensions, we cannot avoid designing *for* two dimensions – only exceptional architectural imaginations can create comprehensive and convincing spaces in the mind and successfully flatten those qualities into two-dimensional information. Most of the built environment today retains the two-dimensional qualities of its representation, like an inhabitable axonometric, removed from our felt reality and our tectonic senses. Technology is an essential design tool, but too often the technical process loses focus of the physical – even metaphysical – nature of the architectural product. I believe that a sense of reverence for the inherent sacredness of space (not only in houses of immortal gods, but in the entire human domain), and thereby for the form that shapes it, is the first requirement of the architect. Every architectural act creates a world, and we must invest the work with this vital purpose:

"While sensations and impressions quietly engage us in the physical phenomena of architecture, the generative force lies in the intentions behind it. … Questions of architectural perception underlie questions of intention. … Whatever the perception of a built work – be it troubling, intriguing, or banal – the mental energy which produced it is ultimately deficient unless intent is articulated."[256]

Learning the qualities of form and space from the body and the instincts as well as the intellect, we may hope to bridge the communication gap between two-dimensional production and three-dimensional realization. To master the symbolic language of architecture, we need a both/and approach to architectural education: practicing historical and traditional design methods as well as more modern free-association and experimentation. We learn about archaic and ancient examples but we don't engage in the process of their creation, and this is where the architect works: translating between the realm of ideas and the real world. Like literature students, learning within past models to master the effects of linguistic composition and rhythm or proportion, architecture students need to learn ancient principles not as a history but as a process of discovery.

The aim is not to indoctrinate future architects with obsolete practices, but to learn the terms and structures of the language – and its tectonic effects – before attempting to compose meaningful statements. With a heightened awareness of how architecture shapes spatial experience, recognition of how critical that expression is, and a deeper sensitivity to how we ourselves experience space, we may hope to realize the eternal aim of all design: building a better world. Gavin Macrae-Gibson proposes we no longer be "inhabitants of an architecture of *no real place,* but characters in an architectural story about ourselves"[257] – we need to master the archetypal language of architecture, in order to 'write' modern mythologies relating man and his world.

The Application of Archetypes

"Rather than simply meaning 'something', art and architecture allow meaning to present itself. We recognize the meaning as new and yet we cannot name it; we are invited to silence and yet must proclaim the utterly familiar."[258]

- Alberto Perez-Gomez

This thesis work explores the interrelationships of the theory of archetypes – 'first model' – and architecture as the first art: the art of inhabiting our world. The vehicle for this exploration is the spatial concept, our own first language of forms and spaces. All architecture is a combination of archetypal conditions: in essential, spatial terms these are mass and void, enclosure and opening. Dark-light, horizontal-vertical, underworld-upperworld, sinking-rising, weight-flight are essential and eternal polarities, conditioning the way we perceive and construct our world. The dialectic experiences of place and space, surfaces and depths, presence and absence all revolve around the same core principles: earth and sky, and the balance between them. This mediation is the first principles of architectonic form, and therein, the essence of architectural expression.

Over thousands of years, human beings have shaped their environment to realize different desires - therein lies the language of architecture. Understanding this archetypal language is essential when a design vision is to be turned into a realization,[259] strengthening the quality of dwelling through powerful architectonic experiences. The design-orientation of archetypes means they can be arranged to suit a purpose, controlling the effects of architecture.[260] Artfully applied, archetypal effects can make stronger architectural statements.

The reverse is also true: ignoring our natural tectonic language creates counter-intuitive spaces that we cannot engage with, contradicting their own messages. Examples throughout the work have shown that a house with no solid enclosure does not resonate with our deepest associations to shelter; a civic building or space with no centralizing geometry or public focal point does not communicate urban identity; a tower with no perceptible base or roof articulation does not communicate vertical orientation – regardless of height. Box-store or basement-style churches are an example not discussed here, because diverse faiths appropriate different kinds of worship spaces, but I maintain that archetypal spatial concepts – a tangible vertical focus, most evidently – intensify our experience of sacred places, as well as investing everyday space with deeper resonance.

Meaning is problematic in a multi-faceted globalized society, but spatial archetypes are universal because they are intrinsic to the common human body and our experience of the world. This *a priori* value system is the basis for any collective resonance in architectural expression: engaging these spatial archetypes is necessarily symbolic, whether the metaphor is invoked topographically or in embodied form. Opening or closing, grounding or uplifting, weight and permanence, flight and openness can all be expressed in these tectonic terms, mobile or static, stable or unstable. Revisiting the spatial concepts associated with basic architectonic forms, and their applications throughout history, we may hope to invest contemporary architecture with greater symbolic intent.

As in any language, mastering this archetypal vocabulary does not require slavish obeisance to its rules or repetition of elements, but the intricate subtleties of language (as of architectural expression) are the keys to richer combinations and new applications. We must learn to speak eloquently through the manipulations of form and space if we are to develop architectural nuances that can address our own time.

"How does modern architectural space affect awareness? In important respects, the principal ways by which it influences people and society have not changed. Architecture continues to articulate the social order ... The modern built environment still maintains a teaching function ... Architecture continues to exert a direct impact on the senses and feeling. The body responds, as it always has done, to such basic features of design as enclosure and exposure, verticality and horizontality, mass, volume, interior spaciousness, and light. Architects, with the help of technology, continue to enlarge the realm of human spatial consciousness by creating new forms or remaking old ones at a scale hitherto untried."[261]

"Today's harshest experiences of scattered dispersal exist side by side with transcendent impressions. For a moment as one looks up at the vault over Grand Central Terminal in New York, as the beams of dusted light pour in through the huge arched windows, one's perception modifies consciousness, attention is broadened, time is distended ..."[262]

[9.14] GRAND CENTRAL (NYC)



Present Potential

Architecture today is capable of the same impact as ages past – perhaps even greater, within our ever-broadening spatial consciousness of 'new' forms (as Tuan describes at left). The terms of the language remain consistent, as do its possibilities for expression: the tectonic interplay of mass and void, vertical and horizontal are the germ of architecture, and the basis for bodily interaction. The built environment continues to influence our thoughts and feelings, articulating a particular 'world view' or lack thereof. The building itself is physically indispensable, but the spiritual or emotional role of architecture is not considered vital to contemporary civilization, as it was throughout history.

Communication or meaning is seldom our focus in our buildings: being practical, responsible, economical, marketable, desirable or comfortable are generally higher priorities. All of these are admirable and necessary qualities, but they are characteristics, rather than character: these considerations are important day-to-day issues, but they do not – as Pallasmaa prescribes – express any authentic way of life. The language remains, but the dialogue disintegrates into incomprehensible Babel or uncomfortable silence. Here and there a clear statement can be understood, among our most-loved or most-hated modern buildings, but we are still missing a connection to any larger system – and giving up hope for its restoration, as if irrelevant to modern sensibilities. We have not yet found an expression of reverberating *truth,* universal recognition or human affirmation like the classical column, upright against the surface of the earth, beneath the sky. I maintain that this is the purpose of architecture, cultivating a sense of unity with lasting and collective resonance;

"Today the urge toward such universality is deeply felt by everyone. It is the reaction against a whole century spent in living from day to day. What we see around us is the reckoning that this shortsightedness has piled up."[263]

Future Vision

"In a future prospect – divested of the great totalizing illusions but not the of the tension toward justice – architecture will again be able to assume its ancient role as mediator between man and nature, as guardian of the conventions and experiences characterizing the places of the world in their infinite diversity …"[264]
- Paolo Portoghesi

In centuries past, architecture served to illuminate and sustain a particular world view: by fixing verticals and horizontals, the art of building affirmed a human place in connection to the larger cosmos. In contemporary Western culture, the totalizing certainties that grounded the ancient world no longer hold – and so we have largely abandoned architecture as intercessor between man and his universe, building up new virtual and digital worlds to satisfy our need for connections.

What this thesis hopes for is a middle place between those extremes, recalling the few universal human truths that relate us tectonically to the world around us and reconnecting architecture to that 'real world' of human experience. We must pursue a sense of 'change within order, and order within change' that the either/or approach to history and tradition precludes. This work operates within a philosophy of both/and, attempting to bring primitive intuition and ancient logic into contemporary context as vital and relevant design considerations. Its objective is the re-connection of architecture and urban design to the human experience of being and belonging, addressing present context with the richer perspective gained through the consideration of history and the ancient symbolic language of architecture.

The aim is not neoprimitivism, nor even neoclassicism, but a sense of universality that includes everything we are, and all that we have been – remembering, not re-creating, what came before. It calls for a broader view of human needs and human experiences, addressing the primal instincts, past memories, present sensations, and future dreams that make us whole human beings. Revisiting the deep structures of our architectural heritage and reflecting on their enduring validity today, its vision is a more satisfying built environment, investing architecture with both the richness of historical memory and the subtleties of haptic experience:

"We can thus awaken to two vehicles of expression, physical and intellectual. For architecture this means one expression "that stems from an analogy with the physical memory of the effects of natural forces on the body...." and one expression "derived from an analogy with the intellectual memory of places and events". The first is empathy which demands a constant reference to the human body while the second is associative which finds its relevance in human culture." [265]



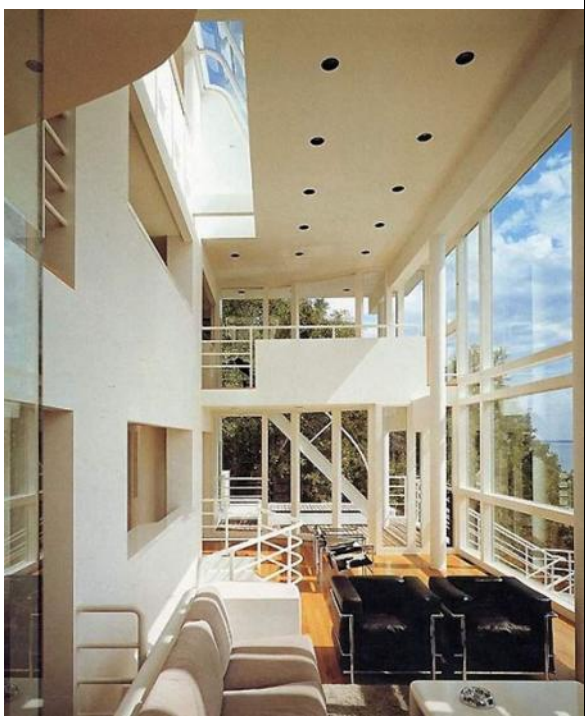
[9.15] CANADIAN WAR MUSEUM, BY MORIYAMA & TESHIMA ARCHITECTS AND GRIFFITHS RANKIN COOK ARCHITECTS (OTTAWA, ON)

The CWR is a cultural building, but the architectonic language it employs transforms commemorative display space into vivid and immediate physical experiences. The disrupted topography of the building, in rough concrete planes, embodies conditions of war in spatial terms to intensify visitor experience.

"A new architecture must be formed that is simultaneously aligned with transcultural continuity and with the poetic expression of individual situations and communities. Expanding toward an ultra-modern world of flow while condensed into a box of shadows on a particular site, this architecture attempts William Blake's, 'to see the universe in a grain of sand."

"As these shifts [in post-modern architectural theory and practice] have been underway, so were parallel developments in cosmology, astronomy and physics that suggest new ways of conceiving centrality, order and chaos. The desire for paradigms (or 'meta-narratives') which express a whole-ness is perhaps epitomized by the contemporary search for a 'theory of everything', a coherent cosmology, among scientists."[266]

[9.15] DOUGLAS HOUSE, RICHARD MEIER (MICHIGAN)



Holl (quoted at left) and others advocate a hybrid theory built upon order *and* chaos, constancy *and* change. Interest in borders and edges, *terrains vagues* and Gilles Deleuze's theory of the fold are part of this search for new architectural practices 'capable of bending rather than breaking'.[267] The crisis of meaning inherent to abstract Cartesian space leads to manipulations of the grid, finding flexibility and the possibility of meaning in overlays and folds. As Jeffrey Kipnis proposes: "folding holds out the possibility of generating field organizations that negotiate between the infinite homogeneity of the grid and the hierarchical heterogeneity of finite geometric patterns." The quest for some kind of self-organizing chaos runs parallel in architecture and cosmology, as Nan Ellin explains (at right) – as it always has, from time immemorial.[268]

This thesis is exploratory, but its territory is by no means uncharted: it takes shape within a transition period in architecture that is already underway, as described by Pallasmaa at the introduction of the work. My grounding principles – that order and meaning are conceptually essential to our being in the world, however disordered our current conditions – are rooted in a growing trend in architectural discourse and practice, to create places that reconcile our contemporary realities in more meaningful architectural expressions. I return to the words of Richard Meier (whose 'meditations' opened this work) as a postscript for my own preoccupations here and for the future of architecture that I hope for:

"Finally, and again, mine is an attempt to find and redefine a sense of order, to understand, then, a relationship between what has been and what can be, to extract from our culture both what has been and what can be, to extract from our culture both the timeless and the topical.... Fundamentally, my meditations are on space, form, light and how to make them. My goal is presence, not illusion. I pursue it with unrelenting vigor. I believe it is the heart and soul of architecture."[269]

Epilogue

"To pass from one discursive space to another, to proceed by reasoning, a text becomes a necessary – though inadequate – conduit. Writing about architecture and perception is inevitably haunted by the question, Can we see through the word into built form? If architecture is to transcend its physical condition, its function as mere shelter, then its meaning, like interior space, must occupy an equivalent space in language. … Since words are abstract, not concretized in space, material and direct sensory experience, this attempt to penetrate architectural meaning through written language will risk disappearance."[270]

- Juhani Pallasmaa

Pallasmaa's reflections have guided this work, and I share his discomfort in attempting to distill the architectural experience into words and images – applying reading and reasoning to *a priori* spatial concepts. What this thesis admittedly lacks is the grounding of the built work, in those intuitive tectonic messages of which I speak, but the three dimensions this work invokes defy description on two-dimensional planes. I have approached architecture from the ground up, exploring the underlying archetypal language of form and space in universal terms, but have not yet arrived at specific, encapsulated expressions. Ultimately, I leave the reader to their own perceptions … with the hope that these considerations will recall attention to their own spatial vocabulary, cultivating richer experiences of architecture.

Arriving at its completion, it is evident how much remains beyond the scope of this work and how many future directions there are to explore. Stretching a broad hypothesis over an even broader area, there are inevitable areas even within the scope that are covered too thinly. Any general, universalizing viewpoint is necessarily a distant one; there are an infinite number of ideas within this spectrum that merit more insight than I can provide.

This work aims to be metahistorical, but – in attempting to learn from 'twenty-five thousand years of cultural memory' Kunstler describes[271] – the majority of the research and discussion presented is based in the past. For me this was the only possible first step, in my own process toward mastering the subtle language of architecture, but the work should serve as a touchstone for future research and development. In laying this foundation, I became aware of the irony in arguing for a focused, centralizing, axial architecture with an expansive lateral discourse – sifting the entire beach, as it were, in search of 'eternity in a grain of sand.' It testifies to the challenges I speak of, but in undertaking this journey through the periphery I anticipate that future research and discussion will arrive closer to its core: "any worthwhile project is an endless quest."[272]

Having surmised my own process of considerations, revisions and redirections into a literary journey of a few hours rather than years, I hope to have created a springboard for future work to develop these theories further, applying them to recent and contemporary works in more depth than was possible here. The work began within a trend toward linguistic roots, deep structures and deeper meaning as Pallasmaa describes, which is already gaining momentum. Future research will be able to address how our current philosophy has unfolded – with a broader vision of architecture, we can build upon ever-deeper foundations. I believe that we will yet arrive at a level of architectural expression that addresses the complexities of contemporary life *and* reconciles man and environment, in dynamic equilibrium.

ENDNOTES

Notes to PART 1

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