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in pregnancy a woman has a unique experience of transformation. This metamorphosis is overwhelming in its poignancy as it awakens divisions in the body and mind. The mother experiences her body as her own, yet alien; the body becomes an unwieldy composite of inner and outer spaces. Boundaries expand, achieving a visible presence...The generative forces of human life beguile as one contemplates how the body becomes implicated in the dramas unfolding beneath the skin—the fetus which grows *discursively within*, eventually thrusts *outward*.

the PREGNANT
body

the pregnant passage in architecture
the architecture of the interval





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the PREGNANT
body Maternity and Extended Family Health Facility

the pregnant passage in architecture
the architecture of the interval

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April 1997.





ABSTRACT

the uncertain pregnancy

the P R E G N A N T
b o d y Maternity and Extended Family Health Facility

t h e p r e g n a n t p a s s a g e i n a r c h i t e c t u r e
t h e a r c h i t e c t u r e o f t h e i n t e r v a l

Submitted by Catherine G. MacKenzie Griffiths in partial fulfillment of the requirements for the degree of Master of Architecture in The Faculty of Environmental Design, The University of Calgary.

Supervisor: Professor Graham Livesey

Key Words: Architecture, Architectural Theory, Art, Biotechnology, Design, Feminist Theory, Pregnancy

In pregnancy a woman has a unique experience of transformation. This metamorphosis is overwhelming in its poignancy as it awakens divisions in the body and mind. The mother experiences her body as her own, yet alien; it becomes also an unwieldy composite of inner and outer spaces. Boundaries expand, achieving a visible presence. Pregnancy in our technologically sophisticated world does not belong to the mother alone. The *pregnant body* is a site where views extracted from popular culture, the body, and obstetric technologies intersect, layer and collide. The pregnant embodiment, which constitutes many facets, is used as a metaphor of *passage* to facilitate the structuring of the dialectic process to generate design strategies for a community-based Maternity and Extended Family Health Facility.

Subsequently, in order to grasp the divergent and diverse influences affecting the pregnant embodiment, a series of five theoretical inquiries and several conceptual design processes were developed which eventually culminated in the architectural intervention. Each differs with regard to the methodology and consequent paths of departure but they are all linked by the common theme of the pregnant embodiment. Dominant modes of thought in these essays and exploration include: ultrasonographic issues, societal changes affecting domesticity, and various psychological and physiological meanings. These inquiries sought to provide the stimuli for nurturing new ideas and spatial themes in design. These were explored through printmaking, models/objects, drawings, and computer graphics. Together these material and conceptual processes and essays aim to identify various architectural positions that are reified in the ensuing architectural intervention.

The composite of these inquiries attempts to relate architecture to a larger societal context, culminating in a depth and meaning to parenthood and domesticity within the public realm. Ultimately, this thesis brings to light the potential to find meaning and expression in architectural design derived from the common but overlooked human experience: **the pregnant embodiment.**

the P R E G N A N T

b o d y the pregnant passage in architecture
the architecture of the interval

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ANTEPARTUM from within or outward?

The integrity of my (former) body is undermined in pregnancy not only by this externality of the inside, but by the fact that boundaries of my body are in flux. In Pregnancy I literally do not have firm sense of where my body ends and my world begins. My automatic body habits become dislodged, the continuity between my customary body and my body at this time is broken. In pregnancy my pre-pregnant body image does not entirely leave my movements and expectations, yet it is with the pregnant body that I must move. This another instance of the doubling of the pregnant subject.¹

As I undress in the morning and evening, I gaze in the mirror for a long minutes, without stealth or vanity. I do not appraise myself, ask if I look good enough for others, but like a child take pleasure in discovering new things in my body. I turn to the side and stroke the taunt flesh that protrudes under my breasts.²

From within or outward? The generative forces of human life beguile as one contemplates how the body becomes implicated in the dramas unfolding beneath the skin – the fetus grows *discursively within*; the fetus thrusts *outward*. Incommensurably complex, the metamorphosis of pregnancy triggers immediate physical sensations and abstract notions of mind and matter. Bodily sensations of growth exist both prior to and beyond cognition. Clothes which once fit tighten, the menses cease. Yet these occurrences alone do not necessarily signal a pregnancy in a woman's mind. Fluttering sensations felt in the first trimester are also frequently noted as *alien* when they are experienced in the uncharted territory of a first pregnancy. Here, a *woman's sense* of her body and habituation of posture is interrupted until these movements are understood as processes of the *endogenous rhythms* of the body itself, but anew.

"A building is like a human," writes Louis Kahn, "an architect almost has the opportunity of creating life."³

In this project, the pregnant embodiment, pungent in its many facets, is used as a metaphor of *passage* to facilitate the structuring of the dialectic process to generate design strategies for a community-based Maternity and Extended Family Health Facility. The *pregnant body* is a site where views extracted from popular culture, the body, and obstetric technologies intersect and layer. During pregnancy, a woman becomes both the subject and object of society's probing scrutiny, as well as her own: the tumultuous psychological and emotional transit into pregnancy, the impending motherhood. In pregnancy a woman is a sort of *temporal interstice* coexisting between the forces operating in society and the body(ies) beneath her skin.

The origin of the word *pregnant* owes less to its literal association of *carrying* a child or gestating. Pregnant is suggestive of an imaginative mind, as it were, teeming with ideas. An architect can be said to *carry* the weight of a project, and in this, a work's process involves exploring ideas, passing judgements, and making trade-offs. Implied then is the exchange, learning, and forging encountered; a quest reached at the end of an arduous journey (the birth of the project). These acts, namely building and designing, impart an exchange delivered to successive generations – a *passage* – a reciprocity. The metaphor of *passage* is used to bring together disparate realms of this reality (society versus the pregnant body), making some symbiotic connection or transition. The essence of this metaphoric construct, most simply, is to transport one reality (as through a passage) into another reality (*meta* + *phora*). In a similar way, the potential of this metaphor lies in its capacity to realize the *crossing over* of thoughts and outcomes, to be gathered and ultimately recomposed, in the architectural design premise.

¹Young, "Pregnant Embodiment," + 49;
²Ibid., +53; ³Kahn, *Between Silence and Light*, +68.

Henceforth, this body of work exists as a conceptual series of explorations, likened to the generative pathway which emerges out of architectural investigations. While there is validity in design processes which will ultimately culminate in a building, so are tangential design investigations, such as site or art studies. These tertiary design activities can be said to act as counterpoints in any designer's work, potentially fueling new ideas where notions of structural or spatial dislocations can be reconfigured or rethought. (And while these explorations *may not* always be visually manifested or sustained in the architectural design, as they are in this project, their potentiality lies both in their capacity to elicit questioning and to engage pathways of connection to architecture.) Aspiring to achieve links between the human condition and architecture, perhaps, is to think of the *design passage* as imbued with catalytic intervals.

The *architectural interval*, parallel to that of the psychological onslaught of pregnancy, deviates from the ordered rational of things: the turnpike in a roadway very simply alters traffic flow without impeding passage. These *imposed* deviations create diversity which may be manifested by means of design dislocation, meandering, or vertexes intended to upset the projectile onslaught. The pathway (in design) is thus forced to bend, branch, spiral. The resulting architecture becomes event oriented, *an passage of ensuing happenings*. In a similar fashion, the psychological and social ramifications of pregnancy are investigated as they provide the catalytic impetus of initiating change in architecture at a social context or in tangential conceptual design inquiries. Through a series of altering and transforming movements, caused by a host of different forces (thoughts/ideas), the output of theoretical essays, drawings, printmaking, artifacts, models, and other conceptual notions are brought into fruition. It is a reciprocating process, whereby an idea manifested in a cluster can effect the outcome of a parallel investigation – thus, the spatial, structural, and programmatic relationships of this project become increasingly refined and resolved.

The Maternity and Family Health Facility, in this way, is seen as an *interval*, that is, it presents one way in which overlapping programmatic and conceptual ideas inspired from the pregnant embodiment might be assembled into an architectural intervention. As the title of the project suggests, the pregnant body, posits a woman into a complex experience which is inseparable from the myriad of forces operating outside. It is through some of these forces – art, biotechnology, culture, design, sociology, and sex – which we as a society continue to exert our influence, control, and definitions on the system of human reproduction.

There, are of, course many possible paths upon which to build, more of them being circumstantial than absolute. As such this design exploration itself is seen primarily as an unfolding made possible by the collection of diverse inquiries which further questions, examine and assess architecture and its role.

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The document is meant to supplement, rather than describe in its entirety, the scope, design intentions and background of this project during its eventual evolution – a *passage* of sorts with *intervening intervals*. In pregnancy, a woman – and a designer – must overcome hurdles and succeed in developing new strategies to deal with the ever-changing situations. Therefore the strategies undertaken in this project involve the development of a multiplicity of design and written trajectories which may or may not share the same origin or parallel direction. The decision to arrive at the design from a series of different explorations or passages was meant to take in, as fully and simultaneously as wherever possible the variety of choices and mutually influential factors that

emerge out of architectural inquiries. That is, the assemblage of these diverse and divergent studies results more or less in a whole design – a territory or village brought together through reciprocity, while maintaining *uniqueness* in its parts, purposes, or situations. The predication also sustains the belief that architecture can be approached at various scales simultaneously, and thus I have purposely tried to organize different scales and multiple readings into each cluster. Together with this process, the architectural project is intended to create pathways which alter in their flow and intention: they gather around points of intersection and overlap at places of contention, thus suggesting *probable* and *varying scales* of contradictory, oblique, or symbiotic relationships. These inquiries demonstrate that it is possible to engage in a dialogue of architecture through means of moral issues affecting pregnancy or graphic means. It would be impossible to identify or explain such a privileged and profoundly moving experience as pregnancy. Therefore the various strategies used to inform design decisions and ideas merely try to raise interest in this meaningful human experience.

The pregnant embodiment is intended to ground the work, make it *gravid*, by providing a social context. To be gravid is to be heavy with child. A responsive society should be *gravid*; providing the means or support (moral or organizational) for the crucial decisions which effect the whole of society, namely the bringing of children into our community, the world.

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The document is presented in five groupings. The prologue introduces, as it pertains to this thesis, the idea of the pregnant passage and the notion of the pregnant body as an *interval*. In the second grouping, the material modes of a functioning object (luminare) and printmaking serve as conceptual design inquiries tangential to architecture, the pregnant body, or the landscape. The pelvis in particular, likened to the structure in architecture, reacting to the changing mass, elicits a structural possibility – a cantilever – from which other spatial predispositions arise out of or form within. The site section is also located here, since impressions of the landscape conceptually configured into these early design inquiries. The third section introduces more theoretical inquiries of the body. This work touches upon the psychological and experiential ambiguities during pregnancy, further confounded by sonographic imaging. Collectively, out of these investigations, the programme and project emerges. Finally, the conclusion offers a personal reflection of child bearing in a global sense, serving to question the stasis of the many proposed, yet to materialize, Canadian maternity centres.

There are of course many possible paths which to build upon. Thus, the design project itself is seen more as refined sketch than a building. The implied end is primarily a commencement into another state which further questions. By its intentional omission from the programme, birth, by virtue of its absence is questioned. Where should it take place? Do women and their prospective families have a choice? What are the immaterial costs and benefits?

Architecture briefly exists as a process. The images and products of the process can be recalled, but, alas they always look quite differently than initially thought. The birth is always a surprise. Spanish architect Juan Baldeweg writes, "architecture is conceived as an instant in which physical, partial and autonomous interventions and intentions converge, reflect on each other, and share in the enlightenment of their components."⁴

⁴ Baldeweg, *El Croquis*, +34.



The boundary between him and his surroundings — between that which his imagination supplied and that which actually confronted him — became more and more blurred until in the end he could no longer distinguish one from the other: his mind appeared external to himself, the objects of his perception internal. All at once he seemed to see himself...from within and without at the same time, as if he too were not more than a random shape in which his mind's eye perceived something of substance. But this very act of imagination that transformed substantiality into reality, though startled by the thought, the traveler found it pleasurable.¹

PROLOGUE the pregnant passage

¹Ende, "The Mirror in the Mirror: A Labyrinth", quoted in Hedjuk's *The Lancaster/Hanover Masque*, + 81;
²MacFarlane, *Psychology of Childbirth*, +12;
³Pinos, "Following the Trace", +125;
⁴MacFarlane, *Op cit.*, +13.

Pregnancy is a temporal and essentially mobile spatial articulation of the body — a rhythmic space of continuously generating pathways which collide or yield to more fixed structures and volatile moments. References to the origin of the word *passage* in the *Oxford English Dictionary* are abundant, but nonetheless explicit of an *act* of exchange or communication (implied or occurring) between people, music, strata of topographies, elapsed time, or various apartments or divisions of buildings (as a lobby). A passage then *gives way*, providing a connection from one situation to another. Can we think of a pregnant woman as one who is "expecting" without considering one who is "passing?" This passing is the pinnacle expression of human reproduction. By this, I mean, not "passed over," but rather a *passing* which is inseparable from our everyday existence. Implied, then, is the exchange, learning, and forging encountered; perhaps a quest reached at the end of an arduous journey (the birth). Pregnancy is a *passage*. It not only marks a period of time between two events (conception to birth), but it is the *portal* of our first experience of human communication and socialization.² A host of external stimuli pass through the maternal body and into the womb environment where they are received by the fetus and reciprocated to the mother by stirrings. This act of exchange is *real*, an *authentic* experience. Good architecture is set apart by its ability to provide a matrix, a potential for communication. Architect Carme Pinos argues this act or reciprocity *is* architecture, the *life*. She continues:

Architecture should communicate with the people who use it...The movement of people inside — this is *the* architecture, not the volume...And maybe our mistake is to ask architecture to explain all.³

The *pregnant passage* implies a connection to a destination. Also suggested by this journey is the knowledge gained by the diverse spectrum of experiences which present themselves. Direc-

The baby, a single cell at conception, goes through all the inconceivable complex developments to become, at nine months of age in the uterus, as sophisticated as most animals ever are in a lifetime. He has been surrounded by the changing world of his mother's body, which he himself has also been influencing by his own existence.⁴

tion through this passage is guided by education and intuition (one's self-knowledge of the body). Of paramount importance is the rich social layering, forged by new alliances within a community, where, in pregnancy, a woman may be ushered into the role of motherhood. Fear of the unknown is, thus, partially dispelled by other women of the community who *have been through it*. "Physical well-being to ensure the tranquility in the mother, and, through her the baby" was a firmly held belief among many cultures throughout history.⁵ Prenatal clinics have existed in China for thousands of years. Masseuses in ancient Rome were called upon to quell anxiety and pain throughout pregnancy and childbirth⁶ (in many cultures today where pregnancy and motherhood is not a marginal role but central to social life and status, therapeutic methods like massage are more commonplace). Having become absorbed with her subject's body through touch, the masseuse becomes conjoined with her subject through the rhythmic duration of the experience (the massage). Journeying across the nooks of the subject's body the masseuse experientially, perhaps even psychologically, partially shares with her subject the bodily zones which elicit pleasure and pain.

⁵MacFarlane, *Psychology of Childbirth*, +15;
⁶Greer, *Sex and Destiny*, ++27-8; ⁷George Steiner, *Real Presences*, +156;
⁸Matthews, "In the Trail of Serpent", +52.

Midwives throughout many parts of the world have used massage to coax a fetus to turn *in utero* to avoid a breech birth. A message is transmitted, through layers of flesh in this situation, received by or imprinted on another body (fetus), and reciprocated through fetal movement. Prenatal massage is a communicative act; an interchange, a *passage* of information. Similar notions are found in pre/post-natal education: information must be received by both listener and educator in order for it to effectively support and guide a woman throughout her pregnancy. The mutual dependency of this exchange is also found in design (art and architecture), which demands the viewer's absorption, concentration, or interest. In his discussion of reciprocity between the viewer and a work of art in *Real Presences*, George Steiner argues that reception is maintained via trust:

Face to face with the presence of offered meaning which we call a text (painting or symphony), we seek to hear its language. As we would that of the elect stranger coming towards us...or...of an intensely communicative persona whose idiom we cannot grasp. There are literary, artistic, musical works which remain closed or only superficially accessible to even the most welcoming of perceptions. In short, the movement towards reception and apprehension does embody an initial, fundamental act of trust.⁷

Architecture is the most obvious matrix by which our social milieu is expressed. The dialectic tension between the immediacy of the pregnant experience, namely its transcendence (body and mind), and a woman's inability to exclusively control this fate is most succinctly embodied in Middle Eastern and Asian gardens.⁸ An oasis in the desert carries connotations of an ineffable presence: a pregnant landscape which has brought forth bountiful life in the most inhospitable circumstances. Another poetic manifestation of the garden's

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procreative force is a thin trail of water that flows into a pool. As is common in Eastern gardens, themes of permanence and temporality suggest of two opposing forces which coexist, or intertwine. Rather than being construed as polar opposites these forces, speak about bridging and counterpoints (intervals), consequently evoking notions of unexpected outcomes and movements.⁹ Embodying a similar sentiment, pregnancy signals the end of one state into another, and thus a permanence is anticipated: parenthood.

We gauge the world and our place within it partially through our experiences, moods, and expressions. The body, in this sense, is not passive but interacts with the world. As Drew Leder states, inspired by Merleau-Ponty's *The Structure of Behaviour*, "the sensing of the lived-body is revealed as the result of its capacity of self-movement, its movement the result of sensing."¹⁰ It is ultimately through our capacities to sense and move in and out of experiences that we first become acquainted with and find our place in the world. For all this, one cannot reasonably say that our experiences will become habitual through familiarity because we are subject to life's caprices. This is most startling in pregnancy since a woman is thrust into a situation which is unfamiliar: the body she has always known has changed, and so will her experiences (living and moving in this body). Pregnancy neither washes over a woman's body nor something else since she is often psychologically called upon to measure, gauge and question herself. The pregnant body, perhaps, is the counterpoint of these experiences, *namely an interval*. No longer just a woman, she may find herself ambiguously juxtaposed *between* her new roles: *the Mother*; perhaps even *reduced* (objectified) as an incubator within the human race.

⁹Benjamin Stein, "Thoughts Occasioned", ++38-43; Eslami, "In Search of an Identity", in *Spazio e Società*, ++73-83; ¹⁰Leder, "Medicine and Paradigms", +31; ¹¹Rotondi, quoted in Cuff's *Architecture*, +203; ¹²Rotondi, *Ibid.*, +203.

One can see a parallel conflict arising in the roles between the architect, client, and other parties. Given that an architectural project is realized by many participants, many forces constrain architects, isolating them from the very process they are specialized to nurture. A building *plays* into the designer's life, but architecture is a service. The architect, having been intimately involved in the determination of the design criterion, fighting planning boards and contractors to ensure the *best delivery*, sees the project as seminal to the growth of his/her own work. "For us," writes architect Michael Rotondi, the work is "seminal in our body of work...Some projects are transitional, some projects are generative...It allow(s) us to explore ideas in a way we haven't...discovered yet."¹¹ Rotondi goes even further to infer a sort of surrogate with the built project. "The way we figure it," adds Rotondi, "we have joint custody."¹² Having carried the project to term, withstood the conflicts and tensions between parties, and finally the birth pains of the *built* project, one can understand Rotondi's impassioned view. A finished project can stimulate much pride, regardless of the contradictory forces at play while *in utero*. Nonetheless, one must question whether unconditional ownership of architecture is possible. Due to architecture's relative permanence, it is really an artifice given to the world. The acts of building and designing, impart an exchange delivered to successive generations – a passage – a reciprocity.

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Whether or not we are always cognitive of change remains uncertain, as such association is often blurred. As many pregnant women attest, the body is both conclusive and inconclusive of growth. The mind reacts differently to changes occurring within the body at different stages in pregnancy. One woman writes, "(w)ere I to lose consciousness for a month, I could still tell that an appreciable time had passed by the increased size of the fetus within me. There is a constant sense of growth, of progress, of time, which it may be wasted for you personally, is still being used, so that even if you were to do nothing at all during those nine months, something would nevertheless be accomplished and a climax reached."¹³ For others this period is inconclusive, the passage seemingly halts...there is only "rocking" (a will to endure).¹⁴ During the onslaught of labour, another woman writes "time is absolutely still." She continues saying, "I have been here forever...Time no longer exists...There is only this rocking, this labour."¹⁵

¹³Lewis, quoted in Young, "Pregnant Embodiment", +54; ¹⁴Young, "Pregnant Embodiment", +54; ¹⁵Chesler, *With Child*, +116.

Pregnancy, amplified by the sensory immediacy that one intimately shares, is a hermetic experience. Thus, the tumultuous forces gravitating within impart multifaceted readings of bodily movements which go largely unnoticed in public. Due to its temporality, pregnancy appears to leave no permanent mark in space: it exists only in its immediate context and can only reappear in another time, or another body. Ironically, for a bodily passage which is so sensorially rich, the experience often remains ominous – the secretion of hormones after delivery *dulls* both pain and memory. This fleeting passage's existence is often only validated by the birth of the child. Pregnancy thus remains evanescent and transitory (a passage crossed to a gain which is possibly an end – a child, *an imprint of ourselves*.)

Life is, then, *the* process, the light of life; the arduous journey, the passage.

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Inter+val: The pregnant body – in passage – the architecture of the interval.

Interval demarcates a situation, a pause, where competing forces gravitate or near each other, ultimately overlaying and shaping our perception of the world (of ourselves). It suggests a place which can be occupied and where forces are reconciled: a space, a site between surfaces, a gap, a break. The interval implies two readings: it indicates a pause, waiting or an anticipation which is suggestive spatially of a threshold or an opening; and it is suggestive of movement, transit or a series, as the repetitive space between palisades. To think of intervals in the passage, then, is to think of a dynamic relationship. As even to pause implies an eventual motion, or as T. S. Eliot would have it "a still point in a moving sky." Though still, one may recollect, possibly reflect, and

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choose another path. Stillness tends to announce a different intensity of motion, since motion never ceases. Only its intensity slows or gains. Thus, the mind may project in thought while the body stills. Louis Kahn's Salk Institute in La Jolla provides an architectural example. Kahn uses successive open frames to link a series of the outer terraces. While we are physically impeded on the outside from transit from one terrace to another, Kahn allows us to visually move through terraces before us – we are projected into the intervals beyond through vision (and thought). "We become engaged with the intervals and the open ends."¹⁶ Undoubtedly, the temporality of pregnancy elicits a paradigm of spatial and sensorial experiences, all precariously perched. As such the *pregnant body* can be seen as a configuration of intertwining and interacting parts. It is a dynamic whole that manifests itself in several realities – consisting of a watershed of experiences brought together in a continuous, unpredictable, yet self-determined movement.

¹⁶Benedikt, *For An Architecture of Reality*, +58; ¹⁷Young, "Pregnant Embodiment", +54; ¹⁸Matthews, "In the Trail of Serpent", +46; ¹⁹Matthews, *Ibid.*, +51; ²⁰Benedikt, *Op cit.*, +56; and in Matthews, *Ibid.*, +51.

The pregnant woman, experiences herself as both *source of transit* and the *tandem centre* of the generative process. Theorist Iris Marion Young describes pregnancy as a paradox: a process that helps *create* life but cannot necessarily control the *fate* of that creation. She further says a woman "does not plan or direct" pregnancy, nor does it "wash over her, she *is* this process."¹⁷ This metaphoric reference to the *interval* marks a tenuous union, thereby stimulating a discussion of how one condition passes into the next, and how possible relationships can generate assemblages through building, renewing, and constraints.

Some of the more pervasive manifestations of an *interval* in architecture, as mentioned earlier, are embodied in themes of paradisiac transcendence. "The paradoxical tension," writes Robin Matthews, "between the garden's immediacy and inaccessibility imparts the human spirit with its enigmatic essence..."¹⁸ Admittedly, humans throughout time have tried to impose regularity on the vagaries inherent in natural terrains, as memorialized by the many rectilinear layouts of French, Japanese, and Moorish gardens. In particular, Western civilization is marked by man's exercise to dominate nature: Le Corbusier's garden terraces incorporated in many of his housing schemes attempt to transform the garden into "a machine to live in." A more unobtrusive theme is, however, expressed by the Japanese garden which embodies the principle of *ma*. The garden, while susceptible to design interventions, is not enslaved by human will.¹⁹ The spaces between the wooden planks in a bridge are *ma*, a pause, implying something incomplete but continuous. The space between does not impede our passage across the bridge, but instead layers our experience. The hollow "clipping" and uneven undulations of planks felt as one passes is imbued with textural sensation. *Ma* can also be translated as "space," "room," or a "mode of being," as being awkward or graceful.²⁰

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One could say that pregnancy is an unstable, indeterminate articulation of being (simultaneously one yet two) not unlike the conceptual design process in architecture. But as experienced in most natural systems, structure and form gradually take shape. As humans we rationalize or attempt to place order on that which eludes logic, namely nature. Routine clinical management, for the most part, still rigidly imposes its logic on the body, disrupting any means to express and cultivate social and sensorial aspects of the body. On speaking about a medical examination Leder writes,

The naked body is exposed to a painful blood test. The patient learns to deliver a history, and objective report of recent bodily occurrences, and to scientifically describe current physical sensations. The observational mode continues as the patient self-administers treatments, reporting back on all the changes in the external appearance and internal sensations of the body.²¹

²¹Leder, "Medicine and Paradigms", +33.

In the architectural process, likewise, parts or activities are brought under control through various manipulations, endowing a project with structural rationale or tectonics. Hierarchies are established by facilitating relationships. Eventually a whole body surfaces. But one can see the shortcoming when ordered systems are too encompassing, subsequently preventing more dynamic relationships from overlapping, converging, forming a vortex. Medical facilities illustrate this point. Emphasis continues to be on programming or engineering, rather than creating a thoughtful merger with holistic design, enhancing user "well being" and "comfort."

Unlike the pregnant body, the conceptual design process in architecture does not yet represent reality; we cannot yet occupy this place in a physical and intimate way. The work is thus an abstraction, an *interval* consisting of ideas which initiate a type of reality— one anticipates how an architectural intervention might manifest itself. As etymology further tells us, *interval* also means a pause between the walls: *inter* (between) and *vallus* (wall or post). The *interval* is the space between two or more occurring things. The *architecture of the interval* is realized among the spatial and programmatic tensions; the gaps; the walls; the layers in the interstices between, the body *within* the body, as it were, the **pregnant body**. More specific to this project, *the interval* is used as the means by which ideas, spaces, structural configurations, and movement are related to one another through architectural means or issues, allowing *reciprocity* to be engaged on various levels. This project is interested in only *abstractly* referencing these issues, thus giving greater potential to expand and challenge parameters in which we define concepts and exercise material modes of expression.

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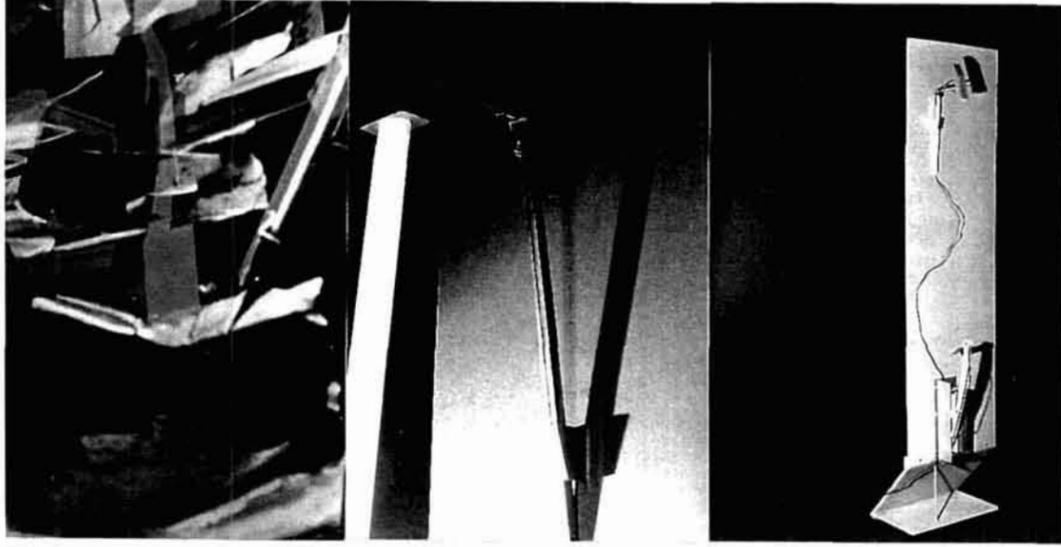


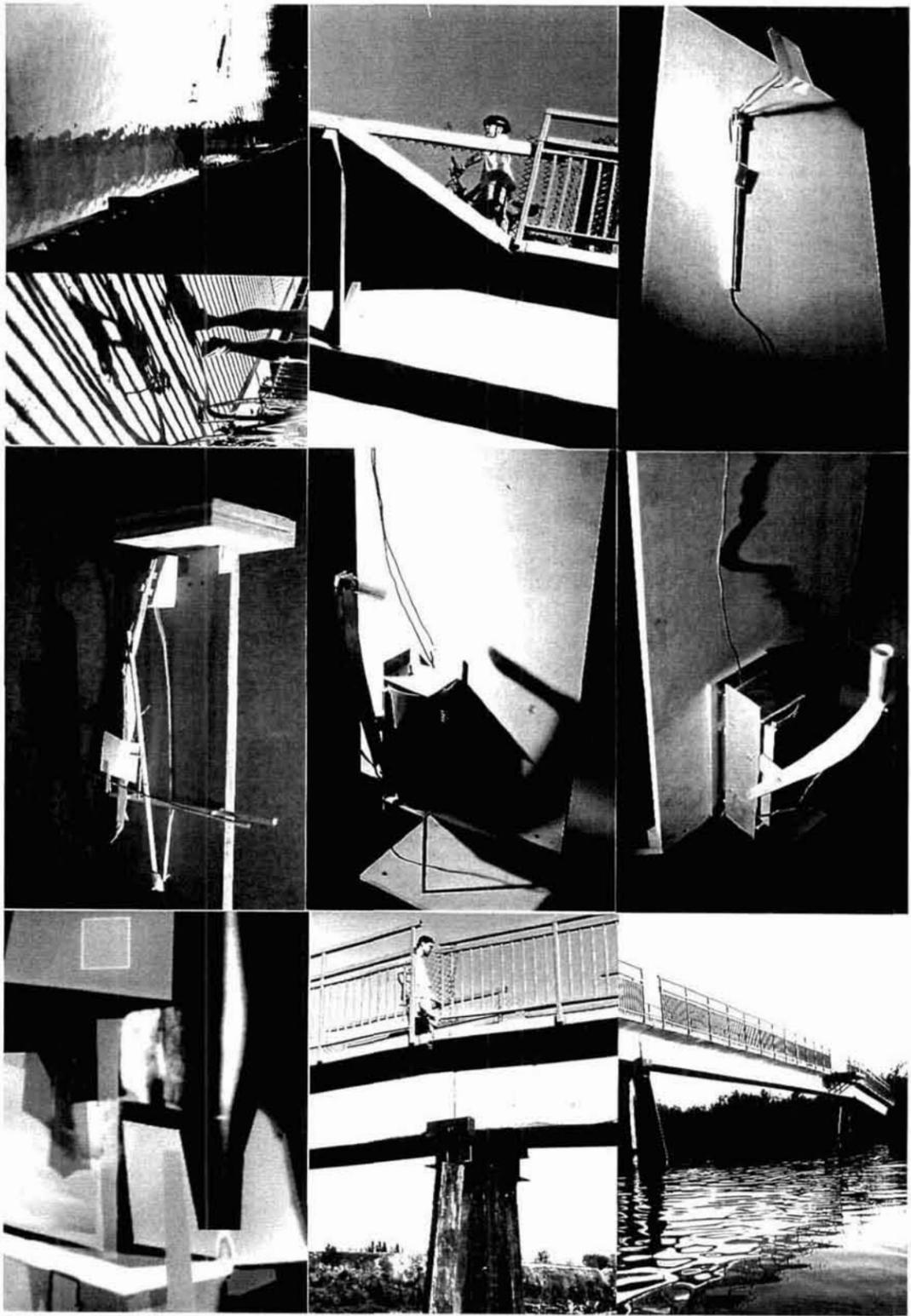
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of LIGHTING pelvis

The light asserts itself into the space, beacons, expands beyond the frame, the wall...The wall, the frame recede in all this posturing, but celebrate in their union with the light, the life.





The mechanical workings of the body follow a secret and subliminal set of directions. Reciprocity, thought and action; the skeleton reacts to changes of circumstances. At birth a baby's legs are positioned into the cover of its pelvis, which is smaller than its head. As the child grows the angle of the hip joint in relation to the pelvis changes to take up walking. The stresses of action trigger new and local loads.¹

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¹ Salter, quoted in *TS, Intuition and Process*, +84; ²Salter, *Op. cit.*, +85-6; ³Diamond, "Why Women Change", ++135-136; and Guttmacher, *Pregnancy*, ++169-171, among numerous other sources; ⁴Diamond, *Ibid.*, +136.

The evolutionary process which enables humans to walk upright involves a complex series of adaptive movements and one which provokes a discussion as to the kind of structuring necessary for spatial expansion during gestation and expulsion (birth). Central to this discussion is the pelvis, particularly its *structural spatial mechanics*. The basic human mechanics of this movement are concisely expressed by architect Peter Salter.

The continuous labour required for a *cantilever structure* to stand and to move is centered on the pelvis. This is a member which provides the support matrix to right the overturning movement caused by a forward shift in the centre of gravity. The pelvis traces loads to the earth. It acts as a yoke and provides a wide base as a fulcrum for the muscles that connect to the leg. By its rotation it determines the distance the leg can move forward, ensuring that the body's centre of gravity is brought back within the structural frame.²

In women, the pelvis's forward tilt accommodates for both internal and external loading: the weight gains of pregnancy and carrying a small child. However, the female body's merits for procreation in the modern world have been largely debated among anthropologists and evolutionary biologists. For some specialists, the evolutionary history of human reproduction is seen as simply inadequate for our contemporary demands; namely career and life-style choices which delay decisions to have children. As the female body ages, the pelvic region is less flexible, making later life pregnancy and delivery more arduous. The biomechanics of the female body are further invalidated by the tendency to measure it against animals. This view purports that, in spite of the increased public health measures and social programmes developed in the last century, human risk for dying in childbirth still far exceeds any species in the animal kingdom.³

As a woman ages, she can do more to increase the number of people bearing her genes by devoting herself to her existing children and grandchildren than by producing yet another child.⁴

Medical technologies are invariably heralded as one of the glorious means of liberating women from the "tyranny of their reproductive bodies."⁵ Technology seems to offer a *solution* to the supposedly ill-fated female plight of child-bearing, rather than presenting options. Compounded by the proliferation of reproductive and genetic engineering used today, the biomechanical merit of the female body is thrown into doubt. Cesareans from anesthesia seem to offer deliverance from the perceived horror of danger and pain in childbirth. One well educated woman I know, who was at the time experiencing her first pregnancy, approached the concept of vaginal childbirth as a potential catastrophe. She instead opted for, and was granted, a cesarean birth. (Several medical figures had advised that she had no urgent medical reason to warrant this procedure).

The pregnant body in North American society still tends to be perceived as *flawed*; not quite up to our contemporary ideal of a fast, efficient, and virtually painless expulsion (birth). In short, the prevailing scepticism which routinely reinforces the technological paradigm over the child bearing-body without considering alternatives, according to Germaine Greer, is more about *fear* (perhaps control) rather than exercising sound judgment.⁶ Unnecessary obstetric practices, such as *routine* episiotomy and use of forceps, deny the remarkable, elastic female body and its provocative structuring. In so doing, pregnancy and birth in North America are still commonly viewed as a *crisis* best handled by experts, thus perpetuating the diminution of the role women *as capable child bearers*. Insofar as sexual behaviour is observed in our society, virility also tends to be biased towards libidos, potency, and fertility (more so of the male), and *not the virility of reproduction* in matters of *child bearing and birth*.

Viewed from a different framework, however, the physiological stature of the female pelvis is dynamic. Each surface responds with different directional forces. The increased weight bearing on the body causes structural realignment of the pelvis and spinal regions: the pelvic bone cavity tilts forward, increases in flexibility, and shifts the centre of gravity outward.⁷ The ensuing weight gain is thus balanced. As both a structure and definer of a space, the female pelvis is read as dynamic and complex. Within architectural relations the pelvic region can be thought of as a doorway, marking the location of entry into different regions – the womb and vaginal canal. But also expressed through its reciprocity with other elements the pelvis is spatial. Here the truss-frame comprising of pelvic bone, stressed abdominal muscles, the spine, and the elastic wall of skin, defines in one natural movement a *cantilevered enclosure*.

This expressive gesture is an extreme suspension of bodily structure and systems, and can be said to deliver a *presence*. As such the pregnant body is seen as powerfully *assertive* and *poised*. "An object, building (or person) with presence," writes Michael Benedikt, also exhibits *assertiveness* of the structure, materials, and parts which collectively form "positioning as a new entity in

⁵Adams (in this article Adams argues that some extreme factions of organized Feminism and obstetric technologies undermine the role of the Mother in Western society) in "Out of the Womb," +271; ⁶Greer, *Sex and Destiny* ++17-19; ⁷Bobak and Jensen, *Essentials of Maternity Nursing*, +190-210; and Burroughs, *Maternity Nursing*, ++161-210.

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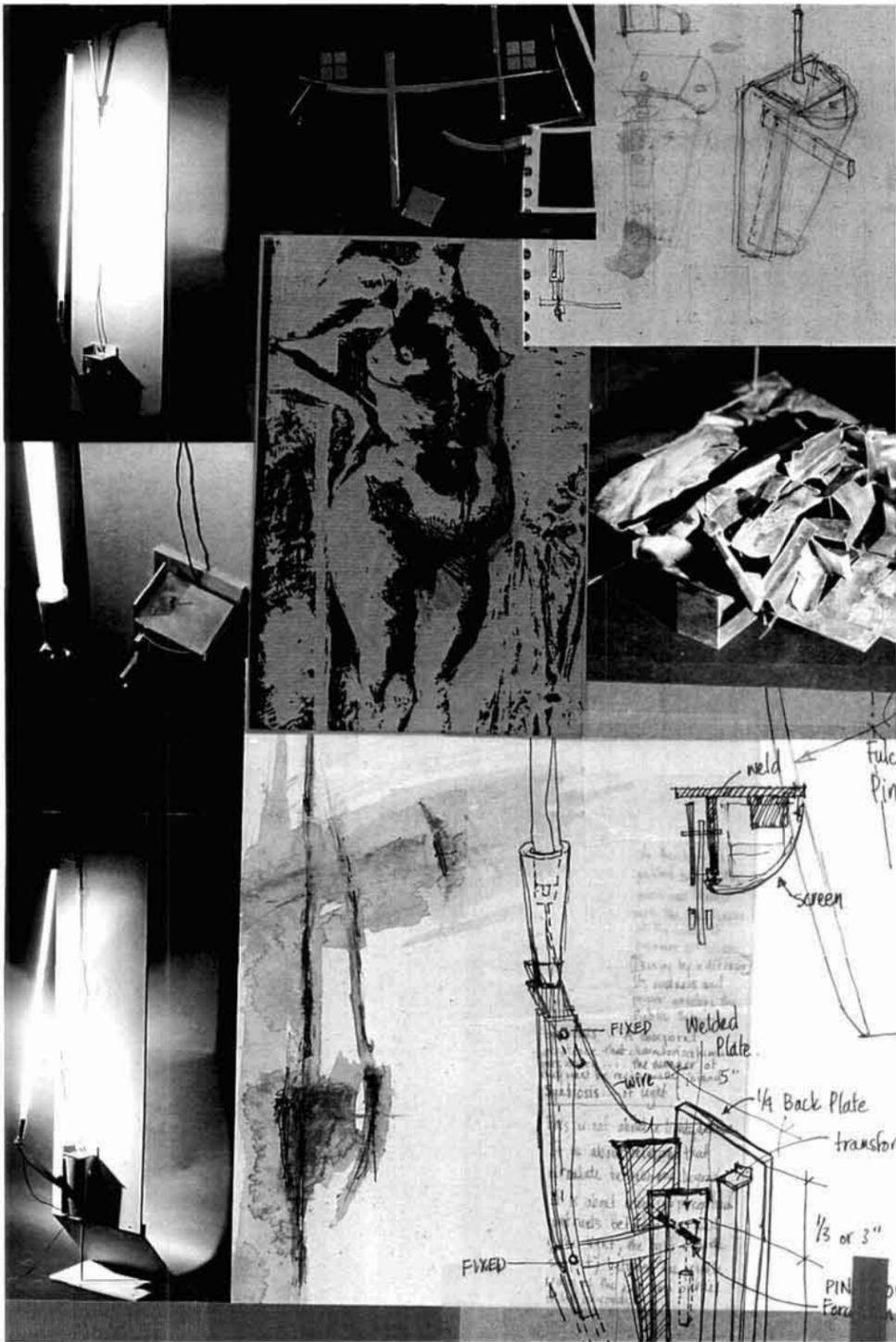
the physical world...(its) articulated parts are not so much adjacent or linked as *mutually poised*..."⁸ Acting as a poetic construct this cantilevered body moves past the mere reading of structural rational. Expressed through the pelvis's form and other transformational changes, the body *cantilevers*, extending itself outward into the world. The philosopher Jean-Paul Sartre says "to know is to 'break-out,' to escape from the moist gastric inwardness and fly out beyond oneself, toward what is not oneself, out there, over by the tree and yet outside it..."⁹

While the body and spirit may *cantilever*, they are nonetheless dependent on the biomechanical impetus which allows them to do so. Thus to "break-out," does not imply to "break-free" as this would surely deny the importance of the shared reciprocity (fetus/mother or structure/facade). Nevertheless, the fetus, in one sense, distances and distinguishes itself from the maternal body; it literally propels itself out of the pelvis, and descends (*lightens*) only later into the pelvis when birth nears. Bold and provocative in its extrusion, yet still protected by the pelvis' structuring, the fetus borders both worlds (private and public). The parturient body, as such, becomes increasingly ambiguous as it extrudes outward. "This belly touching my knee, this extra part of me," writes the pregnant Iris Marion Young, "gives me a joyful surprise when I move through a tight space...(it) calls me back to the matter of my body even as I move about accomplishing my aims."¹⁰ The body (poised with senses and thoughts) is akin to a gauge which can determine fairly accurate spatial depths. As forms, both the pregnant body and architecture are physically anchored by their situational and constructive processes. Drawing expression power out of the circumstance from which it is symbiotically anchored, an impregnated body of architecture, as Steven Holl puts it, is "bound to situation...it is a construction...intertwined with the experience of place."¹¹ Although moving and unquestioningly more experientially complex, the fetus and its mother are also bound together.

Often eclipsed, women still entertain the idea that the fetus is something which they have *constructed* in their bodies. This is partially an illusion: the fetus *implants* itself into the uterine wall. While other creative acts may instill an object with value, the maternal body, Simone de Beauvoir eloquently states, is only a "gratuitous cellular" of growth. She says further, "a mother can have *her* reasons for wanting a child, but cannot give *this* independent person, who will exist tomorrow, his own reasons, his own justification for existence; she *engenders* him as a *product* of her own generalized body, not for *her* individualistic existence."¹² A parturient woman's self-perception of her fertility, rooted in the belief that her body *autonomously creates* a child, is what de Beauvoir purports is the *feminine ego*. For, in all who believe they are creators in some facet, albeit of natural or artificial capacities, lies the commonly shared belief that those who *create* life also have some exclusive investment in it. It is in *this* capacity that the pregnant subject entertains notions paralleling the constructive act of making art forms and architecture.

⁸Benedikt, *For an Architecture of Reality*, ++34-36; ⁹Sartre, "Intentionality," +389; ¹⁰Young, "Pregnant Embodiment," +51; ¹¹Holl, "Anchoring", +9; ¹²Beauvoir de, *Second Sex*, +496.

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My hands take up the tools, reconstructing the natural surroundings into an abode uniquely suited to my body. My actions are motivated by emotions, needs, desires, that well up from a corporeal self. Relations with others are based upon our mutuality of gaze and touch, our speech, our resonance's of feeling and perspective. From the most visceral of craving to the loftiest artistic achievements, the body plays its formative role.¹³

The construction of a lighting device draws inspiration from the structural precariousness of the pregnant body existing as a temporary cantilever, rather than simulating it directly. Seen from a poetic view, the pregnant body forms a triangulated cantilever which defines a spatial condition, an inner chamber, supporting the fetus. This interrelated network is important, for it parallels certain perceptual relationships our bodies have with our man-made constructions and built spaces. More specific to my design of a lighting fixture, a conventional fluorescent tube is placed in vertical orientation creating a more dynamic relationship for design and structuring. The orientation, the wall and vertical arrangement, places the light closer to the viewer's field. In this way, the supporting wall and the object (light fixture), which are both selectively poised and immersed with varying degrees of immaterial qualities when lit, become more intimately part of the viewer's spatial experience. The light, wall and the viewer all figure actively in experience, thus they momentarily conjoin. A relationship is thus established with the surrounding space and, therefore, with the architecture.

In this investigation, the pregnant body is *not* intended to be a figural source but one which is poetically suggestive of a structural (and experiential) situation — *a site in tension, but also conjoined*. This tension elicits certain social and cultural meanings. In many Latin based cultures, as Spanish, the pregnant body connotes a housing which "carries the light." In the correlation between Western phenomenology and pregnancy, Young suggests that a parturient woman's reliance on vision lessens. The legs and feet visually disappear with (as a result of) the expanding mass. The body and the other senses simultaneously "dance" forward, compensating for the impeded vision, resulting from the life (*the light*) growing within "the region of the trunk."¹⁴ The pelvic region, having many associative meanings, is also suspect to other perceptual readings. (Due to the sensorial familiarity or from being mentally absorbed in work, there are times when the pregnant subject may not *feel* her body.) Alternatively, others may notice her swollen body and may comment or react, thus drawing attention to her *situation*. The pregnant body, then, is for many a social intrigue. This notion of the human figure forming the basis for social inquisition is underscored in the furniture and functional objects designed by Elizabeth Diller and Richard Scofidio. Their work examines how we socially respond and react to artifacts.¹⁵ In similar fashion, the intention of the aluminum frame armature in my luminaire is not solely a frame or me-

¹³ Drew Leder, *The Absent Body*, +1; ¹⁴Young, "Pregnant Embodiment," ++51-2; ¹⁵Diller and Scofidio, in R. McAnulty's "Body Trouble," +193-6.

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chanical device for movement. Its cool materiality and attenuated form also conjures an image associative with medical apparatuses, questioning in particular both the struggle and reciprocity we share with medical instruments and technology.

In some ways, this lighting device was nourished by a continuing investigation of many other phenomena, some of them reaching to understand the underlying energies of lighting, materials, connections, and movement. The emphasis largely shifted to investigate spatial structures; and one a *cantilevered* system dynamically captures. Despite what may appear as extrinsic and stationary, the *cantilever* relies upon structural reciprocity in which compression, tension, gravity, balance, and friction play a role. Should one of these relationships falter, the structure will collapse. Supplementing the work further, the design hinges upon exploring the interaction between the light and other bodies (the wall, the fixture itself and the subject). The vertical wall becomes analogous of a site – an *anchor* – for receiving and stabilizing the *cantilevered* skeleton structure. In an act of co-dependency with the wall, a circuit connection is achieved: the tube is connected to aluminum socket heads at each end; a long tapered arm conjoined to the top socket slides into a fixed aluminum sleeve while the lower socket lever – acting as a rotating fulcrum point – is supported off the transformer unit. As such, the lighting unit is capable of *action* and *reaction* throughout its simple mechanical moving ability: when the top socket lever is lowered into the fixed sleeve, it changes from its relatively parallel alignment with the wall to a more pronounced triangulation. The lower movement allows a forward shift in the center of gravity, creating different stresses within the tube. Although a precariously supporting element, the frail, slender tube is an integral part of the structural union. Consequently, in the event that the compressive forces are too great, the tube will shatter.

The temporality of this full union lends an added poignancy:

The tube's removal breaks the structural integrity; the spatial enclosure formed between the wall and tube dissolves.

The remaining structure limps, the sockets fall.

The subject disengages, the life, the light is gone.

The tube's presence announces the potential for light, for life.

When activated the light encompasses all,

The light asserts itself into the space, beacons, expands beyond the frame, the wall.

The wall, the frame recede in all this posturing, but celebrate in their union with the *light*, the *life*.¹⁶

...Light is really the source of all being.
And I said to myself, when the world was an ooze
without any kind of shape or direction, the ooze
was completely infiltrated with the desire to
express, which, was the great congealment of Joy,
and desire was a solid front to make sight pos-
sible.¹⁷

¹⁶MacKenzie Griffiths, Notebook, 1996; ¹⁷Louis Kahn, *Between Silence and Light*, +68.

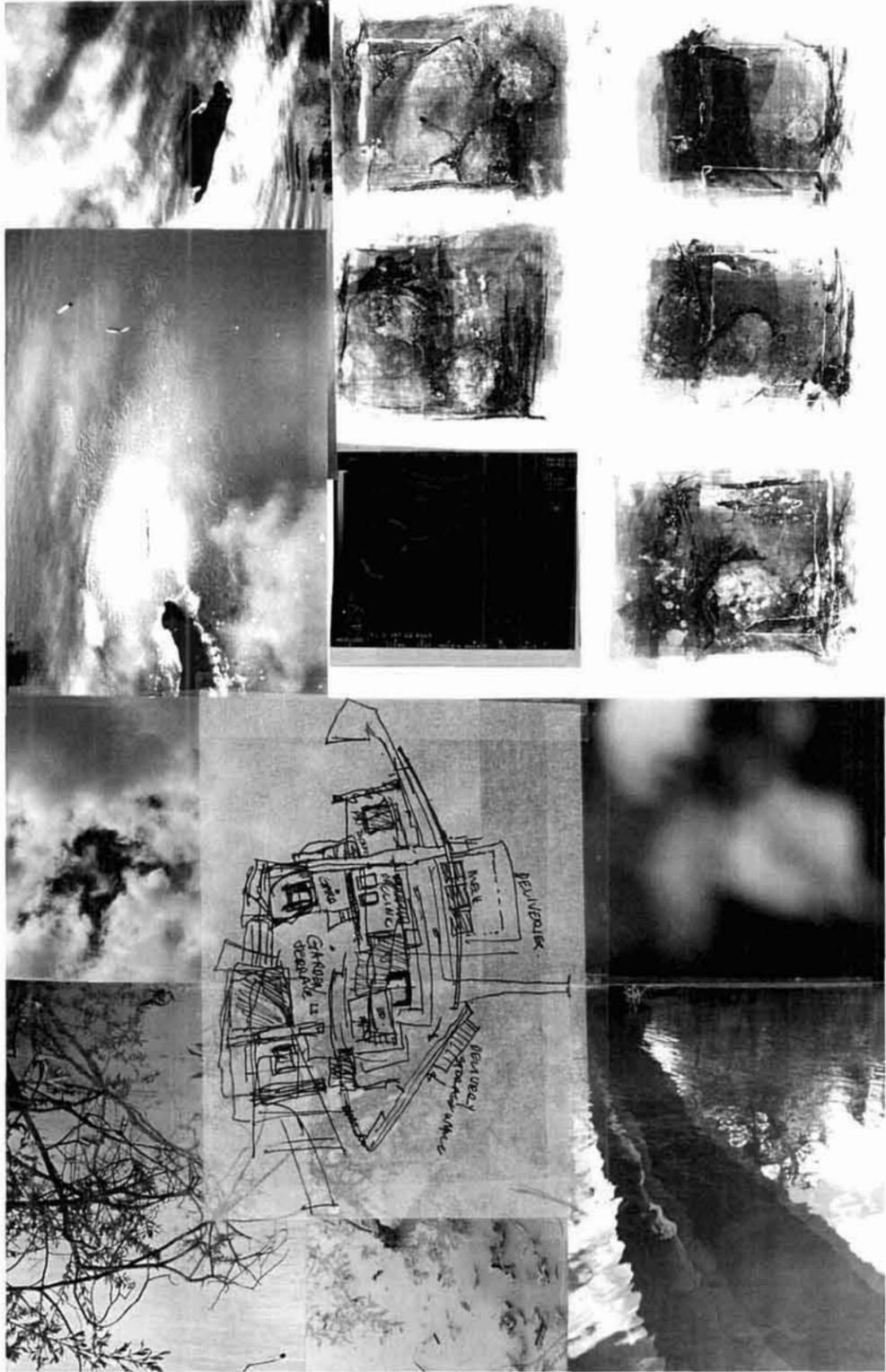


the PREGNANT
body

the pregnant passage in architecture
the architecture of the interval

the PRINTS imprint

A ghosted image remains on the plate, a residue of its former life. Ink is layered again, stripped, and built-up. A rival print is processed, a sibling emerges.



I never know how a particular work emerges...We begin with articulating problems, usually problems that arise from a previous work...we worry about, examine them, become intimate with them, and through this process come to grips with their difficulties. We then go about creating miles of procedure, inevitably finding what emerges upsets and evades these strategies. These initial impulses, the feeling and experiences that are the basis of the work, are always obscure and can only be vaguely described.¹

Necessities reach their maturity when their time comes. Said in another way, the creative spirit (which we might call abstract spirit), enters then into the soul, later to more souls, and provokes an inspiration, an interior impulse.²

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¹Mayne, *Tangents and Outtakes*, Forward, n.p.;
²Kandinsky quoted in *Espiritu Nuevo*, Revista Internacional de Estetica Viva, No. 01, 1993, +67; ³Taylor, Intro. in Robert Rauschenberg, +ix.

Printmaking conjures notions of architectural layering in three ways: it is experienced through visual realms, materials, and generative sequence. Through an understanding of layering, our perceptual encounters in the world morph, blend, and overlap into one another. No longer perceived solely as distinct threads, these tangential inquiries seem to suggest how peripheral spatial boundaries might incise the body, become conjoined, and eventually reconstitute the *siting* of a body *pregnant*. This reading, although abstract, becomes the conceptual impetus for the merging of several programmes in one body of architecture.

Our immersion *with* or *within* electronic imagery, driven by the accelerated pace of everyday life, is dominated by themes connected to mass media and consumerism. The effects of visual immersion can be seen most pertinently when we are either temporarily removed from the context or placed in an extreme of it. As a first time traveller to Hong Kong and Tokyo, I recall being completely saturated, effectively bombarded, by media images and electronic signs. Read in terms of visual aesthetics, the "lightness" and "fragmentary frames" of electronic imagery that is omnipresent arguably denies any perceptual sense of fluid movement, and in this, a lack of layered complexity. Conversely, what *is* experienced is density. The overabundance of images becomes so cluttered and visually overloaded that it results in a feeling weighed down, slowed.

Ironically, in an era marked with unprecedented media and technological advances, this kind of visual aesthetic is treated benignly and standard in our urban environment. Of course this is not always the situation. In Barcelona, neon "signage" and lights form an integral part of the night-life and aesthetic ambience of the street. Coloured lights are juxtaposed from varying angles and street depths. Here the strategy speaks of a lithograph. The intensities and movements, produced by human and artificial means, converge and contribute to the conceptual building of the street's life, and with this, conceivably, the formation of a *conjoined* body.

The most stirring beauty comes from order not found, not order given, as if its permanent harmony existed precariously in a transient and unpredictable world.³

However, if one aesthetic presence becomes omnipresent, as is often the case, it would hardly constitute enough of a reconciliation of the complex reality present in urban life. The contemporary city is an interwoven web of many realities.

What remains in North America is a movement which churns out a tired display of yesteryears glass boxes embellished with electronic signs, comprising little more than "surfaces filled with enigmas."⁴ Veiled by the promise of prosperity (that of the city of images) has perhaps caused us to forget the fundamental things that are indispensable to society, *namely the choices* which allow us to be in the *limelight*, outside it, or somewhere *in-between* the layers. Lost is a strong sense of passage through *the layers* of urban life. "All we can do is place ourselves among them (the surfaces), as one more thing among things," observes Mirko Zardini.⁵ Experiences such as these tend to act as *masses* or *barriers*, hardly encouraging participation at a personal or pedestrian level. Are we, then, as computer graphic artist Paul Berger states, so "vulnerable" to the endless manipulations of graphic imagery that our capacity for perceiving, experiencing, and understanding complexities in our everyday experiences are made in the end unavailable to us? "The average...[t.v.]...viewer does not think of himself as viewing *transformational sequences*," states Berger, and thus "much of our common experience is fantastically complex and multifaceted, but we do not reflect on it...(w)hen we *don't* reflect on systems of presentation, we are *vulnerable* to great manipulation, by others, or ourselves."⁶ Lacking the *will* to mediate, confront or question these issues only perpetuates the prevailing "dislocation" or "alienation" that is commonly expressed by our society.

⁴Zardini, "Skin, Wall, Facade", +48; ⁵Ibid., +48; ⁶Berger, *The Machine in the Window*, +46; ⁷Langer, "The Work of Art as a Symbol", ++183-4; ⁸Kahn, in Norberg-Schulz's "The Message of Louis Kahn," +203.

If urban society is seen as the ultimate venue for the above, then we are at a loss to participate with the city aesthetically in the manner found in art because the redundancy of "arranged" or "programmed" things leaves no place for intrigue, examining, reciprocating. Of course, the extent of graphic manipulation is deeply embedded in many facets. Our bodies too are being turned into graphic surfaces with the aid of biotechnologies; alas *another specimen among specimens*. Conversely in art, writes Suzanne Langer "the making of...expressive form is the expressive process that enlists a man's utmost technical skill in service of his utmost conceptual power, imagination."⁷ Therefore implied is something that emerges out of the built-up resonance of colours and line which emanate with "sentience." Is this possible to achieve in architecture or urbanism? For Louis Kahn, sentience comes forward in our *will to express* a presence. This essence resides in the moment (*the interval*) where light and silence meet. Presence, then, is procreated by the *means* of art (or artful thought). Kahn writes:

A work of art is the making of a life. The architect chooses and arranges to express in spaces, environments and relationships man's institutions. There is art if the desire for and the beauty of the institution is filled...(with) light...the giver of all presences.⁸

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The process of making (architecture), what Khan calls *design*, is imbued with artistic procedures. The design, then, could be said to result from the ideas cultivated amidst tensions: various explorations increase the potentialities for expressing a *presence* (in spaces, structures, materials, and purposes). Noted in the emerging attitudes of architects like Rem Koolhaas is the idea of *building* as an aesthetically *layered* phenomenon. Undoubtedly this vision sees architecture capable of exhibiting complexity in perceptual experience. The work of the Swiss architects Jacques Herzog and Pierre de Meuron demonstrates this questioning through their continuous play of materials and use of composite techniques. Using a limited repertoire of juxtaposed elements, their work embodies the "relations between materials, oscillating between composition in a dense web of pauses, of accelerations, of refined courtesies and little brutalities."⁹ The facade assumes a thickness (of its own) achieved by a double wall effect: a transparent sheet is placed over the framed wall. Hence the conventional reading of a wall as an ominous plane is altered; it is *impregnated* with a textural layeredness.

⁹Zardini, Op cit., +48;
¹⁰McFarlane, *Psychology of Childbirth*, ++13-15;
¹¹MacFarlane, *Ibid.*, +19.

Although artificial, the partially unveiled wall provokes a sense of its *constructed mode of being*: both awkward and graceful. The many forces which converge together speak of a *material interval*: the studs, between which insulation is wedged and wiring is threaded, speak of the essence of labour which creates the wall. We see a glimpse of what is behind, and for this reason, the viewer may become engaged with this raw exposure: a kind of *osmosis* occurring at the skin. The "roughed-in" wall seen behind a glazed surface is challenged as an aesthetic experience. By this, the wall poses a potential *shock* for many who have conventional notions of what a finished surface *is*. It could be reasonably said that this is analogous to the initial shock (or intrigue) of viewing our bodies from x-rays or digital medical scans. If anything, this reaction, throttled because of unfamiliarity, causes some to question, and thereby induces reciprocity, similar to viewing art.

Our bodies, sheathed by clothing and our own skin, share similar intentions to disclose or obscure the identity beneath as do constructed walls, spaces, and openings. Ultimately these boundaries are sometimes thrown into question. Is human skin separate and unique? Skin surfaces more conventionally noted for their material density (shielding) have greater poetic meanings in pregnancy. The swelling womb region pushing outward exists more as a *filter* than a barrier. "There is evidence to show, that towards the end of pregnancy, the uterus and the mother's tummy gets so stretched that some light does get through to become diffused in the amniotic fluid. It would look like the glow we see through a hand held over the end of a flashlight."¹⁰ The skin is porous, passage is thus implied. Likewise, the external environment – or the more immediate social, cultural, and physical environment of the mother – *plays a part*, indirectly and directly, through the maternal screen (body).¹¹ For this reason, I see this protective boundary of skin, both in printmaking and in the architectural process, as something which is one, simultaneously *pulled and pushed* in various directions by different forces.

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...our own bodies are in so many respects inaccessible to us. We cannot see our faces, our backs, nor our entire heads—in other words, the noblest parts of our bodies; we cannot lift ourselves up with our own hands, cannot embrace ourselves, and so on. We plunge into the world of perception feet-first, as it were, not head-first ourselves.¹²

I tend to think of architecture as an interval that hovers, spirals, or weaves around the much broader environment. "As with art," states Thom Mayne, "the experience of diversity in a city will make a more developed human being."¹³ This sensibility coincides with the understanding of printmaking as a kind of layered mental map. Collectively, these experiences become a sort of printed landscape, evoked through the layers of memory and infused with colour, texture, composition, and light.

¹²Walter Benjamin, quoted in Winfried Menninghaus' "Benjamin's Variations of Imagelessness," +332; ¹³Mayne, "A Report from the USA", +48.

Conflicts and tensions exist in any encounter, creative or otherwise. These conflicts, at times superimposing and assertive, are suggestive of the dynamic tension resulting from the convergence of many forces. The conceptual synthesis of materials in printmaking, while significantly less complex than architecture, nonetheless requires a careful study of how materials respond to one another and how concepts such as layering, diffusion, separateness, and harmonization are presented. Having to rely on the *semblance of arranged elements*, printmaking owes greater similarity to the process of architectural design: careful selection of materials and additives and the use of machines/tools to draft, register, and structure images. Furthermore, the printmaker must juggle the more fluid conceptual process with the technical aspects of building and finishing the work. The balance between technique and design is a perpetual struggle for the printmaker – s/he enters into a vortex of sorts. The creative vortex (an interval), beyond the capacity of any designer to fully predict or control, nonetheless speaks of tumultuous forces which *play into* the completed work or experience. In other instances, the work's making and therefore physical existence is entrusted to others, who, therefore, are also agents of its execution.

Printmaking is a *metamorphic process* in that the pace and degree of change, often external work itself, is to some extent the agent of manipulation. Printmaking, in particular, is equally an exploration and a skilled execution. The arrangement of procedures during the *pathways to printing* requires quickness on the part of the artist: s/he must react to an inordinate amount of indeterminacies that arise from technical mishaps to optical surprises, yet anticipate, all the same, a desired outcome. Veils of overlaid pigment transform the perceptual depth of a two dimensional image, creating a surface that may appear luminous, ephemeral, or expansive. How the surface of built layers absorbs or reflects light can increase, diminish, or alter perceptual boundaries. Yet all these layers are perched precariously on the plate until printed.

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Much of the sensibility and process of printing is indebted to the secondary site (accepting that the plate is the primary site): the paper and its materiality (density and texture). For this investigation, Japanese rice paper is used because it takes on the sentient qualities of skin; it is a membrane that both conceals and filters. For example, the layered effect of pigments and paper make visible the infinite possibilities in which a certain reality may appear and subsequently be perceived. Yet there is always an element of control, present throughout the construction which is unavailable in natural metamorphic processes. A mother is not a designer, but more *the context* into which another life force *asserts* itself, directed by its own DNA imprinting. However, in light of *in vitro* fertilization and genetic manipulations, human control enters more pervasively into the selection of a potential candidate (fetus), thus making this natural process more ambiguous. It sits somewhere between natural and human intervention. In art and design, the created work is achieved on the basis of selection and conscious decisions. Whether or not these materialize is another issue.

¹⁴MacKenzie Griffiths;
Notebook, 1996.

The generative mono-type prints explored here are pulled from the same mother plate and elicit notions of genesis. The plate *is not* cleaned after each printed run, allowing each successive print to carry the former print's ghosted image. Subsequently, almost every print retains a kind of *genetic imprint* of the former that is nonetheless unique (siblings of sorts). Also expressed is the fusion of materials and process: the paper, the layered pigments and over sketching speak of a dynamic and accretive process. The many accumulated layers *cross over*, *diffuse*, and *morph*, embodying the many qualities of a site – human, urban or natural.

Layered pigment is built up both – veiled and opaque – and erased; released, or removed.

The layers resonate. Diversity is the norm. The origin from which the prints first appear is altered by metamorphosis. What was first perceived as blue becomes green when a wash of yellow is placed over top. What was green reveals blue when a layer is stripped away.

The plate matures, becomes saturated. Yet, in all this density it is still vitreous in nature as the *birth* nears.

The printing begins. The ink squeezes out, disperses into and across the paper, flowing beyond the registered boundaries. Release, the birth. The paper is separated from the plate.

A ghosted image remains on the plate, a residue of its former life. Ink is layered again, stripped, and built-up. A rival print is processed, a sibling emerges.¹⁴

Collectively, colour, light and layered pigments create an aureate glow and a sense of depth and space that, in spirit, captures the essence of the vortex of our beginnings: the inner body-scape we developed from, once occupied, and corkscrew out of.

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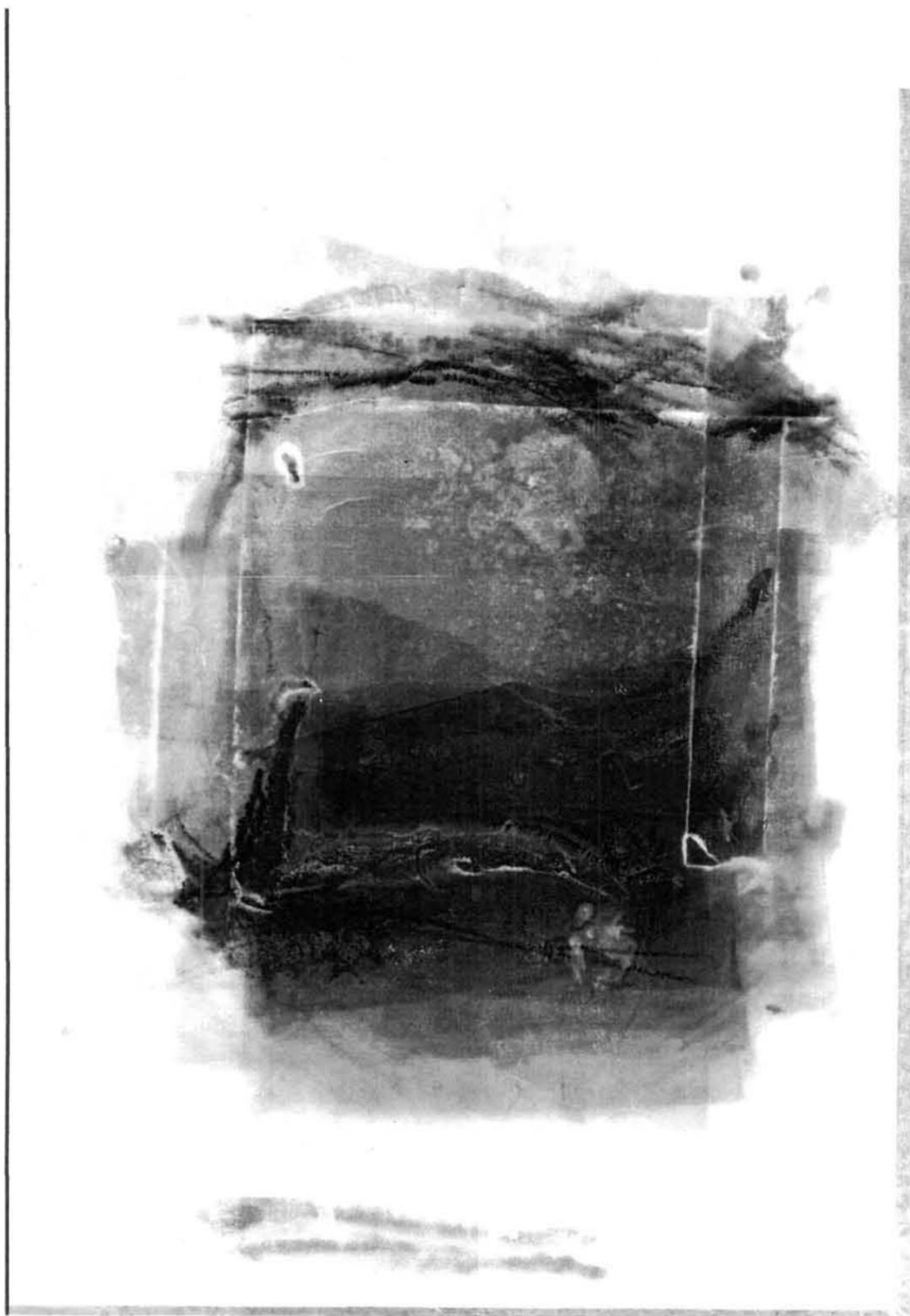


the PREGNANT
body

the pregnant passage in architecture
the architecture of the interval

the PLACENTA site

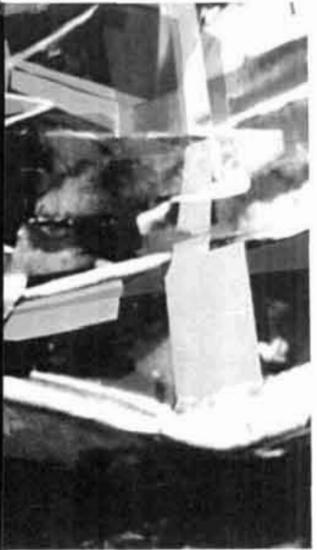
into its spongy mass the circulatory flows of land and water intertwine, are re-directed, absorbed, or branched.

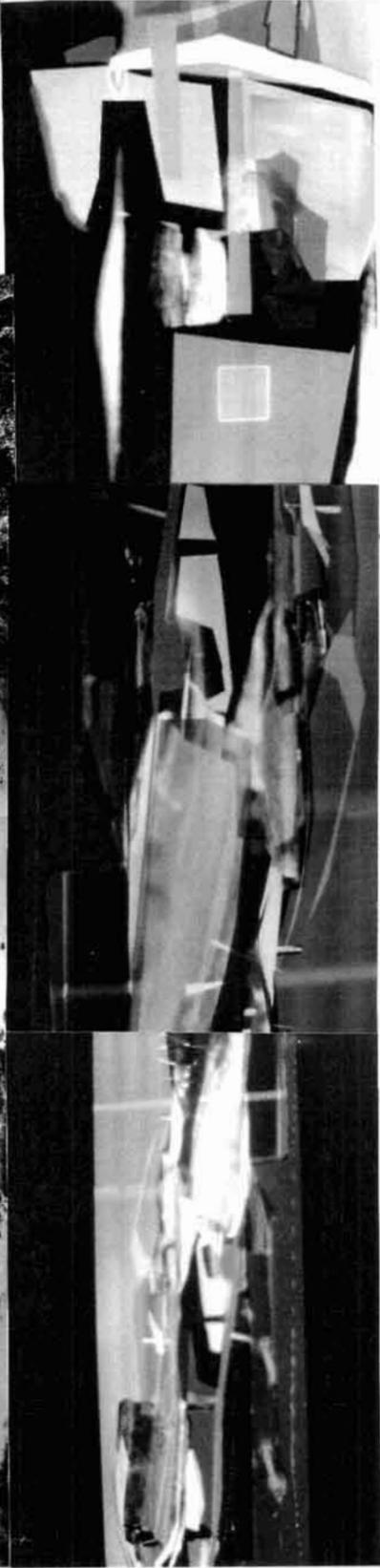


37th Street



north glenmore reservoir





Though the site is a product of culture, it is by nature not a finished or closed project. It is an artefact of human work that can neither be completed or abandoned. Its meaning can never be determinable. The site, like the human condition is open. This surplus of site, its indefinable

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Landscape represents a series of visual signifiers which make it possible to recognize and appreciate "Natural Beauty"...Landscape denotes the external world mediated through subjective human experiences in a way that neither region nor area immediately suggest. Landscape is not merely the world we see, it is a construction, a composition of the world. Landscape is a way of seeing the world.²

P L A C E N T A site at large

¹Burns, *On Site*, 1991, +151; ²Cosgrove, *Social Formation and Symbolic Landscape*, quoted in Andrighetti, +29; ³The City of Calgary, 1991, +8; ⁴Burns, op cit., +147.

Located in the north link of the Glenmore Reservoir, overlooking the Weaslehead park, the site has been shaped by human and natural forces. Standing on the edge of the link's escarpment, some of the most captivating views overlooking Calgary's Elbow River Valley unfold: the rim of mountains, harvest stained hills, an intersecting *melange* of paths. Through this vantage point, looking southwest, the City and all traces of urbanism remain *discursively* in the background, effectively "erased." Instead, my senses are immersed by the continuum of space reaching across the body of water below and traversing the landmass from the Tsuu T'ina Nations Reserve to the mountains. Here, within this cone-of-vision, the landscape seems surprisingly untouched, but this is an illusion. Two seemingly opposing forces (natural and artificial) have effectively impregnated the Elbow river valley.

Prior to 1933, the Reservoir had little more than imaginary existence fueled by the aspirations and plans of N. G. MacDonald to supply drinking water and control down-river flooding.³ The siting of the proposed Reservoir was seen as a *metamorphosis* easily sustained by existing topography. Centuries of deposition and erosion, partially caused by seasonal flooding at the union of the Elbow River and the mouth of the lower plains, formed a basin known as the Weaslehead (a former Indian campsite). Today, the Reservoir is fed by the last major meandering of the Elbow River at northwestern tip, creating an umbilical connection across the Weaslehead Mud-flats. What emerges architecturally is a generic "mixing" space — *an interval in the landscape*.

One impression of the Weaslehead Mud-flats is that it forms a transitional space between the plain's rim and the water. Into its spongy mass the circulatory flows of land and water intertwine, are redirected, absorbed, or branched. Neither solid nor fluid, the Mud-flats metaphorically exist as a *placenta*. For this reason, the Reservoir appears implanted into the earthen banks. During high flooding, the Weaslehead is objectified, forming an island. When the waters recede, these boundaries obscure, becoming one with

...architecture is not constituted of buildings and site but arise from the studied relationship of the two and from an awareness that site is received as an architectural construct even if unconsciously.⁴

the surrounding land. Emerging as more important is the fluctuating dialogue between the Weaslehead and the Reservoir: its seasonal expansion and contraction, fluidity and solidity, reflect the dynamics of two bodies conjoined: *a body within a body*. Amid its greater contextual relationships, the site is further caught between its speculative transcendence. At one level, it is being pulled by further development; at another there is the insistence of "letting it be."

In spite of either reading, the site is destined to transcend itself: the natural river flow ceases through damming, the body expands, and grows stout, *likened to a pregnancy*. This transformation, however, is not meant to be viewed in form and function alone. In itself, this reading is neutral, fostering notions that the surrounding landscape is independent, separate. On the contrary, the *act of transformation* can be understood as the quintessential force shaping the varied historical uses and recreational activities existing in the park today. The "natural" site cannot be easily removed from human time because of political, economic, and cultural forces that continue to shape and transcend former intentions. For instance, the encroaching community exerts pressures and pushes against the Reservoir, changing the way it is perceived. Ultimately, this has a profound effect on our response to the Reservoir's boundaries, edges, and margins. Yet some of these ideologies that prompt change through realigning former notions of boundaries – clearing a site for development – can be equally problematic. This is evident in the proposed plan to extend Scarcee Trail via 37 St. by bridging across the northern half of the Reservoir. *Clearing* in this context means *clearly denying*, haphazardly discarding the rich social and aesthetic qualities of the Reservoir. I agree with Carol Burns when she says that the *cleared site* tries to deny its origin in human construction; it is a veiled attempt to remove itself from the human condition."⁵

Undoubtedly, every reading of site differs, indicating the multiple scales of meaning. For me, this site is of *passages* and encounters related to one another through transitional intervals. Here, movement is implied by the "event-filled" occurrences. Lost, by the mesmerizing nature of the path itself in one moment, and in the next, pulled out of our thoughts by an unexpected situation – the city appears, or the earthen tremor of hoofs announce the transition from one action or situation to another. Subsequently, we are subjected to forces beyond our control. All the experiences that pile upon one another speak of the *accumulated dissonance* that we coexist with, are *discontinuous* with, and yet, are *transformed* by. Thus, while we can choose a path to follow, we cannot fully anticipate the fate which harbors along the journey. We live with a measured uncertainty, conjoined in one moment and separate in the next. As with pregnancy, says Adrienne Rich, "there is another kind of fear which does seem elemental; the fear of change, of transformation, of the unfamiliar."⁶ Admittedly, the question of the future change is one of most volatile issues affecting the site today.

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⁵Burns, *On Site*, +151;
⁶Rich, *Of Women Born*,
+167.

Through a regrettable but inevitable series of events, conservationists have waged strong resistance in recent years over any further disruption to the northwestern tip of the Reservoir, including the link, in hopes of preserving its *natural state*. The most extreme factions have demanded the restriction of human traffic, elimination of horse riding, and have argued for the closure of most trails (by "post and cable barriers").⁷ Any historical and long-standing social activities in this argument are often dismissed – effectively "erased." Thus, what is deemed a *natural site* remains a generalized concept that is open to ideological debate. Questions regarding the preconceived authenticity of the Reservoir as a *natural site* are posed. Ironically, the Reservoir is a site which was partially conceived by artificial means (the damming of the Elbow) and which has diverse historical and social uses including Indian settlements, ranching, military and the recreational uses. Compounding this fact is that this issue reinforces the ongoing debate of excluding *humans* from *nature*, a conceptual problem which also finds parallels within the separation of the *physical* and *social* body in Western medicine.

⁷ The City of Calgary's Design Brief, ++41,96-7;
⁸ Lewis quoted in Andrighetti's *Towards the End of Landscape*, +34;
⁹ The City of Calgary, Op cit., 90-8.

The continuity of this argument seems to suggest that the "natural" and "human" worlds are *separate*, thus eliminating any kind of social or design intervention. No overlap, no conjoining, no understanding reached. According to C. S. Lewis, "nature if taken strictly, has no opposite... (W)hen we say that anything is part of nature, we know no more about it than before... perhaps the chief use of *nature* is in its purity as a grammatical subject for expressions of optimism or pessimism: it is in that way rather like the word *life*."⁸ Given past problems with poorly conceived urban projects within natural environments, the position of ecologists is perhaps understandable, but it is ultimately inconsequential for park users. The social value of combining a layering of urban forms with landscapes can heighten multiplicity and subtlety of experience. A construction of this kind can thoughtfully merge into this site by varying scales, occupations, range of spaces, massing, and programme. Essentially creating a new dimension of social layering is in keeping with the Reservoir's character. Support of continued and expanded public use is strengthened by the 1991 *City of Calgary Design Brief's* long-term plan to extend and diversify public use of the Reservoir by expanding existing, or designing new recreational buildings, and providing permanent eating, educational, and information centers.⁹

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Architecture and landscape can be understood only as parts of a wider cultural formation. They are markers of competing social construction of places--the whole social spatialization of (the) site and its experience. This requires a "thick description" which goes beyond a mere "theatre reviewer's description" of the environment, to take in the social activities and conceptions of...a space set apart on the margins of everyday life.¹⁰

PLACENTA site surveyed

¹⁰Shields, *Site Work*,
+46; ¹¹Hadid, *El Croquis*,
+ 28; ¹² Hadid, *Ibid.*,
+17.

In my mind, the North Glenmore Reservoir Link has come to mark a particular conjunction where nature, recreational activities, and the encroaching aspirations of future developments overlap. The manifestations of this site are anything but static. What remains is a momentum of dynamic evolution. The site is thus suggestive of a transitional space, *an interval*, providing the potential to forge, challenge, alter architectural forms and record their growth. My reading of site, subsequently, is nourished by a continuing investigation of the many layers of phenomena. Some of which are the visual contextual flow and expansion of landscape expressed in a series of prints, sketches, computer drawings, and models. Consequently, this reading works on multiple levels at once. It is an effort directed at understanding movement encountered at various levels of intensities. The main premise is that the site can transcend and thus can be potentially thought of as being capable of bearing and receiving other elements of urban life and architecture. In this way the evolving architecture can be thought of as an intervention *impregnated*, perhaps received, into a much broader context. Like Zaha Hadid has succinctly argued, an "architectural project is *not a carcass* that gives form to concepts, but material form to which concepts are attached. She further states that "there is no (*singular*) conceptual order that is capable of transcending its material existence." Hadid suggests that architecture cannot be merely thought of as an "object", but rather should be considered as an "act" arising from "experience(s)" which simultaneously occur with *meaning*. "Architecture," she continues, "is the result of thinking about the object as an *act*, as a *transformation* and as an *invention*... (I)ts content is not distinct from its form, but rather they are one and the same."¹¹

This sensibility is meant to coincide with the earlier series of abstract landscape mono-type prints in which the accumulated layering of ink alters in each subsequent printing, thus becoming more diffused and eventually collapsing the strong edges of the frame or original image. Explicit here is the notion that landscapes

(Drawings) are a means of investigation. Some of them are actually in the process of mental portrait, and they do come during the design or construction of the project...Drawing is a very important tool for me. Maybe the ultimate result is very different from what was first intended, but through the tool of drawing you travel through this project and understand the result. ¹²

are composed and recomposed through layers of ink and successive printings guided by alterations in memory and perception. In other site studies, I use a method of line-washes and planes to single out and create a generative construction of the landscape. Though abstract, these *plein air* sketches are suggestive of the dynamic movement of the pathways and surrounding hillside, subsequently influencing my approach to the architectural process. Located on a plateau below the escarpment's edge, this site potentially sets up a vortex encounter between urbanity and nature. By bringing an urban dimension to the escarpment's base, tensions arise: an indeterminate form emerges from the collision and overlap of *two* distinct bodies – **architecture and landscape**. The resulting expression is one of *transformation* whose dimension cannot be fully predicted in itself, its path followed in all directions. This action nevertheless collapses preconceived notions of the former escarpment's "edge" and subsequently replaces it with another. The "edge" is thus altered.

¹²Young, *Pregnant Embodiment*, +49; ¹³Holl, "Anchoring"; +9.

In many ways, this approach to architectural landscape offers an *alternative* to existing "setback" zoning, (such as) the abrupt termination of Lakeview's residential community. Most often, this typical formula reinforces the *separation* of landscape and built-forms. However, in my view, the urban quality of this site cannot be easily separated from nature. Although one is placed in another context here, it is still not far removed from urban life. There exists a tension from the context where one departs from and where the new context descends. As in pregnancy, Iris Marion Young says "my old habits retain the old sense of my boundaries."¹² The act of making links between architecture and the landscape, much like pregnancy, is something also structured by social and natural relations.

Building transcends physical and functional requirements by fusing with a place, by gathering the meaning of a situation. Architecture does not so much intrude on a landscape as it serves to explain it. Illumination of a site is not a simplistic replication of its "context"; to reveal an aspect of a place may not confirm its "appearance." Hence the habitual ways of seeing may well be interrupted.¹³

The site, as a circulatory *interval*, is likened to a metaphoric placenta. The placenta is the life sustaining connection for the fetus. It also achieves an interweaving—a symbolic link—at several distinct realities. The most simplistic reading is one of a spongy *interval* which brings together a complex system of circulatory functions conjoining mother and fetus. Already, this presents three possible situations. At one level, the placenta acts as a place of exchange; to redirect. Second, the circulatory pathways of two beings (mother and fetus) *meet* or *gather* in this shared location but also occupy *two distinct* spaces. A woman's immune system does not attack or reject the fetus because of the chemical mediations of the placenta; it subverts the mother's immunological

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defenses. In this way, the placenta acts as type of *filter*: it *shields*, yet also permits some *passage*. The third aspect of the placenta is that it *anchors* the fetus, essentially "siting" it via the umbilical cord into the maternal wall.¹⁴ In a similar way, the site conceptually connects the axis of 37th St. and the series of pathways which converge near the escarpment, subsequently redirecting or absorbing them. This trace provides a series of processional intensities: its placement beside the paved roadway, it links from the Weaslehead to the upper escarpment and to the lower series of trails which unfold onto open spaces, dense brush, and framed views. Other initial relationships also surface: it joins an urban structure to the surrounding river valley and the escarpment's edge to the lower plateau. These relationships are suggestive of a third character of the site as a point of anchorage: an insertion into layered context from which movement and spaces flows around, through and beyond. Here recreational activities, topographical texture, and the grain of city and social history interweave. Such forces speak of the quality of space, defining not just movement, but also the texture (materiality and programme) of a place...how it is layered.

¹⁴Ziskin, *Basic Physics of Ultrasound*, +125.

Layering is meant to suggest a kind of building; a series of happenings. The emerging structure, placenta-like at this stage, conceptually and physically *creates a connection*. Once anchored, the evolving architecture is transformed and becomes distinct. Existing elements can physically and spatially coexist or become disrupted and discontinuous. The manipulation of the ground plane, the roof, and terraces seems like a valid inquiry in this project. It was thus my intention that the metal landscape models would create an intensified version of landscape, suggestive of initial *bodily disruptions* soon after conception. A *collage* made of scraps of bent metal suggests possible routes and paths along the escarpment's edge. These metal paths are fed across and spiral into and down uplifted layers and over the uneven terrain of terraced platforms and planes. This early stage also spoke of the formation of a rising volume along the escarpment's edge, creating a protective wall. At one level the planes shield, while others left open, define possible floors or more ruptured situations (where glazing could occur).

These inquiries, in my estimation, convey a series of landscapes which reveal an inexhaustible variety of hidden features and encounters. This union is *anchored* precariously. Nonetheless *anchoring* can help orientate oneself. It is a marker unto which a pregnant woman perceptually and spatially views her body.

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As my pregnancy begins, I experience it as a change in my body. I become different from what I have been. My nipples become reddened and tender, my belly swells into a pear. I feel this elastic around my waist, itching, this round, hard middle replacing the doughy belly with which I still identify. Then I feel a little tickle, a little gurgle in my belly, it is my feeling, my insides, and it feels somewhat like a gas bubble, but it is not, it is different, in another place, belonging to another that is nevertheless my body.¹

EXPANSION the body within the body

¹Young, "Pregnant Embodiment," +48;
²Beauvoir de, *Second Sex*; +504; ³Rich, *Of Women Born*, +182;
⁴Kristeva, *Desire in Language*, +238.

The pregnant body *is* the body within the body. For centuries, it has been the site of human fascination, fueling imagination and intrigue and supplying us with the impulse to unearth the mysteries beneath its surfaces. The *Mother*, because of her proximity to the fetus, enters into an intimate, inner-body dialogue which subsequently *imprints* on the developing child. The infant's stirrings are the first communicative acts that humans make, forming the basis of early dialogue. This *act* of reciprocity is an exchange which occurs across space, from one body to another (the fetal and maternal). Thus, it is reasonable to say that our social milieu begins in the womb environment. The *passage* of information comprised of sounds, light, and vibrations from afar, seep through the amniotic fluid, *cross over*, into *the world within a world*, the space between boundaries.

Communicative events occurring within the pregnant body and filtered from outer contexts are delivered and experienced largely through bodily sensations. Such sensations, experienced as though they were "a kick delivered at the portals of the world," induce a kind of disjunctive dialogue which at times requires an effort of will to bring meaning to the woman.² (Disjunction is implied in the *cytological* sense, referring to the migration and pairing off of chromosomes during meiosis. Thus, dislocation simultaneously exists with symbiosis). I take Rich's remarks as a starting point.

In early pregnancy, the stirring fetus felt like ghostly tremors of my own body, later the movements of being imprisoned me; but both sensations were my sensations, contributing to my own sense of physical and psychic space...Far from existing in the mode of inner space, women are powerfully attuned both to *inner* and *outer* because for us the two are continuous, not polar.³

Pregnancy seem to be experienced as the radical ordeal of the splitting of the subject; redoubling up of the body, separation and coexistence of the self and the other, of nature and consciousness, of physiology and speech.⁴

Yet, in spite of the complex psychological melange a woman during pregnancy undergoes, it has remained a marginal topic in theoretical works, overshadowed by our contemporary focus on *conception and birth*. However, while this interdependency is at times clouded by ambiguity and conflict, it is, as a passage, equally provocative as the conception and birth. As Simone de Beauvoir describes, a "pregnant woman feels the immanence of her body at the same time (as) it is in transcendence...she and the child with which she is swollen up make up together an equivocal pair overwhelmed by life."⁵

Widely documented in pregnancies are women's intimate experiences of fluctuating boundaries: their perceptual construction, shifting, and separating (perhaps deconstruction). Where in this *body* do surfaces, boundaries and edges meet or converge? These issues intertwine, creating a blurring of thought. As confirmed by a host of theorists and feminist writers such as Iris Marion Young, Julia Kristeva, Adrienne Rich, and Simone de Beauvoir, pregnancy is an extraordinary experience of *decentralization*; causing an upset to former self-perceptions of the body (and mind). Ensnared by a host of strange forces, in part manifested by hormonal and chemical changes, the parturient woman may be bewildered at the phenomenon taking place within her. Some women feel the strangeness of this transcendence more than others. For the dancer Isadora Duncan, whose body existed as the catalyst of her self-expression, the transit was more than she ever hoped to cope with. "The child asserted itself now, more and more. It was strange to see my beautiful marbled body softened and broken and stretched and deformed...More and more my lovely body bulged under my astonished gaze... Cruel hours of tender waiting in the night...With what a price we pay for the glory of motherhood."⁶ Yet other women find aesthetic reveries in their pregnancies. In contrast to Duncan, Iris Marion Young describes the pregnant body as "a kind of dance," where through "movement...not only gets her where she is going, but in which she glides through space in an immediate openness."⁷ Clearly this experience implicates each woman differently. For the most part ambiguities and tensions surface when, in pregnancy, a woman experiences *her body as herself, not herself, and yet coexisting with the fetus*.

While pregnancy is a normal state in female physiology, a woman's attitude toward her maternity in a particular culture or situation *bears* an enormous influence on her experience. Pregnancy is thus, in part, a *cultural construct*. Should, for instance, the pregnant body be vastly different from the cultural stereotype of femininity, as it is in many Western societies, a woman may encounter anxiety and guilt causing her to harbour resentment, ill feelings. The changes resulting from pregnancy can be disorienting for many North American women whose girth is more bountiful than the cultural aesthetic permits, namely what glamour magazine covers lead us to believe. If the plucky, pout-lipped and svelte female body is the *ideal* then surely it is no surprise why many parturient women express distress about their physical appear-

⁵Beauvoir de, *Second Sex*; +495; ⁶Duncan, *My Life*, quoted in de Beauvoir's *Second Sex*, ++503-4; ⁷Young, *Pregnant Embodiment*, ++51-2.

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ance. "Perhaps more difficult to bear than the physical discomforts of pregnancy (in western societies)," states Greer, "is the psychic discomfort of feeling unattractive."⁸ Pregnancy thus confounds. Each pregnancy remains sufficiently ambiguous. Pulled in directions imposed by societal expectations and conflicting demands – such as career obligations, the medical profession, economic situations or social responsibilities of being a mother, wife, and single woman coping alone – a parturient woman may discover her role to be both vague and strictly defined. Clearly, as Greer succinctly observes this can be an extraordinary dilemma: "The gestation period of humans is only nine months, too short a time for any individual to get a grasp about pregnancy management and her place in it. The decisions which any mother makes are partly rational and informed and partly irrational and emotional."⁹

⁸Greer, *Sex and Destiny*, +9; ⁹Greer, *Ibid.*, +9;
¹⁰Duden, *History Beneath the Skin* (CBC transcripts), +9;
¹¹Duden, *Ibid.*, +9.

Fueling this doubt, the ascendancy of biotechnologies today has redefined how in pregnancy a woman *feels*. Once communicated through metaphors in a visceral sense, that is intuitive or physical, the pregnant body is now "felt out" by visual and abstract idioms fabricated by realms of science. Thus something otherwise imperceptible by the senses is today *erroneously* believed to be *felt*. "No one can *feel* a fertilized egg," states Barbara Duden, since "it doesn't belong to the realm of what *is* accessible to one's bodily senses."¹⁰ In response to the mass application of biotechnologies Duden says "that the *only* way out is to say *no* to this and to argue from one's own senses."¹¹ While we must take up the challenge and confront the management of biotechnologies, to simply say *no* denies a good part of our contemporary culture. Biotechnologies contribute to this perceived *alienation*, but they are nonetheless still are an irrefutable expression of our culture. What of the children born with the aid of *in vitro* fertilization? Can we say that their existence has *no* significance? Were they not meant to *be*? Maybe the significant issue raised here by Duden is that we must not lose sight of physicality and emotional contribution our bodies have in shaping our perceptions.

Despite the importance of remembering how our perceptions are shaped by physicality and the emotional contribution of our bodies, there is a pervasive tendency in our culture to think of the fetus as an entity that is separate *from* the mother. Strategies which serve to objectify one thing from another tend to be rooted in the medical profession's pursuit of knowledge, which subscribes to an unlimited use of biotechnology and science to validate claims. No one can deny that such research, from the standpoint of improving health and developing life saving procedures, has value from which the breadth of human society can benefit. How one perceives a value received, however, is an important distinction. Especially in terms of the pregnancy which *is* a healthy body state. Who has the right to decide for another that full medical intervention *is* a given, a standard? Such decisions are not as clear as one would imagine. There have been too many indications, for instance, that Western medical practices in child birth are socially and psychologically *damaging* for the mother. The most extreme of these methods, still prevalent today, are best summarized by Margaret Atwood in her novel *Surfacing*:

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After the first, I *didn't* ever want to have another child, it was too much to go through for nothing, they shut you in a hospital, they shave the hair off of you and tie your hands down, and they don't let you see, they don't want you to understand, they want you to believe *it's* their power, *not* yours. They stick needles in you so you won't hear anything, you might as well be a stuffed pig, your legs are up in a metal frame, they bend over you, technicians, mechanics, clumsy students or sniggering practising on your body, they take the baby out with a fork like a pickle out of a pickle jar. After that they fill your veins up with red plastic, I saw it running down the tube. I *won't* let *them* do that to me ever again.¹²

Since matters of medical rationale are largely tolerated by the populace, few people will question what is progressing. The vanguard revivals in holistic health techniques, decreasing the number of "technologically interfered childbirths," and the increased use of personalized services provided in maternity and community health centres indicates that such ideas are beginning to be overturned in North America. Ironically, most women with lower incomes, being poor and lacking governmental assistance, find these "healthier alternatives" – profiled on traditional childbirth management – to be too expensive. Very few women and their families, according to Calgary midwife Joy Harries, partake in such alternative care even if they can afford it, since their modern consciousness is so rooted in the security of the clinical model that they find it difficult to seek out or accept other forms of maternity care and services.¹³ While some progressive maternity centres are adopting more self-autonomy in matters of pregnancy and birth, our former medical practices are alarmingly becoming rooted in other global communities. As one woman told me in Caracas, "you just shut-up and take the razor," since nearly all Venezuelan hospitals today use routine episiotomy.

In our society, where many long-standing, sacred human values and rituals in a communal sense are declining we are also witnessing the perceptible shift of the human body itself as a *commodity* in the marketplace. Today, global institutions are vying for control of the emerging multi-billion dollar biotechnological industry. It perhaps comes as no surprise that a number of intrusive, at times ethically suspect, genetic research projects governing human reproduction are blindly tolerated for economic reasons. Although the importance of bioethics cannot be gauged in such a brief discussion, the subject must be acknowledged as a vital issue affecting human reproduction. Regardless of the great success biotechnologies seem to offer, synonymous with much industrial and technical growth, many consumer and health advocates are growing concerned about the impact they have on our social morality. It is undeniable that fertility regulation is one of the most important functions of adulthood. To *choose* to remain childless is one thing, while to discover oneself infertile *is*

¹²Atwood, *Surfacing*, + 58; ¹³Harries, interview at Briar Lynn Birthing Centre, Sept. 1996.

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another. Women who undergo infertility treatments are especially vulnerable to immense psychological stress and to the conspicuous humiliation of procedures which, often times than not, result in a live birth.¹⁴ Subjected to doses of hormones, repeated laboratory pelvic examinations, and self-monitoring like the meticulous charting of fertility peaks and faithfully adherence to "prescribed" sexual intercourse positions, women and their partners succumb to a barrage of *impersonal fertility rituals*. The extent to which the body partakes, in this sense, in conception or early gestation is often eschewed, cheapened. Where lies the belief of body as *sacra* (sacred) in light of all the medical "hype" surrounding biotechnologies? The *sacra* places emphasis on the venerable aspects of human life. As a term, *sacra* implies communion, an exchange shared, a *passage*: with others we conjoin in celebrating the newborn or in the mourning a life which has passed.

Sacra elicits the collective reverence for *life* or the spontaneous *empathy* for others; the communal *body* embraces the individual *body*. Conversely, as the human body becomes commodified – in that *it* or *parts of it* can be bought, sold, or even leased (in the case of surrogacy) – our understanding of the *sacra body* erodes. The intrinsic worth and sacredness of the body, traditionally reinforced in our communal rituals, tends to be more separate from our contemporary thoughts, our appreciation. If one accepts this declining norm, therefore, our growing acceptance of sperm, eggs, or embryos as types of commodities to be traded, contested for legal ownership, or harvested for medical research will become commonplace. The *raw material* for "biotech" progresses? What value, we might better question, does biotechnology affirm with our sense of human relations in our world community? If we remain placid to the expansion and profiteering of infertility clinics, Andrew Kimbrell warns, in his discussion of the *business of baby making*: "we will forge stronger *commercial* bonds than *parental* bonds"¹⁵ – the impact which will be devastating to the human psyche.

As knowledge of improved fetal health and genetic disease detection increases, the life-styles of parturient women will likely continue to be subjected to criticism orchestrated by the popular and medical press about concerns governing the fetus' exposure to various contaminants. Tobacco smoke, environmental toxins, alcohol, and other chronic conditions, related to poor dietary habits and inadequate exercise, are placing the emphasis on disorders and preventive measures. These, in turn, have helped gynecological and obstetric services maintain primary control of human fertility and reproduction. To this point, the choices of a pregnant woman – if she really has any – are galvanized by what is deemed appropriate within the "context of laws and professional codes, religious sanctions and ethnic traditions, from whose creation women have been historically excluded."¹⁶ Even women who prefer to know as little about their metamorphosing bodies as possible and prefer leaving this fate in the hands of medical "experts," likely will encounter, to their bewilderment, the medical procedural means that render them powerless, dissatisfied, and separate from their bodies.

¹⁴Kimbrell, *The Human Body Shop*, ++68-81; and Greer, *Sex and Destiny*, ++49-59; ¹⁵Kimbrell, *Op. cit.*, ++73-4; ¹⁶Rich, *Of Women Born*, +129.

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Consequently, implicitly or explicitly, these appropriating tendencies influence the popular press, which perpetuates the notion of the dislocation between the fetus and the mother without appreciating the intrinsic meaning that their *conjoined* relationship instills. Seen as objects, the fetus and the pregnant body, figure as little more than curiosities toyed with by popular culture. By their pervasive means to provoke controversy, media images of pregnancy, if anything, have a tendency to fuel doubt about whether women are (intellectually or morally) capable child bearers. Lessened by the "matter-of-factness" of a yet another media image, the role of the parturient woman tends to be frequently underplayed, undervalued. Through the eyes of the media, we see the nude, very pregnant, Demi Moore expressed with an unexpected sexuality that is contrary to the more complex psychological associations at play. In the case of the pregnant Madonna (Post Modern), whose pregnancy is believed to be a manipulated staging, it is confused as another one of her conceived media idiosyncrasies. So *seduced* are we by Madonna's media persona we cannot fathom her *real* human desire to bear a child.

¹⁷Rich, *Of Women Born*, +129.

As a society, we too also judge the motives of Mandy Allwood's decision to bear all octuplets and *not* to question the pharmaceutical company for supplying the off-counter fertility drug or the exploits of the tabloid which would have allotted her a small fortune had she fully "delivered." What is revealed by these schemes is nothing less than a *superficial understanding* of what a woman in pregnancy undergoes. Once a source of feminine mysticism and power upon which centuries of complex female social relationships were forged, child-bearing is now indexed under the control of ominous others whose deliberations rarely praise the efforts and courage of the *Mother*. To some, *this* courage may be overstated, but it is important to emphasize that the nature of pregnancy is steeped in rhetorical and political overtures of the day which often systematically erode the opinions and voices of parents, especially the women themselves.

There is a hardly a woman I have met who *does not* harbour some resentment about their pregnancy or birth experience having felt depersonalized by clinical or hospitals encounters. "If passivity was required," writes a self-reflective Adrienne Rich about her compliance in allowing obstetricians to extirpate her from her birth experiences (sedated and left alone until her *time* neared), "I would conform myself to the expectation...of centuries old *endurance* of suffering in becoming a mother...affirm(ing) myself as a *womanly woman*." In the end, having endured the prohibitions of hospital births, common in the sixties but still prevalent today, Rich states, "I was...mistrustful and alienated from my body."¹⁷ Removed from the help and moral support of family members, neighbours, or experienced compassionate attendants, women today *still lack* the benefit of the complex societal network which once governed child-bearing. This fractured service has been effectively severed by decades of impersonal management. No one can dispute that the decrease in maternal and infant mortality directly results from the advances in modern obstetric care. However, society cannot

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blindly disregard that the *irrefutable experience of pregnancy* imparts on all human development.

What is pertinent in any design of a health facility is that the awareness our sociological, political, and financial systems need to be restructured, establishing effective public education on human reproduction and providing more support for parturient women and their families. Sadly, these social issues are rendered as backgrounds, effectively superimposed by the preference to profiteer off of the *flawed* reproductive body; infertile. Also relevant are the parental relationships learned from kinship or communal ties which help prepare and guide new mothers and fathers. As Rich rightly states "what we bring to childbirth is nothing less than our entire socialization as woman."¹⁸ The wonderment many mothers entertain about the nature of their pregnancies bringing forth a *fullness* or *fulfillment* to their lives, is not quantitative, but culturally and emotionally enmeshed. It is a widely accepted fact that there are genuinely unknowable aspects of child-rearing in which "intelligence and emotion play a more significant part in mothering than instinct." And while most parents would agree that "mothering (parenting) behaviour is learned," our contemporary society rarely responds adequately to this need "by custom and example."¹⁹

¹⁸Rich, *Of Women Born*, +182; ¹⁹Greer, *Sex and Destiny*, ++8-9; ²⁰Hadid, "Another Beginning," +27; ²¹Steiner, *After Babel*, + 262.

Time and again we witness in the news cases of surrogate mothers who fight to regain partial custody of the babies they have bore. The message is clear. There are social bonds that remain *sacred* in spite of our ill attempts to separate ourselves from them. Yet, the conditions which provide opportunities for interaction and bonding in a *public domestic* realm are lacking today. "There can be no great architecture," states Zaha Hadid, "without a social programme. A visionary architecture has to take part in a political vision, and its reality presupposes a political process which puts a new architecture on the agenda and thus transforms the profession into a movement with aims and inspirations."²⁰ How, then, can the design of a public facility evoke the complex issues arising out of the pregnant passage, the pregnant body, *this* interval? If social awareness in architecture is *institutionalized* at mass will it fall prey to design mediocrity (also as Hadid observes)? At one level, we must acknowledge the limits institutionalization imposes on design. However, Marshall McLuhan in *Popular Culture* argues, that it is the vision and imagination of the artist (or designer) that instills questioning, provokes thoughts, and overrides pure technique and the engineering of life. Applying this vision to architecture, the impetus is *not* to translate, but to *build* platforms that provoke discussion. George Steiner elaborates: "there are mysteries which cannot be transcribed; it would be sacrilegious and radically inaccurate to transpose or paraphrase."²¹

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Embroided with the mysteries, pleasures and frustrations of their metamorphosing bodies, pregnant women face the inevitable dilemma of dislocation: a disruption in their former state of *being* (presence). The pregnant passage is a tangled composite of unfolding, surfacing, yet diffused relationships. The body is both unpredictable yet logical; bearing witness to periods of saturation and heaviness, yet buoyancy and lightness; periods of unrest, motion, and uncontrollable bodily convulsions (nausea, pain, hunger) are contrasted by bouts of waiting, yearning. The psychological confrontations experienced by the parturient woman are likewise juxtaposed to her new encounters with the city, landscape, objects, and medical technology. Such strategies, if anything, challenge us in architecture to reconsider the varied relationships of the human condition, particularly during gestation. While turbulence, ambiguity and complexity reside in these encounters they nonetheless represent a life *lived* through both direct physical relationships and indirect psychological interactions. One can see that pregnancy has many metaphysical stratagems that contain multiple readings of spatial ambiguities, pretenses, and overlapping tendencies which find abstract parallels in the architectural process.

Consequently, this bodily transformation is widely reported among women who feel alien. Anyone familiar with the extremes of travel presumably understands the debilitating and compromising engagements that oblige one to confront the world with a taxing uncertainty. All that is known is reluctantly throttled. Events are temporarily isolated, bearing no connection to one another. Since it is dislodged from a context of familiarity, the mind no longer becomes a reliable guide. But foreignness also elicits pleasures, delights, and mysteries. The experience of travel bears some likeness to the pregnant passage. Pregnancy is a *journey* to the unknown, both romanticized and feared. The pregnant woman is tested psychologically and physically. She is seen by some as somewhat of a curiosity, at times mocked or praised, and yet, she may be remarkably undaunted and resilient when confronted with the negotiations and transgression of society's boundaries. Hers is a body that is *sited* by cultural constructs. And yet the pregnant body is temporal in time and space – subject to the internal processes of transformation that invariably thrust outward and dislocate.

Young demonstrates this when she experiences the unforeseeable spatial negotiations played through her pregnant body. One can reasonably draw from this that the body shares a dynamic relationship to its environment; human life is *not* separate, but *conjoins* with the experiences encountered in daily life. Our existence is multilayered, it *imprints* upon us. As the body perceivably grows into "another," a psychological dislocation prevails; the mind retains the *former* sense of boundaries while the body's growth creates the emergence of new relationships. Since her body is a poetic *constructing anew*, any feeling of self-distinction that a woman previously felt is no longer exclusively hers. Young writes:

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I move as if I could squeeze around chairs and through crowds as I could seven months before, only to find my way *blocked by my own body* sticking out in front of me, but yet *not* me, since I did not expect it to block my passage. As I lean over in my chair to tie my shoe, I am surprised by the graze of this hard belly on my thigh. I do not anticipate my body touching itself, *for my habits retain the old sense of my boundaries.*²²

It seems to me that humans can better address development in our society, and in this, relationships to the ecosystems, if we view them as *pregnant*, inseparably linked. Meticulously constructed, slow and complex in their unraveling these evolutionary forces ask us to pay attention to the "other" at the threshold of nature, awareness, and structure. Perhaps then we will be more conscious of things beyond our own egocentric bodies and will see ourselves as bodies *within* the body of the world. Architect Peter Salter addresses this point when he says that architecture should be used as a "shaping force that allows metamorphosis to take place."²³ Salter here reasons that materials, appropriately selected and used in architecture, speak of a dynamism and life force when they are allowed to age, oxidize, or weather. Witnessed this way, architecture is understood as a metamorphic process whose catalysts are both nature and human activities.

²²Young, *Pregnant Embodiment*, p. 49; ²³Salter, *Intuition and Process*, +35; ²⁴Wilson, "The Sphinx in the City", +25.

Although it is often destructive, humans often consign natural, social, and artificial realms in opposition to one another – separated *rather* than conjoined — in their attempts also to seek understanding and order in society. Today, many of us live in estrangement or uneasy alliance with our partners, neighbours, and society which we have engineered. Our perception is divided, lacking. Our cities, and even work patterns, speak less and less of social interlocking or bridging, but rather more of nomadic existence. Reflected in this is our current ideology of tactical problem solving which fuels the drive for creating greater efficiency. Despite the emergence of special interest groups which propose that more holistic and venerable aspects of human life and the environment need to be addressed, these realizations rarely make their way into our social policies or urbanism (and other design schemes). Transformation of our social and aesthetic society tends to be overlooked, blighted. Architects need to demonstrate more unexpected and engaging built environments; they need to be *infused* with life processes. This obliges us to confront the world as if our habitual means of contact need to be relearned and diversified. Calculated, rigid, and ordered urbanism, also evidenced in the separation of domestic realms from public life, is the topic of much debate as summarized by Elizabeth Wilson's warning of burgeoning social unrest and paralysis in contemporary life. She says "in many cities we have the worst of all worlds: danger without pleasure, safety without stimulation, consumerism without choice, monumentality without diversity."²⁴

The world is fundamentally an evolutionary process which we humans are a part of, and also upon which we also (at times forcibly) assert our own identities – we twist out, dislocate.

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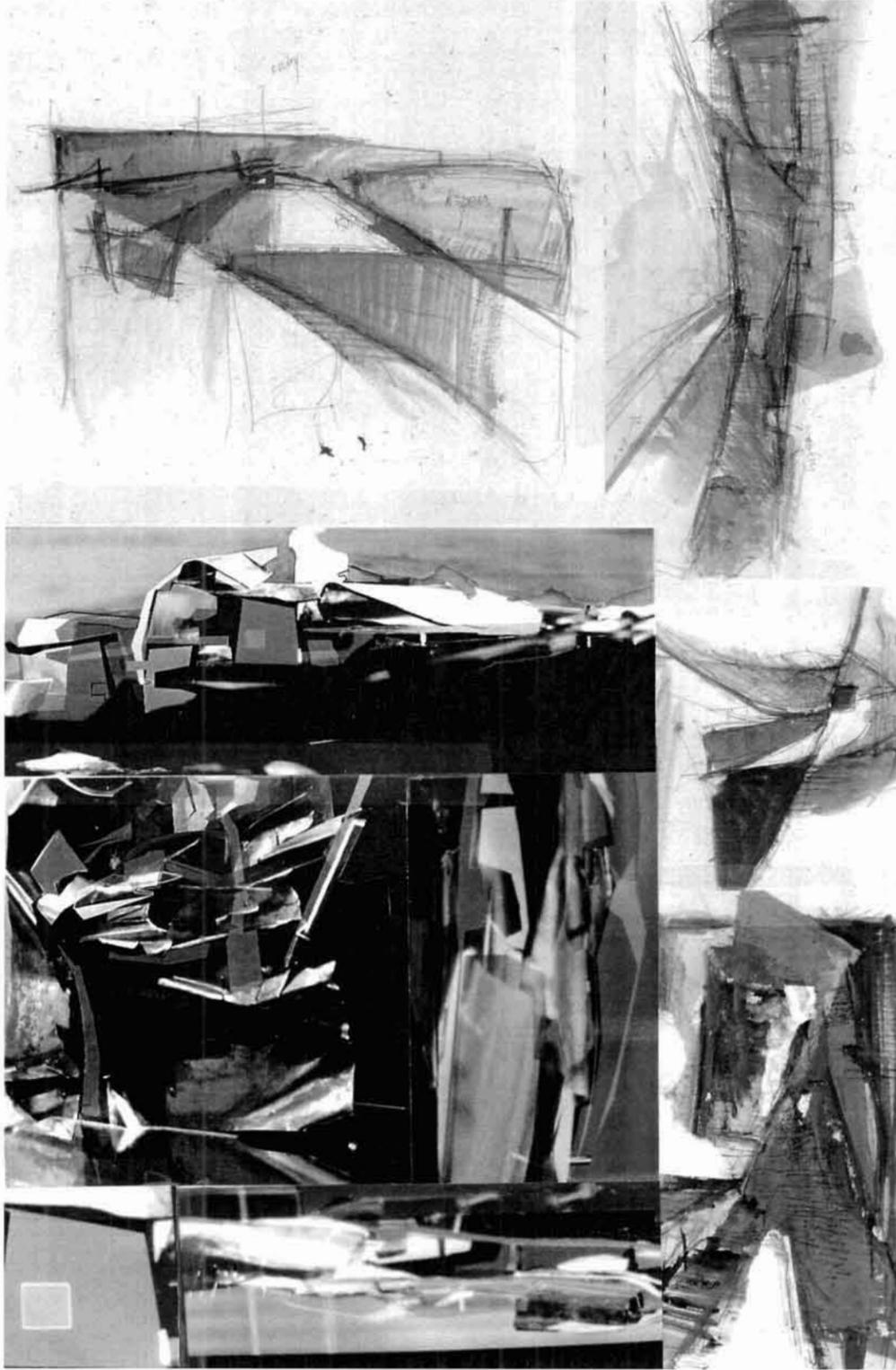
the PREGNANT
body

the pregnant passage in architecture
the architecture of the interval

the SURFACING landscape

the scan is envisioned as a context (a site) upon which another presence will emerge...provoking a certain kind of calculated ambiguity between the expression of landscape and the built form.





Environments are not passive wrappings, but active processes which work us over completely, massaging the ratio of the senses and imposing their silent assumptions. But environments are invisible. Their ground rules, pervasive structure, and overall patterns elude easy perception.¹

SURFACING imaging beneath the skin

¹McLuhan, *Popular Culture*, in Kroker's "Technological Humanism", + 56;
²Neville Wakefield, describing a woman knitting in "Ann Hamilton: between words and things", in *Mneme*, +19.

Realms within the publicity and privacy of the body have attained notoriety today. Images derived from ultrasound, magnetic resonance imaging (MRI), and electron microscopy, achieve a sort of cyberspace "window" that enables us to visually acquire, penetrate, and travel through the drama occurring beneath our skins. What was once thought of as insular, even exclusive, to the realm of medicine or biology is now turned *outward* into the domain of the mass media and popular culture. With the aid of biotechnologies, we can navigate through the layers of skin and into the inner body chambers. In prenatal ultrasound, this voyage unfolds into a world unto itself, the *conjoined* world of the fetus.

Images generated from biotechnologies and dramatized by computer enhancement generate an exuberant aesthetic and emotional response when used in the popular media. Of course, this can be enlightening, but it is equally problematic. In one respect, the application of this technology represents a broad range of interests that are useful for enriching public education and cultivating medical inquiries. For many parents, it is the opportunity to visualize the unforeseeable. Each parent's passage through and into this *body-scape* will be experienced differently: for some the socially complex nature of pregnancy is jeopardized, *rendered trivial*; the realism *undermines* the imagined. Others, however, may revel in the unexpected discovery of seeing their fetus move or suck its thumb. Such visual manifestations are anything but static, whether or not they are exulting or conspiring. Undoubtedly, it is also a resource that is exploited for its potential to widely publicize and circulate ideas and issues. Images of the unborn can carry powerful ideological messages which, at times, can illicit insidious human behaviour. Most notable in India, this technology is the quintessential means of determining fetal sex; aborting in most cases a healthy female fetus in favour of a male. Yet the benefits of this technology, like the decrease in infant mortalities must also be acknowledged. This raises, once again, the paradoxical relationship the body shares with technology. Does the *image* construct the *message*, or vice versa?

Trailing off from this...spool a single thread formed an umbilical link between a seated figure and a mass of yarn. As she knitted, so the thread was unwound.²

Medical diagnoses are process-driven and thus, susceptible to ongoing fabrication. Various "diagnostic truths," supported by medical imaging, usually are highly speculative; no longer *what is* but *what is constructed* in a given time, space and even culture. Consider, for instance, the multitude of human disease and disabilities which can be traced to genetic origins. Our society responds by investing considerable energy and resources in sponsoring a host of genetic research. Already the knowledge of our genetic makeup is creating a greater sense of urgency with respect to employing "high-tech" imaging to counsel, plan, educate, and validate inquiries. Without question, this drive to diagnose genetic "defects" has a significant impact on the use of new technologies in prenatal examinations. The role of the pregnant body in this oscillating biotechnological boundary is significant because it becomes the origin – *the pervasive site* – where anxieties exist about the unborn cluster. Our apprehension, or *unknowing*, awaits in the contents of a petri-dish, an amniocentesis test or a digital scan. How these results are ideologically managed, measured, and gauged is a perplexing issue.

³McLuhan, *Popular Culture*, in A. Kroker's *Technology and the Canadian Mind*, ++62-62; ⁴MacFarlane, *The Psychology of Childbirth*, ++ 12-19; and also see Anne Balsamo. "On the Cutting Edge", ++222-6.

We have also come to expect greater efficiency, faster, better, and utterly flawless products: we have begun to demand and expect **the perfect baby**. Society places a high premium on the proper development of the fetus. We *covet* the pregnant womb, but **ironically** pay little heed to the brutish tyranny of children raised in the world's slums or working as labourers in abysmal conditions, not to mention the physical and moral abuse resulting from adult and societal neglect. The *wanted* child is embraced, while the *unwanted* child may well encounter a life of misery and torment.

Biotechnology fuels the emphasis that is placed on life within the womb. To paraphrase Marshall McLuhan, electronic media is an extension of our biology – it is the metaphor of the twentieth century.³ On the contrary, this associative meaning is effectively masked by the pervasive contemporary view that the sonographic image *is real*, a fact. Technology thus reconstructs a hierarchy, reasserting itself while *subverting the maternal body*. In the last decade, concerns about patient expectations regarding reproductive technologies has been steadily mounting. Pediatrician Aidan MacFarlane observes, along with other physicians employing similar technologies in areas of dentistry and surgery, that some people form unrealistic expectations from what is viewed on the computer/video screen. A "proper" image seems to *guarantee a certain outcome*.⁴ This imagery may be taken so literary that other realities cannot be appreciated – *in other words, that it is an abstraction*. Fetal visualization thus seems for many people to *absolutely confirm* the presence of a human life: an individual whom belongs not only to the biological parents, but also to society. As witnessed by the various governmental regulations concerning fetal health, even a *wanted* baby's development and arrival can come under the involuntary control of society. A healthy pregnant woman may find that she is *expected* to forgo some social indulgences. Consequently, a pregnant woman may find herself stripped of any identity, effectively "erased" by "the moral

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panic" surrounding the state of the fetus, or at least the conceptual boundary they both share. By this I mean the media's obsession with the boundary of *womb* not the *pregnant subject*. This has effectively *undermined* the *invaluable social contribution* of a women (and her partner).

Most prospective parents enter pregnancy and childbirth with fears that their child will falter. As such, attempts to control the outcome of severely deformed fetuses by using "pre-screening" technology is perhaps understandable. But as current reproductive technologies offer prospective parents the *hope of perfect babies*, expectations will continue to rise. Aiming for the ideal child is highly commercialized. Images of perfection and wholeness conveyed in magazines, commercials, and further sustained in medical journals express the exalting desire for human perfection. (Today nearly ninety-five of "defective" fetuses will be terminated at the request of parents.)⁵ Who is liable for children predisposed to a physical defect that are not caught in the ultrasound or genetic screening? Will personal and public intolerance of disabilities be heightened?

⁵J. Marks, "The Human Genome Project", +101; ⁶Stabile, "Shooting the Mother", ++198-9; ⁷(Preimplantation of human embryos through IVF is on the rise: over 20,000 test-tube babies have been born around the world since the 1980's.) R. Kotolak and P. Gorner, "Babies by Design," in *The Chicago Tribune* cited in A. Kimbrell, *The Human Body Shop*, +88; ⁸Proud, *Understanding Obstetric Ultrasound*, +42.

Understanding the role of obstetric imaging technologies from a social aspect is complex enough given the other competing critiques for its use in medical fields. Medical diagnosis, with its tendency to "highlight" errors, rarely considers the experiential phenomena we share with technology and bodily experiences. According to Carol Stabile and other writers like Adams and Woodward, what accounts for *natural* reproduction and child-bearing today is highly speculative given our "widespread engagement with technoscience." Perhaps, the "*defense of motherhood* today would be much stronger if we resist(ed) the temptation of forging the *traditional links between nature, femininity, and irrationality*."⁶ Heterosexual sex is no longer necessary to become pregnant. Biotechnologies can effectively forge new pathways once considered biological barriers. Post-menstrual women have successfully given birth with the aid of IVF; *in vitro fertilization*.⁷

It is clear, that as genetic diagnosis becomes either routine or strongly requested by parents, health care specialists, propelled by the fear of liability lawsuits, may have to, at the very least, advise parents of the existence/function of prenatal screening. As such, pregnancy, more than either childbirth or labour, becomes a site for any number of mappings delivered by various technological surveilling systems. Arguments for and against routine obstetric scanning are often debated, but the use of fetal visualization does have merit. For women who have suffered a miscarriage or an incomplete abortion, an ultrasound scan is a starting point to help parents come to terms with a poor fetal diagnosis and adjust to a loss. British obstetrician and former midwife Jean Proud, describing an incomplete abortion, remarks that it is "extremely difficult for a mother to dissociate herself from her unborn baby, to accept that although she lives, the baby within her does not."⁸ For others, this technology offers some amount of reassurance, particularly when they express uncertainties about their pregnancy (especially

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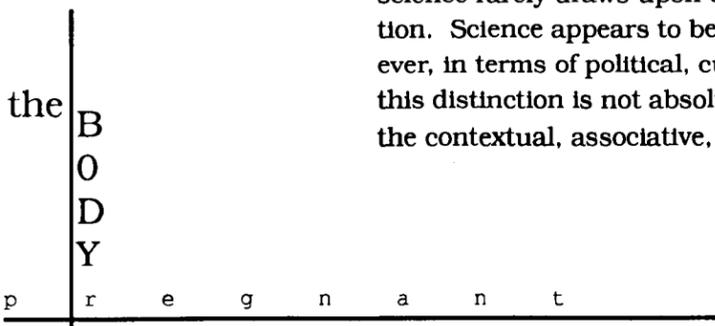
when little fetal movement is felt). But as Josephine Green notes in her study of psychological effects of fetal diagnosis on women, even when a scan reveals *no* abnormality a woman's anxiety still remains high because the possibility of a "malformation" has already been *implanted*. Oddly enough, while Green found that emotional bonding between mother and fetus at this early stage is *over emphasized*, the desire to know whether or not the baby is healthy is commonly expressed.⁹ The *image* of the unborn has a tendency to *sustain an ideal* – **the perfect baby**.

Ultimately, the advances in biotechnologies refashion what traditional concepts of pregnancy, birth, life, and death will be – or, even more frightfully, arresting what a *worthy life is* or *is not*. The immense social and psychological aspects which have shaped our perception of the pregnant body are not only vast, but also uneasily separated or removed. Questions which ask what *psychological* aspects govern being a mother, especially in cases involving "manipulated human reproduction," are becoming more ambiguous. In a California custody case in 1990, a surrogate woman was denied custody of a child who was conceived by IVF and brought to term in her. Custody was granted instead to the biological parents who provided the "embryo" which was created by fertilizing the egg of the mother and the sperm of the father and implanting it into the surrogate. In response to the ruling, psychiatrist and surrogate expert, Dr. Michelle Harrison found the bond between the surrogate mother and developing fetus was superseded by technology. The surrogate mother's ineffable contribution to the bringing of this birth into existence, according to Harrison, was not adequately, legally, nor emotionally addressed:

For the slowly evolving fetus, home is the place filled with the mother's warmth and cushioned by her fluids...In the last months, the fetus hears her singing, her talking, her crying. At birth the newborn shows preference for her voice above all others...The donor of the egg did not experience the nine month long intimate, dynamic and life giving process that went on for every second of gestation. In the fullest biological sense, the donor of the egg *has not mothered the baby*.¹⁰

Alice Adam's essay "Out of the Womb," consistent with Harrison's view of the diminutive role of the birth mother, further suggests that obstetric technologies function to invalidate the symbiotic relationship. Subsequently, this admonishes a pregnant's woman's rights and identity. "Was *woman's* mothering the inevitable, and desirable, result of female biology," Adams asks, "or a culturally constructed practice?"¹¹ Whatever the intention, science rarely draws upon the popular culture or media for validation. Science appears to be the means of measure, *a fact*. However, in terms of political, cultural, religious or ethical discourses, this distinction is not absolute nor fixed. Usage varies according to the contextual, associative, and cultural preference.

⁹Green, quoted in Proud, op. cit., +20; ¹⁰Dr. Harrison, quoted in Andrew Kimbrell, *The Human Body Shop*, +116; ¹¹Adams, "Out of the Womb", +270.



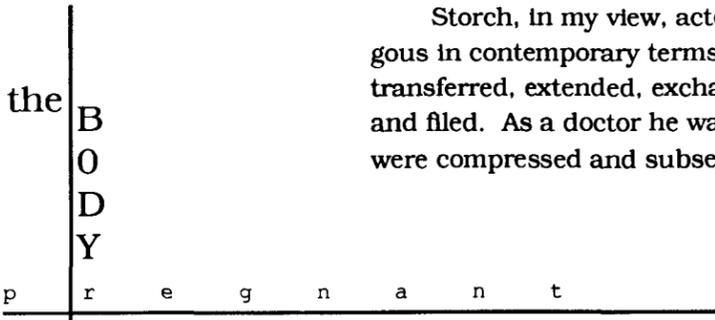
The deployment of biotechnology has at times lent itself to a kind of "staging." Backlit aborted fetuses are occasionally used to simulate an inner womb environment in documentaries. In other instances, the desired "angle" is controlled. According to Ann Oakley in *The Captured Womb*, the first use of ultrasound was "to determine placental size and fetal position and lie; and if fetal movements" obstructed "the view, diazepam (valium)...is used to sedate...(the fetus)...so it may be *manipulated into view*." ¹² While these technologies have broken the traditional ominous barrier between the fetus and the outside world, creating a "window" into the fetal domain, the view itself has become locked, a rigid frame. Despite science's attempts to uphold "truths" – to validate and naturalize claims of fetal development, growth and medicine – it cannot help but leave itself open to inaccuracies. Discrepancies in the way biotechnological images are understood and interpreted are more frequent than the medical professional leads us to believe. In *The New England Journal of Medicine and Culture* Dr. Jermone Kassirer states that "experience" and "memory" guides most diagnoses. Thus, perception infuses each diagnosis: knowledge of biotechnological images weave together with the experiential and physical body. He further states:

¹²Oakley, *The Captured Womb*, +172; ¹³Jermone Kassirer, "Images in Clinical Medicine", ++829-30; ¹⁴Duden, *The Woman Beneath*, +158-169.

To interpret an image, we use information from experience and memory to create a model of reality. The layers of imagery go even deeper; many of the images we use in medicine are already models. Microscopic slides are not living cells; CT scans of adrenal tumors are only representation of the actual tumor; ultrasound representation of septal defects are sound waves converted into video or film image, *not the defect itself*. Often, therefore, we are *creating* from classical hands-on auscultation, percussion, and palpation.¹³

Acknowledging that a certain medical "vagueness" and "indeterminacy" exist, the overlapping tendencies used to inform health diagnoses have some parallels to those used in eighteenth century Germany. In her historical synopsis of a country doctor's medical journal in Eisenach, Barbara Duden traces the "layering" and "flow" of health information. The doctor profiled, Storch, merged his knowledge of the body (guided by reason) with information expressed by the parturient patient and her *experienced* attendants: midwives, female relatives, or other women who had bore children. The passage of information was fed through a loop – the patient via attendant via doctor and vice versa. Rarely did the doctor conduct physical examinations. Instead, he relied on the *exchange* of subtle messages to confirm a health diagnosis or suspicion.¹⁴

Storch, in my view, acted as a kind of bridge, perhaps analogous in contemporary terms to a *modem*. Bits of information were transferred, extended, exchanged, layered, compressed, deleted, and filed. As a doctor he was the *channel* in which his diagnoses were compressed and subsequently guided and fed outward to the



receiver – his patients. Despite Storch's considerable efforts, the receiver acted upon the acquired information autonomously. Nothing was solely under his influence. The exchange of electronic information operates in a similar fashion. At one level, the receiver acts independently, employing his/her knowledge of the information to the requested service. Information received is recomposed and layered with different composite meanings. The modem forms an umbilical link between two spaces – the sender and the receiver – can also operate in multiple ways. Along different paths, information stored in a file may become dislodged or aborted. In all this, the nature of the modem behaves unpredictably. The course of electronic ailments or peculiarities which are unable to be deciphered by the receiver are present to a computer specialist, a type of artificial doctor. Like Storch, the computer specialist sometimes physically presides for diagnoses and often receives notice through a courier or correspondence. The eighteenth century doctor was physically distant, yet he reciprocated with the exchange. Information, though vague, nonetheless overlapped with ideas culminating from nature, personal observations, and the patient(s). Duden explains,

¹⁵Duden, *The Woman Beneath*, +171; ¹⁶Proud, *Understanding Obstetric Ultrasound*, +42-3.

For Storch, nature was unproblematic...This vagueness of his concept of nature allowed him to let body concept and nature blend into each other. From biology, the life-story, and a woman's complaints he derived his idea of the nature of this woman, and with his prescription he talked he talked to nature, even if in chemical symbols, in order to guide it onto right paths or reinforce it. ¹⁵

By contrast, a common complaint of contemporary obstetrics, as sustained by Proud's extensive study of 16,000 pregnancies, is that a woman's relationship to her physician is often invalidated. Particularly in pregnancy, a woman may see herself as "powerless" to make her own decisions about child-bearing. Should she try to seek more information about a specific concern or issue, her questioning may seem either "threatening" or "trifling" to an authoritative doctor on "tight" schedule. Also pertinent is the fact that counselling about the nature of, or reason for, imaging is often insufficient. "Very few women," Proud explains "receive a written explanation of the reason why their scan is thought to be necessary." More often than not, she continues "they are presented with a form to take along to the imagining department at the hospital, having little counselling regarding the nature of the investigation from either midwives or medical clinicians." ¹⁶

The merger of the biological with the technological creates a *re-conceptualization* of the body formatted in a "palatable" digital array which is easily consumed by our media culture. Using computer graphics, one can *zoom in*, *colour enhance*, *sharpen*, and *delete* the extraneous material any body scan. Equally prolific is the "real-time" scan, which produces the effect of a "live-on-air" news coverage. For some women and some feminist scholars, ultrasound, like other obstetric procedures, epitomizes another invasive assault on the female body. Yet for others, it is a technology women may use

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for their own ends. It is a means by which women can "choose not only whether, when and where to bear children, and the circumstance of labour, but also between biological and artificial reproduction."¹⁷

Counterpoints to this view continue to mount. Proclaiming that such technology solely verifies a pregnancy ignores the notion that pregnancy can be intuitively or sensorially *felt* by a woman herself. The body, in pregnancy, *is* still experienced. As Duden has noted in her thorough analysis of women's health and medicine, a woman's perception of her body is guided by sensation. For Duden, "quickening" (the first detected movements of the fetus which occur at approximately eleven weeks) signifies life in the womb; it is a "perceptual observation determined by the woman herself."¹⁸ Seen this way, the electronically presented scan exists as another layer of information *confirming sometimes what the mother has already perceived*. But, surely, it is thinly veiled to obey only things which originate from our intuition. To completely sever our ties with technological knowledge denies our own culture. Kathleen Woodward in "From Virtual Cyborgs to Biological Time Bombs" asserts that "it is absurd to think of technology out of control or autonomous because it is in fact thoroughly embedded in our social processes."¹⁹ However, in asserting the above, Woodward is not suggesting that technology is "neutral", but rather that generally we as a society have a "fascination with the simulacra of Postmodernism, with copies without originals, with the paradoxical insubstantiality and invincibility of the body in the space of virtual reality."²⁰

¹⁷ Rich, *Of Women Born*, + 174; ¹⁸Duden, *The Woman Beneath*, +158-169; ¹⁹Woodward, "From Virtual Cyborgs", +49; ²⁰Woodward, *Ibid.*, +49-50; ²¹Leonardo da Vinci, trans. by L. Watson and quoted in, *Supernature*, ++115-125.

Bodily perception today is one of ambivalence; it sits uneasily in the face of technology. We need not abandon biotechnology altogether, but we should reconsider the significance that bodily sensations impart on social bonding and the type of *reciprocity* that is obviously required. Theoretical notions as early as the fifteenth century recognized the significance of this exchange of information or dialogue between mother and fetus. A commonly held view among Renaissance philosophers and artists was that the thoughts imagined by parents at the time of conception influenced the mentality and physicality of the baby: their thoughts merged into the new spiritual presence (fetal). A pleasant experience is thus "imprinted" or "impressed" on the developing body. Leonardo da Vinci writes:

The things desired by the mother are often *impressed* on the parts of the child whom the mother carried at the time of desire. So it is concluded that one and the same soul governs the two bodies, and the same body nourishes both.²¹

This belief from the Renaissance that certain events or thoughts can influence an unborn child parallels contemporary theoretical studies in child psychology. There is a growing body of psychoanalytic evidence that suggests a direct correlation between

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a pregnant woman's emotions and the behaviour of her unborn child, both in the uterus and after birth. By birth, the infant's repertoire of basic human behaviour, affected by maternal or environmental events, is already "imprinted."²² In many ways, through the *distaning forces* of images, we can control and manage our relationships. Images can be said to insulate us from *real* and *reciprocal relationships*; but they cannot, in themselves, implicate us in an *intimate* and physical way. Nonetheless, they signify a *presence*, although abstract. Through the screen, we can access experiences beyond the ordinary, beyond what is cloaked by the skin. But what experience and knowledge does this deliver? While many mothers and their partners may express excitement in previewing the baby that they will eventually hold, the scan only involves them in the spectacle without engaging the *full complexity of the reality*. Yet, if we too quickly accept the philosopher Jean Baudrillard's view that contemporary society has become disengaged from reality and that our lives are superficial vestiges drawn from media, will we fail to appreciate the potential aesthetic and experiential qualities in electronic scanning? Fetal images, when viewed experientially as belonging both visually and textually to the body, are nonetheless inextricably intertwined with our contemporary experiences and perceptions. *The mother exists inside, beyond and collectively with the life which is hers, and yet is another*. We cannot hope to grasp everything in a glance. Or, as George Steiner would have it: "there are literary, artistic, and musical works which remain *closed* or only *superficially* accessible to the most welcoming of perceptions."²³

²²McFarlane, *Psychology of Childbirth*, ++25-6;
²³Steiner, *Real Presences*, +156; ²⁴T. S. Eliot, *Burnt Norton*, + 15.

At the still point of a turning world.
 Neither flesh nor fleshless;
 Neither from nor towards; at the still
 point there the dance is.
 But neither arrest nor movement. And do
 not call it fixity,
 Where the past and future are gathered.²⁴

Implicit in the race to obtain better "imaging" is the very question of what are we accommodating. Is it new technology over the human condition? The challenge then is to create a greater range and depth in the quality of health and education. While we have the technological capacity to communicate information just about anywhere, can we take up the challenge of *effectively* communicating with our material bodies? Should not *performing* the act itself – child bearing – carry more significance than the *symbol* of the act (the image)?

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The liquidity of computers as we know them is based upon *photolithographic printing* processes, permanent inscription. Everything that is written via electronic media is erasable and ephemeral unless stored or reinscribed, but the microchips that enable this liquidity are still just immensely "compactified" books, active yet permanently carved enduringly in silicon. With software we are *siteless*, but the software itself is rooted in that hardware that supports it.²⁵

SCANNING THE SCANS computer (re) configurations

²⁵ Novak, "TransTerraFirma: AfterTerritory," + 36;
²⁶ Novak, *Ibid.*, +36;
²⁷ McLuhan, *Understanding Media*, Intro, n.p.

Our bodily perception exists no longer as one which elicits the bones as frames and as the skin the most outmost boundary. With new medical imaging technologies scanning across, the body mirrors a reality that could never before be experienced: we have layed open our intrinsic selves to others and to the electronic files of computers. In this process, the body as we know it no longer exists here nor there, within or without, it exists equally electronically as pixels on a screen or is "carved enduringly in silicon."²⁶ Ultrasound beams rendered invisible to our senses penetrate the depth of our matter, cutting "sectional" slices of anatomic structure at high-speed intervals. Layers, pathways, territories of human circulation, tissue, and bones descend through the transducer and are expressed as evanescent pixels on the computer screen. The material body appears seemingly discontinuous from that which exists electronically, but in "real time" scans, it simultaneously occupies both spaces. Particularly in regards to the pregnancy, its relations and perceptions have come to embody aspects of technological images.

For the sonographer who has mastered the hand-held transducer (the scanning instrument), this tool *extends* conceptually further than a mere object to hold and guide. Through its construction and manipulation, a bodily connection is made and felt. Sonographer Judy Ward, from the Calgary Diagnostic Laboratories, implies that a reciprocal union exists with the sonographer, machine, and patient. Ward says:

...the mechanism (transducer) is suspended in a warm oil medium at the scanner's head, which is rounded and light and angles into the "nooks" and crannies" of the anatomy. Oil is spread out evenly across the scanning surface (womb) using the transducer's head until a "sticky" film is built-up creating a *coupling bond* between the skin and the mechanism. A soft "suction" action can be heard as the transducer is gently pushed into the body.

When the optimum position is found the transducer is held stationary or "rocked," directing the ultrasound beam to traverse across the body (a pie-shaped sector scan results). This rocking motion often *stirs* the fetus creating a fluttering sensed by the mother and sonographer alike.²⁸

A great amount of exchange occurs during the scan, creating what Ward describes as a "chaotic, spiralling affair." The over anxious mother may *talk* and subsequently "acoustically interfere" with the ongoing scan. "Parents" she continues, "often become intimately entangled with the visualization of their fetus."²⁹ Nonetheless, Ward points out that the sonographer must *instruct* on-lookers how to read the shapes, and that it is only then that they *see* a recognizable figure. The ultrasound scan also presents various reconstructions of the fetal domain. Partially built by sectional cuts *incising* through the pregnant body, as "the degree of flexion in the longitude axis and in the cross sections extending from the fetal crown to the abdomen", the scan shapes alternate readings of the body as a digital landscape capable of manipulation.³⁰

²⁸Ward, interview with sonographer, January 1995; ²⁹Ward, *Ibid.*, 1995; ³⁰*Ibid.*, Jan. 1995. (Fetal mapping uses a variation of SONAR technology, first used by sound navigation and ranging for detecting submarines and ocean topography. Sound transmitted through a narrow beam in the transducer sends out an electronic pulse.)

A computer generated series represent an outgrowth of the earlier site studies and is used to develop the graphic sectional and circulation patterns that eventually shape and direct the architectural intervention. The structure of the graphic programme enables spatial configurations to be easily manipulated through layering, and quickly expanded, compressed and deleted. The movement of spaces and circulation amongst the geography of hills, clearings, and trails that converge at the Glenmore Reservoir site speak of a multitude of forces that are densified, yet equally exaggerated. This quality lends itself to an *indetermination* of form, because many possibilities present themselves and parallel the *crossing over* that is inherent in a multifaceted and diverse multimedia process. Likewise, the physical scope of the computer programme provides a connection to the way architects implant artificial contexts into natural bodies, namely the landscape. It provokes a certain kind of calculated ambiguity between the expression of landscape and the built form. However, this does not preclude the possibility of artificial and natural systems from coexisting or occupying the same realm. They may overlap, spiral, diverge, and vary in a certain degree of intensity and saturation. The presence of these influences simultaneously exist in natural, artificial, and electronic landscapes (as in obstetric visualization).

The presentation of the emerging architecture is not necessarily one of balance. Some forces extend beyond, while others are pulled into different directions, achieving a presence in their own right. My main interest was to conceive of this phase as a type of scan: an image of a previous site model was scanned into the computer graphic programme to provide a context, or a mother site, upon which the beginnings of a more tangible architectural construction began to evolve. The scanned image (the original

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context) could not be easily manipulated. While the scan appears as a tangible image with depth, the computer reads it primarily as a solid, unidimensional surface. In other words, the scan is devoid of layers (which collectively form lines, surfaces, or planes), and thus cannot be extensively manipulated in itself. It is only through inputting new graphics, generated through collage, layers, or lines, that a scanned image can be altered. Thus, the scan relies on the implantation of new information before it can grow.

Intentionally embedded, the scan was envisioned as a context (a site) upon which another presence would emerge. Obviously some manipulation on the background emerges, erasing and diluting sections. Essentially, this is comparable to cleaning and preparing the surface of a "printing plate" for inking. Some elements, however, existing on the scanned image were extended and occasionally projected into space. In this early stage, I *dislocated* the evolving structure from the escarpment's edge, forming a "cushion" or space "in between." Circulation, then, became directed to two main directions: bridging perpendicularly across, creating an *umbilical* connection to the escarpment; and two, generating a flowing circuitous path susceptible of spiraling, merging, and branching. The former extends, narrows and expands, reinforcing the continuity of the existing pathways in the Reservoir. Here the circulation branches to different spatial zones, spirals to different depths...bridges. This journey reinforces the idea that physical and conceptual boundaries can be linked either physically or conceptually. Adrienne Rich reinforces this idea, suggesting that pregnant women know that their boundaries are not "polar" but "continuous." Yet the degree and intensity to which these boundaries, artificial or natural, are continuous remains sufficiently ambiguous.

The nature of an evolving structure and its system of spaces, nonetheless speaks of a directional force that is not "linear" but "spiralling" in the light of continuous questioning. Essentially, here, the graphic manipulation was used to break beyond the original scan's "frame," to penetrate the surface and to establish an inner layering in keeping with the nature of the *passage* and its *intervals*. Hence, the outdoor movement of paths experienced from the site may be conceptually architecturally embodied in the computer through "sectional" and "composite inner-frames." Consider meandering down and through a pathway which opens onto clearings, narrower trails and framed views. While we are clearly in an outside context, we nevertheless internalize the sensations of the outer world. The outer world filters through and into our bodies. Some of these qualities are experienced as threshold. For instance, we understand the "trail's end" and where it meets the "clearing." In architecture, these are the thresholds which transport from one context to the other. We are directed, gathered, allowed to pause, perhaps even take a different direction from what was initially intended. This sense of movement presided over most of the evolutionary phases of the work, at times shifting away from the scan and focusing on the developing image. In other words, possibilities and circumstances arising from the infusion of the architectural program or tectonic relationships move *interactively* with, or *autonomously* outside of, the site, theory, or cultural context.

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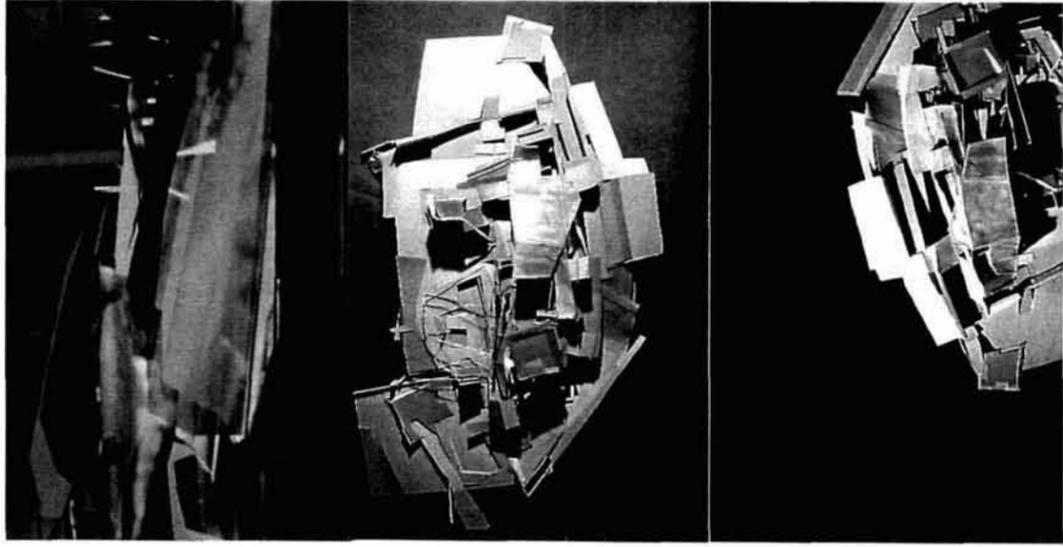
The developing architectural graphics are meant to reflect this trend. A series of planes and lines were pulled into a number of directions and layered to produce different volumes and relationships. The intention is to infuse this early stage with a sort energy – a life force that may *morph*. Some of these graphic configurations drew inspiration from the pregnant embodiment. In particular, the emerging roof section took on a slight figurative capacity, becoming a swelling folded surface and encapsulating an inner space in one sweeping gesture. The scanned model image (a notation of the site) combined with graphic overlays and line configurations, results in a new territory – a genetic hybrid of the former that demonstrates greater evolution and coherency in architectural development. At one level, the computer, like any device, produces predictable outcomes. Predictable patterns emerge from the process of inputting information, scanning, storing, erasing, creating a mirage of endless manipulations and producing autonomous results. Unexpectedness arises from chance combinations – how layering actually visualizes, strengthens or creates another condition.

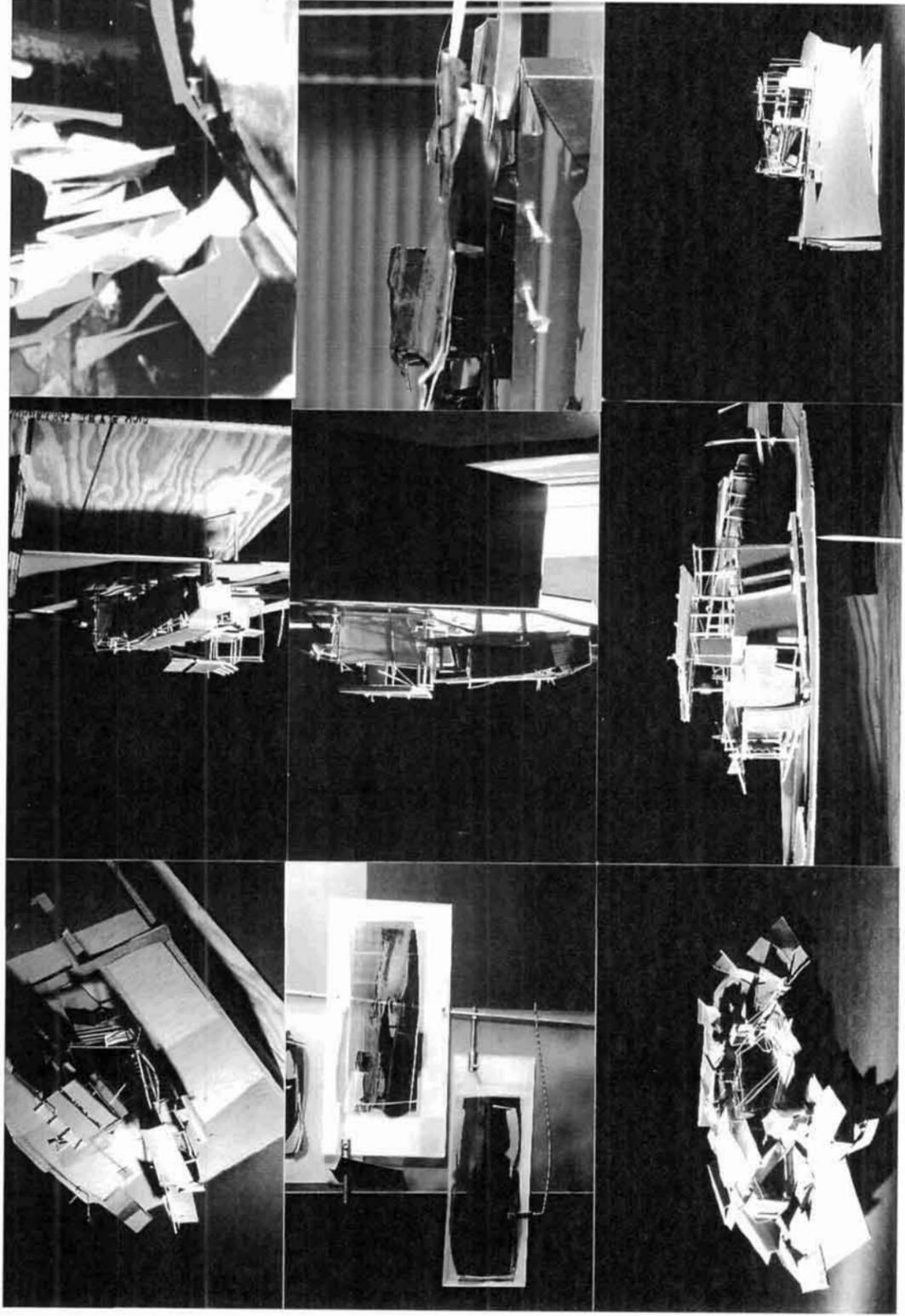
³¹Morse "What do Cyborgs Eat?", +165-66.

Especially common in successive digital layering is the considerable "load" gains and "extended" pressures on the memory: the graphic input may take several minutes or longer to journey to the screen. At any one time, the screen appears frozen. The transit of information across the screen is sometimes so slow that the resulting transformation is visually unpredictable. At other times, the mission *aborts*. A sense of anticipation and anxiety resounds. One waits for the *results*, fixated on the screen while some control is subsequently relinquished by the possibilities that emerge (common also to processes in printmaking and architecture). Of course, here, a series of electronic impulses create the context. This technology allows layers and lines to build up, resulting in both structure and depth; an electronic collage. The layering calls attention to a *construction*: surface, planes, and directional orientation. With respect to the amalgamation of this constraint, the original mother image was not cast aside: traces of its presence remain and surface. The layering of computer graphics, while similar to printmaking in that vells are successively built up, accommodates more flexibility: the layers can be *endlessly* manipulated, lightened or darkened.

For Margaret Morse in *What do Cyborgs Eat?*, imaging technologies create a *second skin* from which we measure ourselves—a kind of comparison or gauge. Therefore, if the screened image *tells* us the baby is healthy, the mother may feel she is "living-up" to her reproductive destiny: she encapsulates a body which *bears, ripens the fruit*. The "second skin" created through *interfacing* technologies, Morse continues, acts "as if it were an immediate experience."³¹ The challenge, then, is to create a greater depth in health facilities that more readily engages overlapping tendencies in technology and the body through dialogue and architectural means (programmatic and spatial predispositions). Although every work has an identity in its own right, the process is intended to be seen as an ongoing developmental series, to the extent that there is a broadening that occurs from understanding the whole project in its repetitions, differences, and departures.

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(T)aking birth out of the hospital does not mean simply shifting into the home or into maternity clinics. *Birth is not an isolated event.* If there were local centers to which women could go for contraceptive and abortion counseling, pregnancy testing, prenatal care, labour classes, films about pregnancy and birth, routine gynecological examinations, therapeutic and counseling groups through and after pregnancy, including a well-baby clinic, women could begin to think, read about, and discuss the entire process of conceiving, gestating, bearing, nursing their children, about the alternatives to motherhood, and about the wholeness of their lives. Birth might then become one event in the *unfolding* of our diverse and polymorphous sex: not a necessary consequence of sex, but one experience liberating ourselves from fear, passivity, and alienation from our bodies.

I am a woman giving birth to myself.¹

THE UNTIMELY LABOUR the processing

¹Rich, *Of Women Born*, +184; ²Lewontin, "The Dream of the Human Genome," +109; ³de Beauvoir, *The Second Sex*, +525.

Crucial to my architectural thesis is to emphasize the overlapping tendencies of concepts, derived from the pregnant embodiment, and how they can spawn diverse pathways of design inquiries paralleling the dynamic milieu out of which metamorphic processes are conceived and find expression in this project, a Maternity and Extended Family Health Facility. Visible evolutionary patterns arising out of the architectural design process, for instance, from one stage to the next are not necessarily sustained visually or linearly, nor can one conceptual mode be said to exert itself above all others. In other words, the frame work for the design is stored in its theoretical concepts, likened to a simplified DNA building code.

The organism does not compute itself from DNA. A living organism at any moment in its life is the unique consequence of a developmental history that results from the *interaction* of and *determination* by internal and external forces...Organisms do not find the world in which they develop. They make it. Reciprocity, the internal forces are not autonomous, but act in response to the external. Part of the internal chemical machinery of a cell is only manufactured when external conditions demand it.²

Similarly the design premise does not necessarily inhibit other diverse self-organizing processes from flourishing. Out of this dynamic framework two systems primarily emerge: one that is more or less strategically directed by a governing principle, of the pregnant embodiment; and second, alternating design patterns which emerge in response to the intervening global dynamics of external forces (biotechnology, societal issues, printmaking and so on). Roughly speaking, these external forces act as *catalysts*: they intervene and add complexity into a generative sequence, causing it to absorb new information which dislocates or results in a directional change – reciprocating as they pass. So in this sense, the architectural outcomes are not always predetermined, but are

...[A woman] cannot consent to bring forth life unless *life has meaning*; she cannot be a mother without endeavoring to play a role in economic, political, and social life of the times.³

regulated systematically. The architectural design sustains development from these shifting movements, accidents and strategic directions, partially inspired by the essays and other design studies. Out of these inquiries surfaces three composite, but "genetically linked" buildings: *The Central Complex*, *The Aquatic Anchor*, and *The Pavilion*.

The potential of this *embryogenesis* concept lies in its potential to transmit information from one cluster to another. Ultimately information is transposed, reformatted, and new counterpart bodies emerge and assert themselves. These burgeoning architectural bodies – *The Central Complex*, *The Aquatic Anchor*, and *The Pavilion* – reflect this tendency in that they are structurally independent of one another, yet conversely linked by proximity and circulation. In each group, there exists a paradoxical relationship of coexistence and separation: each embodies the same physical realm, but separately define different spatial, programmatic and siting conditions. Rather than evolving into one self-contained unit, the overall design layout produces a compositional asymmetry – *legs and arms pushing into different directions*. In an attempt to engage the idea of an generative sequence, circulatory movement is not directed towards a definite end or central space, but rather accumulates around various points of transitional concentration, specific programmatic zones, and gathering spaces.

This quality is noted in the collage model, which hints at the characteristic architectural design patterns and also responds to the varying landscape elements: ochre, pivotal characteristics; green, dislocated and bridging paths; and red, possible concentration of core functions. From a series of horizontal, vertical, and folded planes – differentiated in materials ranging from translucent skins, frames, and solid entities – suggestive spatial sequences emerge. The intention of the collage is to express the theme of *interval* as an *assemblage of independent elements* brought together by spatial and material enfoldment, around entrance points (bridges and circulation), and between level changes and doubled-story volumes. An absolute criterion is the creation of various scales to encourage both domestic and institutional volumes. Also crucial to this design stage is the idea of crossing points which can direct transition from private areas to ones that are expressively public. This is best recognized by the extruding element (later forming the *Pavilion*), which escapes the brooding density of the elongated form and projects into the landscape. Out of these processes, another presence is also implied – the manipulated landscape – since any *act* of constructing alters the physical and experiential shaping of landscapes. Echoing this idea Andrea Kahn writes,

(A)dding a new building to a site transforms its use as well as its topography, microclimate, and circulation. The construction of a building defines successive sites for ensuing constructions—that is, any building alters

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adjoining sites as well as its own. The site is neither pure nor ideal; it is "claimed," which is to say it is preoccupied, by power and time. As the embodiment and inscription of these preoccupations, the site is made in the work of architecture, and this is necessary if the work of architecture is to be made.⁴

The "preoccupied" site characterizes a type of pregnancy that is *impregnated* by artificial and natural layers over time. Landscape, as it were, is *conceived* both consciously and unconsciously by the *act* of designing. The fate of such a construction is precarious and ever-changing. Each forging pathway continues to impact the shaping of a project. The structure, for example, undergoes alterations to compensate for a host of issues which arise in the transition from conceptual design work to working drawings. Building, paraphrasing Louis Kahn, is generative – a life force in itself, effectively *pregnant*.⁵ Although building constitutes a layering over time, it can have a limited life, controlled by *the passage* of time, and uses which inscribe different meanings.

⁴ Kahn, "On Site," +164;
⁵ L. Kahn, *Between Silence and Light*, +68.

In this project, the architecture appropriates the site; it is the basis from which the developing form, a burgeoning maternity centre, is supported, extended from or burrowed out. This does not entail the complete omission or oblivious denial of site, as is so often a persistent theme when land is "cleared" for new developments, an action which effectively suppresses any trace or residue of a former state. In the most simplistic terms, although by no means conclusive nor absolute, the *enveloping* and *enveloped* artificial landscape are conjoined with the evolving architecture. Yet the altered landscape can also be seen as an entity in itself.

Articulated by the U-shaped composition, three new sets of garden conditions emerge. Witnessed from the outer perimeter in an area defined by the space between the north escarpment and the flanking retaining walls, a meandering promenade of terraced gardens wrap around and envelop the architectural mass. This landscape promenade cushions and nudges against the architectural mass and produces an uterine wall of sorts. A second outdoor condition also appears: the enclosing architectural mass delineates an exterior courtyard where most viewing rooms are oriented. Finally, an urban landscape gesture emerges from the mediation between the landscape and the built form: bridges transport one from landscape (natural) to another (building). Therefore, the project can be seen as situated within the *vortex* of natural and artificial landscapes – landscape and built form, and park and urban life – a *constructed* interval in the landscape. Perhaps, this vortex, in keeping with the mixing of a hybrid programme, attempt to reflects the site's diversity in an inner dimension. Architectural topologies and altering structures also further reinforce this tendency, as in the use of cantilevers and staggered levels which ultimately effect the nature of the spaces themselves, setting up programmatic adjacencies and tensions.

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The building thus reacts to the site in several ways. One example is the different articulation between the north and south side of *The Central Complex*. Where the building follows the edge of the escarpment, for instance, the domestic character is suggestive of a high fence (a wall), serving to shield or protect the interior from this more public side. In contrast, the south side is richly varied with differentiated glazed units and wooden screens in keeping with the varied texture and seasonal rhythm of the Reservoir Valley. Through this screening, the repetitive frame of the structure is de-emphasized. Here, the notion of screen is strongly emphasized — the *passage* of light is sieved.

While it is difficult to become fully acquainted with the complexity of the pregnant embodiment itself and draw *extracts* that are pursued within the architecture, both the urbanism and the architectural process nonetheless, with their ongoing constructions and processes, can said to be *pregnant*. They simultaneously undergo transformation and contraction. And rightfully so, a situation, as seen in this project, which incites social interaction is *pregnant*. Out of the *exchange*, a new eccentric focus (interval) is realized; one that is decentralized, yet inextricably joined as a constructed landscape gesture; and one that has *forged* a new direction in women's community and family health. This notion of hybrid building allows each zone to be built over time and independently of one another, partially offsetting costs.

Ernst, "Health Care Reform," +131.

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This section only *briefly* overviews some programmatic initiatives, while the project section more specifically describes the main design characteristics, core spaces, and structuring predispositions. In keeping with this project as an exploratory process, the threads of social and conceptual meanings in design and architecture are discussed most prevalently here. Likewise, the ensuing drawings, likened to an x-ray scan, highlight structural connections, obscure the surrounding site and other visual documentation, and express a dialogue which is visually sustained rather than verbally. These layers of information do not always join, and therefore offer divergent paths of experience which, most simply, cannot always be indexed to a controlling frame.

In an effort to explore new ways to deliver care to women and child-bearing families, alternate forms of community based maternity centres, *without on-site* birth facilities, are emerging. The schemes partly arise in response to the sordid and benign conditions which characterize the management of pregnancy and child-rearing from the hospital/clinic setting. Instead, the new generation of maternity centres attempt to address and respond effectively to the complex psychological and therapeutic issues underlying pregnancy and parenthood. Eunice Ernst, an American advocate for maternal and child health reform, suggests that it is now time to "act", "deliver," and "redefine" alternatives.⁶ She argues that "we must look *beyond* medical care (and) to *health promotion*"

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and recognize the influence that "sociological, psychological, cultural, and economic factors" have on pregnancy and birth."⁷ These remarks by Ernst further validate the *pregnant passage* in which birth figures as an *interval* coalescing at its hiatus.

This project reflects one process methodology within a sea of other possibilities for the design evolution. The programme focuses on maternity and parental education, which (hopefully) questions the current delivery of maternity health issues. Birth, as a term, is acknowledged as a *transcendence* of body and mind. The *literal birth* occurs elsewhere, presenting an alternative to the maternity concept. For this reason, the project can conceivably be used as a base for trained maternity specialists who conduct off-site examinations and consultations or assist with off-site births. In this way, the programme is inspired by the new directions in women's health and maternity anticipates that practitioners (doctors), nurses, midwives, health care educators, and fitness trainers can effectively and efficiently work together to deliver new alternatives of care, as established in the Low-Risk Clinic and Midwives' Project in the Grace Hospital in Vancouver (also formally in Calgary). It has been argued that the delivery of these overlapping services has provided a high quality of skilled and compassionate care which has been well-received by child-bearing women and their families. It is a move Robin Kilpatrick from the College of Midwives in Ontario says, that is not fully motivated by cost, but by "more of a social movement."⁸

⁷Ernst, "Health Care Reform," ++131-2, ⁸Robin Kilpatrick quoted in "Midwifery Takes its Place," +A8; ⁹Rich, *Of Women Born*, +180; ¹⁰Burtch, *Trials of Labour*, +226.

Until recently, these issues were largely dismissed by many traditional medical practitioners who tend to see child-bearing as a "condition" rather than a *healthy articulated state of a woman's being*. Childbirth says Rich is "not a drama torn from its context, a sudden crisis to be handled by others because the mother is out of control."⁹ To appeal to some doctors (whose mannerisms can be alienating and impersonal) for emotional support during pregnancy is of little comfort for women who receive advice from a medical culture that is geared to prescribing remedies rather than *compassion*. Canadian lawyer Brian Burtch, whose research includes Canadian legal policy and the status of Midwifery in his *Trials of Labour, The Re-emergence of Midwifery*, describes the current structure of maternity and infant care in Canada as being both a "contradiction" and a "paradox." The formidable control of child-bearing by the state and medical profession is not only "dangerous," writes Burtch, but "restricts women's self-determination...as individuals and as a community...even when such self-determination can be shown to be clearly advantageous for women and their children."¹⁰ Thus, the failure to establish any out-of-hospital maternity care centres results primarily from the denial of government funding and the lack of physician support, rather than user preferences, sensitivities or the reconstituting diversity in our modern communities. Yet, it is suggested that, with the restructuring of Canada's health care, community clinics will offer a cost-effective alternative that nonetheless contributes to our social milieu. This maternity centre represents a modern reinterpretation of the *public sphere of domesticity*. Such a reinterpretation is well

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needed in a time when most expectant women are separated from their mothers and other family members. Echoing this view Ernst states,

(A)s threatening as it may be for providers, it is possible that more of the prenatal dollar spent on pre-pregnancy and prenatal education would offer the most effective, long-term improvement of birth and parenting outcomes. It is also possible that women participating in such an educational program during their first pregnancy would require less direct supervision of care by providers in subsequent pregnancies. This could free time and money to concentrate on women who are at medical, social economic or psychological risk and need intensive professional care.¹¹

¹¹Ernst, "Health Care Reform," ++136-7; ¹²Ernst, "Health Care Reform," ++131-2.

In the struggle to broaden and prompt long overdue change in the delivery of maternal health services, some progressive agencies within the Grace Hospital in Vancouver and the Maternity Centre Association in New York are successfully integrating medical and technological consultation with childbirth education and fitness seminars through cooperative alignment with off-site facilities or the development of new hybrid programmes. These trends are also reflected locally in Calgary by the rise of independent operators who deliver private or public maternity consultation and education. Introducing such changes in health services provides women with more opportunities to actively *participate* in multidimensional programmes that meet their diverse antepartum and postpartum needs. "Education for childbirth," writes Ernst, is the "beginning of efforts for women to reclaim the birth experience and to move from a passive acceptance of routine administration of drugs, varying degrees of restraint during labour, separation from the newborn, and artificial infant feeding to active participation of women and their families." Ernst elaborates that, when women feel involved, they enter into a reciprocal relationship, sharing their intimate and public concerns with self-help groups, trained specialists or other educators who provide support and encouragement to their subjects.¹²

Reform in the delivery of maternal health services in North America is an *active* response to the growing awareness among many women, and some maternity health organizations, that acute care or excessive medical intervention for a healthy human process is inappropriate, costly, and emotionally unsatisfactory. The major complaint about mainstream maternity service stems largely from its overt control of a natural process that should foster mutual support, discussion, and understanding. These concerns are reflected widely in findings researched by a host of women's health organizations in Canada, the United States, and throughout Europe. It is generally agreed that a parturient woman's self-esteem and confidence rises when she is provided with extended health/educational services and support. Furthermore, the delivery of these integrated services screens and triages

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candidates for more appropriate or specialized care. There is, then, favourable evidence to support alternative maternity care in Canada, as seen by the proposed new facilities in Toronto, Montreal, and Vancouver.

In the search for such proposals it would be clearly absurd to expect all women in our society to return to traditional birth and counseling practices and outwardly reject biotechnologies, somewhat comprehended as potentially life saving medical procedures. Thus, the continuing integrative use of reproductive biotechnologies presents a compelling argument for hybrid maternity centres. This argument is also sustained by *The Canadian Centre for Policy Alternatives*, which promotes research and proposals on improving social issues that reflect the concerns of women. The initiative in this project is to suggest that an interval – *a public domestic community forged by the spiralling alliance of medicine, education, therapeutic and fitness services* – has the capacity to transgress boundaries in Canadian maternity and family health care. A similar attempt to develop such a project recently is found in Vancouver, as outlined by Burtch:

¹³Burtch, *Trials of Labour*, +221; ¹⁴Inspired by Rich, *Of Women Born*, +184.

(A) proposal to develop an out-of-hospital clinic in Vancouver...will provide a variety of health services for women, including maternity care...In such clinics women are seen as "well" and not automatically "sick." These initiatives can be linked to the notions that women are cared for by women, and that available technology and knowledge can be applied in a setting conducive to the collective interests of women clients and practitioners. Services concerning obstetrics and gynecology will not be fragmented, and resources can be centralized. The women's clinic appears to be a reshaping of the "community of women."¹³

Surely, a change directed at rethinking the design and programme of future health complexes, which provide opportunities for social intertwining can help change the relationships we have with our bodies, or at the very least, help abandon notions of pregnancy/birth as a crisis handled as if it were an "Amazon expedition."¹⁴ The culmination of this series of events provides design opportunities to facilitate change at the level of architectural and other creative tertiary inquiries. Specific to this project, the resulting architectural intervention embodies a few aspects of maternity needs found through multilateral design inquiries in the hybrid programme development. It proposes the assembly of a diverse range of services, revealing the symbiosis between concepts and spaces that are otherwise construed as opposing. For instance, massage and aquatic exercise, long known for their therapeutic potential, are presented as an unexpected anomaly in this maternity concept. Merged by programmatic proximity, the facility also engages design elements of bridging and counterpoints, as noted by the abbreviated tri-programme clustering: *The Central Complex's* Medical and Health Station, Lactation Instruction and

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Breast-feeding area and Cafe (Ovoid Node), Counselling offices, Interpretative Library/Gallery (inclusive of lecture theatre and video/electronic archives), and Child Drop-off (Cradle); *The Aquatic Anchors'* Pools (wading, hydraulic exercise, and lap), Exercise studios, Massage therapy, Fitness/Aquatic offices; and *The Pavilion's* Baby-well Clinic and Lab and Diagnostic Sonographic Chamber.

Other aspects of the programme cannot be easily defined or confined by the spaces manipulated by the tri-clustering condition. As such, the dynamics of the programme bring to the architectural project a willingness to infuse multiple identities (maternity/parental education, medical and therapeutic health services, and diagnostic imaging). These posited programmatic encounters are simultaneously dynamic, in that they may prompt a series of unexpected spontaneity in the design and spatial configurations. Such is the experience of the architectural bodies – conjoined by adjacencies, yet separate in their specific intentions. Simone de Beauvoir states, "pregnancy is a drama that is acted out within the woman herself...She feels it as an enrichment and an injury; the fetus is part of her body...it represents the future and, carrying it, she feels herself vast as the world...A new life is going to manifest itself and justify its *own separate existence*, she is proud of it; but she also feels tossed and driven, *the playful thing of obscure forces*."¹⁵ Even when a pregnant woman is fully immersed, within a physical context, her body can be said to occupy different spaces, thus transcending herself into different experiential realms. Reflected in the project, henceforth, is one's placement in various realms – among the objects and spatial dispositions – as though caught in an unavoidable vortex (interval) of the moment, but also where various traversing pathways always present themselves as potential departures.

While such theoretical underpinnings cannot be translated directly, an essence of their quality, as partially realized in *The Pavilion's* bridge, is conveyed by the dislocation, bridging and branching of elements. Like the dissecting tendencies in biotechnologies, it incises the *Central Complex's* body. Yet it is through this bridge that the facility, physically dislocated from the escarpment, is primarily accessed. The result is a situation of tension that is expressive of both dislocation and bridging. Perhaps this movement is an appropriate expression of the tenuous "umbilicated" notions that technology has with the sensorial body. Parallels to this movement are also found in the merger of medicine with the more rekindled women's collective, where education and compassion configure with empirical observation. Other architectural functions are limited by certain ranges. Charting, measuring, and recording bodily functions are systematic, eliciting images of endless computer manipulations or archives with their collection of specimens. This idea is best expressed in the repetition of examination rooms in the Medical and Health Station in the *Central Complex*: evenly spaced cubicles are placed within a continuous translucent wall, with terminals that electronically document and

¹⁵de Beauvoir, *Second Sex*, +525.

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recall. Further still, other programmatic configurations transcend and align themselves with very different functions. The upper lactation stations and lower cafe, partly defining the *Ovoid Node*, is highly visible to user needs – it twists out, drawing attention to itself – and yet provides some degree of intimacy through screening and partial enclosure. (Most standard international security issues for women note that nursing women are targets for petty thieves because they are both more vulnerable and distracted. The screen and slight enclosure of the *Ovoid*, as such, does offer some small amount of security.)

For parents who choose to work very few projects attend to the vital changes inherent in their urban domestic life. In an attempt to bring about a vitality from what is lacking the Maternity and Extended Family Health Facility's *life* is created for the users. Metaphorically, it implants a "familial anchor" in our contemporary society that otherwise seems to *dismiss* the importance of the role that *publicness* figures into parenting. Subsequently, the hybrid programme is meant to broaden opportunities for discussing, viewing, and understanding the ongoing transformational patterns in adult life as they are, *pregnant, in passing, and vortexing.*

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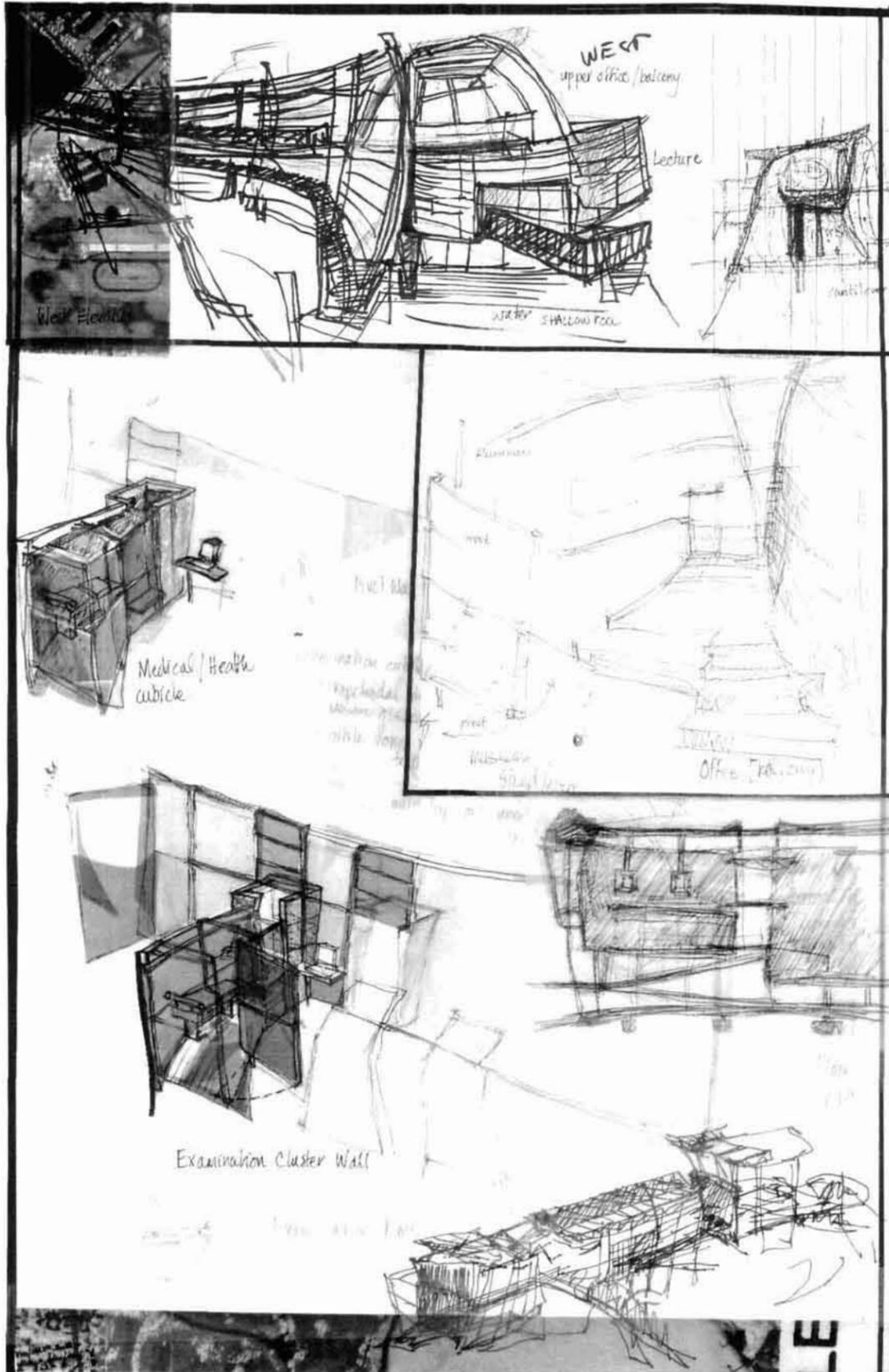
the PREGNANT
body

the pregnant passage in architecture
the architecture of the interval

the CENTRAL COMPLEX bodies within a body

the concentration of programmatic elements are thrust forward, creating a cross-sectional movement across the space...





The indeterminacy of form, its dispersion and instability, produce in contrast, an object whose image is never presented as a synthesis, as a synthetic perception in which time and space of experience collapse to produce a unified and controlled knowledge...In its place a surface of incidents is proposed, a description of space by equivalent points that are joined by multiple line of force.¹

The figurative sites of *jouissance* are migratory rather than static. These sites are the site of masques rather than programmes...The feminine masques slip into the transparent text of the planned, disciplined city.²

THE UNTIMELY BIRTH the central complex

¹Hadid, "Forms of Indetermination," +24;
²Birmingham, "Refiguring the Feminine," +71;
³Birmingham, Ibid., +71.

Echoing the profile of the escarpment, the elongated *Central Complex* is pushed and taunted by opposing forces. Defined by a relatively simple external contoured shell, it is also conversely dynamic by housing a myriad of programmes (*architectural bodies with the body of the plan*). The *Central Complex* functions primarily as a central exchange station (placenta-like) where nearly all circulation is fed into, directed out, or abroad. While the building houses a hybrid programme – catering to educational, health/medical, and interpretative library/gallery function, it is also conceived of as the primary vortex for learning. Seminal to this idea is that the internal programmatic functions neither deny their interior origin nor are confined to a general plan configuration. Programmatic elements inflect into the space, twist out, and penetrate layers thus transforming the relatively elongated form. On this basis, projecting and penetrating elements – *Ovoid Node*, *Lecture Theatre*, *Cradle* (Child Drop-Off), and *Reception/Waiting balconies* – are concentrated along the perimeter edges, rotating off the orthogonal plan. Collectively, these elements aim to express the varied transit which takes place between the different building levels, thus facilitating a visual and circulatory communication between the two storeys. Ramps, thresholds, bridges, and stairs repetitively mark the boundaries of transit. Hence, it is through the proliferation of crossing pathways which validate particular *pregnant* experiences, that the body dislocates, grows.

bodies within a body || the plan

The layout achieves a lofty openness: balcony spaces overlook a double-vaulted space with partitioned zones, creating privacy for medical/health examination in an otherwise open concept. This character is repeated on a smaller scale. Offices can be interconnected or subdivided, in that, without substantiated modifications, they can become smaller meeting rooms, classrooms, and work spaces used for individual or groups: education/counselor's

...The occupation of a site that is neither quite outside nor inside the frame but rather is in a powerfully dynamic and disruptive relation to inside and outside...this vicillating site of the feminine *jouissance*...awaits us at the edge...³

offices, administrative needs, and for lower gallery functions (display/partitions). Another adaptive spatial consideration was to establish a generous volume height that is proportional to the top of the es-carpment. In this way, the free height of the upper storey (5.25 meters) permits the hypothetical installation of a loft, at either end, if there is a requirement for more office space in the future.

The design also attempts to break away from the typical sterile and *claustrophobic* design conventions found in most health facilities. Yet, it also must meet the auxiliary functions necessary to guarantee proper user need and comfort. Washrooms and breast-feeding zones assume a greater priority and visibility to parents and pregnant women. Likewise, consideration of the heightened anxiety commonly experienced by people waiting for health appointments, results in the placement of general waiting areas near the south-facing views onlooking the courtyard and the Reservoir. To achieve this, the concentration of programmatic elements are *thrust forward*, creating a cross-sectional movement across the space and maximizing the daylight penetration. Another obvious spatial implication is the expression of the north convex/concave as a circulatory corridor, comprising an unobstructed lateral and vertical movement in the building enclosure. Like that of a meandering river, the external ramp traverses downward, wraps around the north wall and eventually folds in upon itself (accessing the lower storey's interpretative library/gallery, cafe, child care area, and access link to the pool). However, similar dynamic qualities, injecting the building with energy, are also achieved by the inward lean of glazing/screen units on the south facade and the curved roof structure.

Other design considerations include screening direct solar gain through the south facing glazing – rendering it diaphanous, yet inductive to a play of lighting conditions by louvers and different coloured, sandblasted, or serigraph glazed units. The screening is deliberately chosen to deliver a fascinating and ever-changing inner lighting condition that nonetheless confirms to basic human privacy issues and provides a natural light source. Light is sieved. This effect consents only to the penetration of light which, in turn, gestates life within and casts a dance of veiled shadows throughout.

the || ovoid node

As I grow uncontrollably large in my pregnancy – beached – my bladder shrinks with each month...I can no longer predict or offset my urge to urinate. Without warning my waist constricts uncomfortably, and once again I find myself barging through crowds, disrupting lineups and obstacles in an frantic search for the nearest toilet. It is around my bladder I plan my day trips into the city... In my pregnancy I have rediscovered the neighbourhood I thought I knew, but did not know, for I now see it for its toilets.⁴

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⁴Susan Fedor, *While Pregnant with Kye*, interview with sister 1994.

Sharing the upper space with the main reception that overlooks the courtyard and Medical/Health Station, the *Ovoid Node* is distinguished by a lantern quality and volumetric emphasis. Programmatically, it defines a semiprivate space for public breastfeeding and lactation instruction, the lower level cafe, and the service core. The *Ovoid Node* is a tapered egg-shaped form which penetrates the two storey volume. It could be potentially made of glazing that is rimmed with horizontal bands of plywood fixed to aluminum supports. The strategy of the semi-open screen is to separate areas simply, without acting as a forceful barrier.

The *Ovoid* volume pulls up and away from the main floor plate, creating a void to the north and thus maximizing the effect of light. This break – the void – is likened to that of a fetus which foretells its growth and proclaims itself by twisting outward from the pelvis. Another reading also presents itself: the horizontal and vertical distribution of materials and structure can be viewed as continuous, or entities in themselves. The compositional diagonal vocation of the stairwell implies a spatial rotation, an *interval*. Light neither passively nor silently rests upon this object. Rather, it breaks through and fragments, entering deeply into the horizontal slits. The rimmed panels of the *Ovoid* stop short of the ground floor: the skin recedes to glazing, permitting transition, visually and physically, to the outer courtyard. This move also aesthetically exhibits a sense of antigravity, a swelling object posed miraculously in a larger sea.

the || medical and health station

Located on the upper floor, a centrally placed medical and health station, specializing in maternal and child health, is flanked by the two footbridges and freely accessed from either end. As noted earlier, the programme anticipates a shift in health care services in which a team of diverse health specialists will work together in a collaborative community/regional facility. On this basis, the scheme proposes a space occupied by two health care specialists with separated offices, but shared reception/data entry area(s), examination rooms and storage space (medical and clerical). Its central location spatially overlaps with the *Ovoid Node*, integrating laboratory areas, the lactation instruction and breastfeeding area and the public reception/waiting area in a spiralling motion: the ensemble of a cell forever dividing, consolidating and traversing boundaries.

This is underscored by the way in which compositional tension and dissonance, intervening within an ordered system as emphasized by the examination cluster wall, are the necessary catalysts for eliciting a sense of transformational change. Thus, a force of vitality and energy is evoked when such devices superimpose each other, subdivide and join spatial fields creating design analogies and counterpoints. This compositional agitation gives

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rise to different volumes and, in particular, results in the creation of the nurse's double office volume that penetrates the floor plate, breaking free of the architectural language above. Subsequently, being poised in two realms simultaneously – upper medical and lower library – provides not only a physical connection to the two levels, but a thematic overlap. An effort is made to entice dialogue, insofar as knowledge of the body imparts a reciprocating will on the part of subject and governing physician. Considerable attention is also paid to compositional sequences whose geometries are linked together but nonetheless produce a surprising unexpectedness and variety. Thus, the interior is envisioned in the manner found in pregnancy when a woman is compelled by divisions and sensed conjoinings.

the || examination cluster

³Grace Hospital,
Calgary, Obstetrics
and Gynecology Dept.,
Dec. 1994.

The issue of privacy necessitates that each examination unit functions as an acoustically sealed container which is sensitively enhanced for human comfort.⁵ An undulating rhythm of solids placed within a curvilinear, translucent glazed wall is intended to create a dynamic, but systematic, dispersion of examination cubicles throughout. This modular arrangement can incorporate five cubicles. One possible arrangement includes: four areas for examination purposes, and one differentiated materially to highlight a separate function, possibly a small lab with medical storage. Seen spatially, this modular system produces small "blind" corridors which allow for a small semiprivate area to be defined. Such an area would be spatially capable of accommodating a computer terminal desk for entry of patient data and consultation. Entry into each cubicle is gained through a wide, double-hinged pivoting side door that offsets direct visual access in the cubicle. Capable of multiple movements, the door swings independently in lower and upper halves or fully rotates outward, closing off or revealing the data entry area. The cubicle itself is meant to function in two ways: the frontal half comprises of the main examination area while the end defines a small change area (wardrobe space and general storage for medical equipment/supplies). The use of different chromatic colours further emphasizes this duality: warm for the front and cool for the end. The rear portion of each cubicle extrudes slightly into the north circulation corridor, potentially providing nooks for public telephones and inciting a visual presence to passersby.

the || cradle

Functioning primarily as a transitional day space for child-care, rather than a "full-fledge" daycare, the design of the *Cradle* assumes that children are "dropped-off" while parents attend to their needs in the building. The sleeping hutch becomes an important architectural feature – a wall made of a translucent,

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curved facing which wraps the Northern, defined tiered sleeping platforms within. The *Cradle* is cantilevered from the eastern wall by a underlying system of steel cribbing. Not only is this area physically levitated above the gallery, but compositionally an effort is made to highlight the tension between the primary theme of sleeping and the role of play. The *sleeping* realm in the *Cradle* is fixed and somewhat limited, whereas the *realm of play* spills over into the handling of the orientation where upper and lower outdoor play-courts can be easily accessed. Play, thematically, speaks of an unlimited exploratory activity that takes place elsewhere, beyond. "To keep the spirit of childhood within oneself for the whole of one's life," says Aldo Tanchis, "means retaining the curiosity of knowing, the pleasure of understanding, the desire to communicate."⁶ Articulated by means of structuring and positioning – thrusting upward and outward towards the Reservoir valley – the *Cradle* is perched in both interior and exterior realms. The intention, thus anticipates that the children will partake in the activities housed within – the pool, gallery, lecture theatre, and so on – and the opportunities the site presents.

⁶Tanchis, "Bruno Munari: From Futurism to Post-industrial Design," +20.

t h e l e c t u r e t h e a t r e v i d e o a n d e l e c t r o n i c a r c h i v e s
i n t r e p r e t a t i v e l i b r a r y / g a l l e r y ||

Situated in the lower plan, the adjoining library, gallery, lecture theatre and archives are conceived as flowing, flexible spaces to be used for a variety of purposes, such as exhibitions. From a circulatory view, this open concept is based on the assumption that the public can freely traverse the space, enticed by the various programmatic offerings of the cafe, lecture theatre, archives, or the northern core wall which sectionally provides shelving for displays and books. The lecture theatre is, for the most part, a conjoined space linked by the continuous ramping floor and the compositional adjacencies of the archives and double-volume nurse's office. Sectionally, this clustering offers various stepped alignments which abstractly refer to the overlapping tendencies of the site, the prints, and the fetus and the mother: the double-volume office orientates itself vertically (sky), while the archives favour the horizontal (earth). Conversely, the lecture theatre, lifted on piles, straddles the two realms alike. There is a powerful sense of ambiguity between these spatial dispositions in that the qualities of the sky and land appear to be in conflict with each other, but also evoke a shared existence. Supplementing this fluctuating duality, the Video/Electronic Archives can be opened or self-contained by a translucent track wall.

t h e || p r e c a r i o u s s t r u c t u r i n g

The main structuring system, anchored by a pin joint connection located in the south, is composed of a tilting steel skeleton which folds over and wraps underneath itself. The final wrapping creates an inner shelf and a cantilever: a bulging *volumetric attenua-*

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tion which in one continuous fluid movement, encloses and defines a volumetric two-storey space. The cantilever edge condition defines spatially the library shelving area underneath and a circulation corridor above. Tectonically, this creates three possible architectural transfigurations: wall-as-roof, wall-as-floor, and wall as the definer of the volume itself. Yet its relative uniform expression does not systematically override other spatial predispositions. The continuity of this structural system is periodically disrupted by various programmatic elements or circulation devices.

Overall, the presence of the *Central Complex* is a swelling form which is meant to convey a sense of anticipation. Both enigmatic and direct, the *Central Complex* best reflects this quality through a formal tension created by juxtaposing the two convex profiles together (the north structural system and the north wall). Also explicit is the dual tectonic readings created by concave and convex gestures: the reading of an interior shaping differs from the outside, in that the concavity speaks of *embracing*, while the convexity *pushes* out. What one discovers from the multifaceted readings is that these architectural relationships are dynamic and subject to interpretation. Abstractly highlighted throughout this development is the persistent theme of the pregnant embodiment, especially the bodily and psychological tensions. "The birthing process", Young writes, "entails the extreme suspension of the bodily distinction between outer and inner...As the months pass and the weeks progress, increasingly I feel my insides, strained and pressed, and increasingly I feel the movement of a body inside me...Through pain and blood and water this *inside* emerges between my legs, for a short while both inside and outside of me...Later I look with wonder at my mushy middle, and at my child, amazed at this yowling, flailing thing, so completely different from me, was there inside, a part of me."⁷

⁷ Young, *The Pregnant Embodiment*, +49.

Structuring, in keeping with the ambiguity expressed above, is also exploited as a term to imply *transfer* or the delivery of *actions* and *reactions*. From the perimeter, glimpses into with the lower interpretative library/gallery and cafe are offered. The vertical spatial stacking conceptually descends upon the lower floor's underbelly, forming a loop, which is then channeled upward by the unfolding ramp. This leads to a particular attitude which suggests that the capacity for learning is approached on many levels, yet also defined specifically.

the || wall shields / unveils

A concave/convex wall is juxtaposed from the convexity of the main structuring system. The nature of this connection creates a condition, similar to the shaping of an hourglass, that never fully congeals: the two diverging wall surfaces come in close proximity to one another for a brief moment and then separate, as it were, repelling one another (meiosis). This configuration speaks of two surfaces which are distinctly separate yet singularly united as a

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spatial core. It can be equally viewed as a "domestic precinct," forming of kind of "fenced perimeter." Primarily, the wall maintains a sense of privacy within but it also acts as a continuous environmental shelter for winter winds. Once again, an effort is made to obscure various relationships and moods. From within the corridor, the mass of wall is atmospherically dematerialized by a spanning clerestory and two vertical entry splices, which allow the main circulation spine to be lit from above. The continuity of the edge is broken, allowing light (life) to enter *through the cracks*. In particular, the two-story vertical slits create an intentionally "framed" view of the site, not unlike that of a "cropped" medical scan.

In contrast, the southern wall plays with different intensities of built up screens and transparencies. The premise was to conceive of an adaptable system of layered screens and glazed panels – some operable, solid, frosted, serigraph, and clear – which respond to climate, privacy, and aesthetics. This layered screen system is potentially adaptive to a number of configurations, creating greater flexibility for interior conditions. Wooden screens consist of long, wide louvers placed within, or spanning across, the main structural system. This allows for a functional usage, such as the placement of shelving on the inside. Other combinations present themselves: different glazed surfaces can be placed on the inner or outer structural layer and over screens. Whatever the configuration, all panels will be immersed by bright southern sunlight creating a kaleidoscope of geometrical shadows and colours. Consequently, the amalgamation of interior and exterior surfaces will convey a dynamism that is in keeping with the intensities found in life and site patterns. Although abstract, the essence of the idea – *passage* – is understood.

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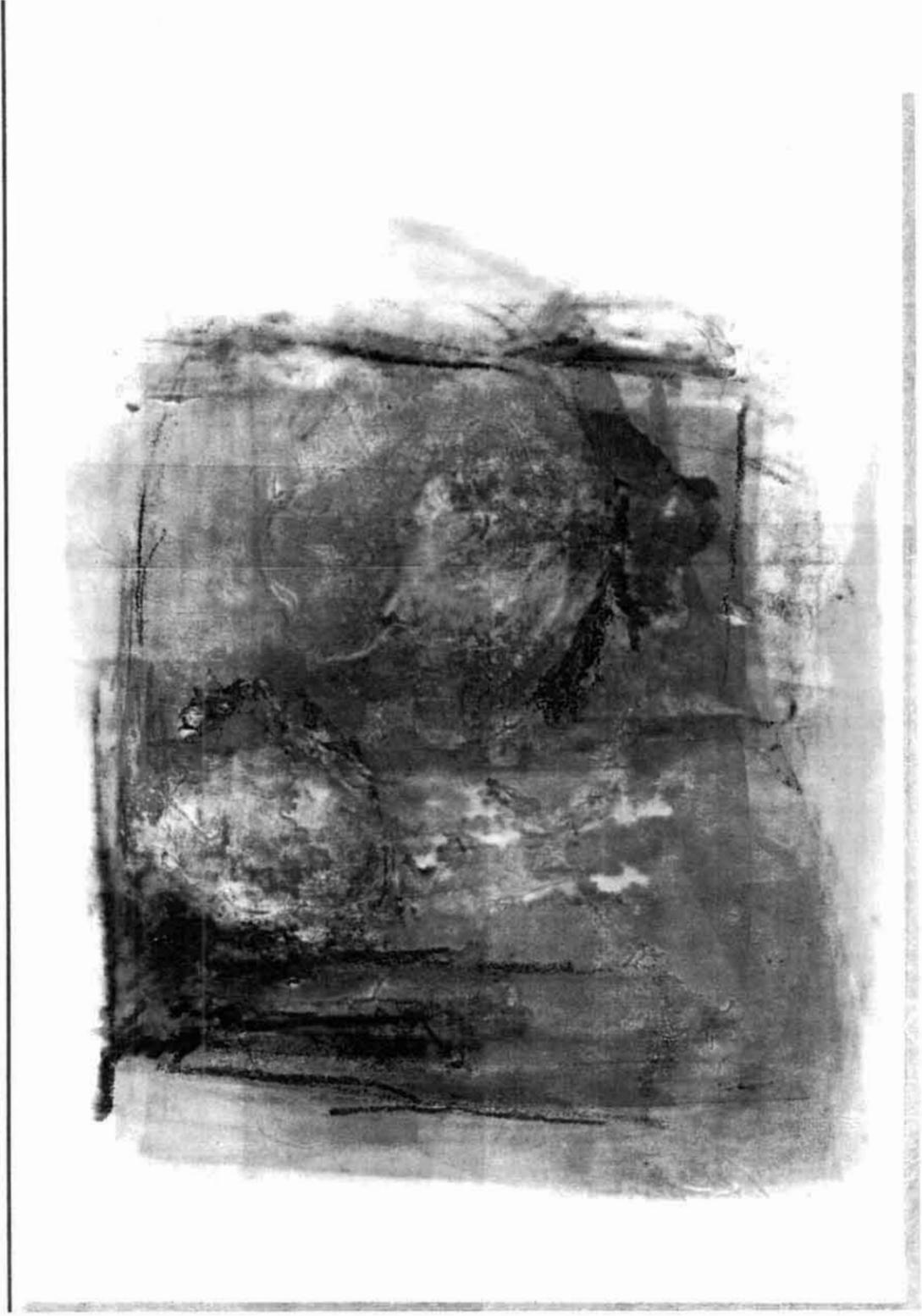


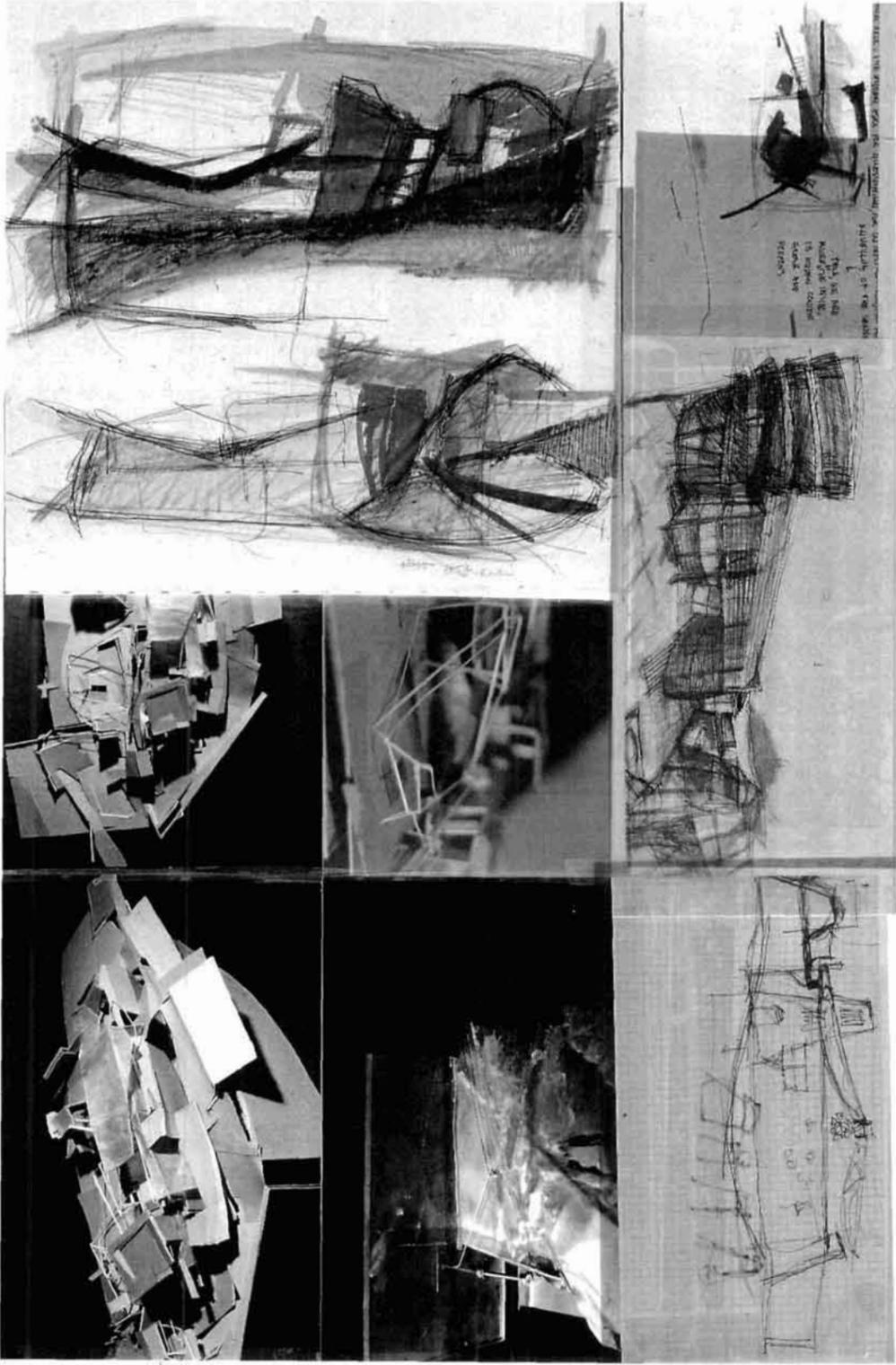
the PREGNANT
body

the pregnant passage in architecture
the architecture of the interval

the AQUATIC ANCHOR pool

while her pregnant body and mind may signal a set of opposing impressions on land, her entrance into water can be said to form an equilibrium.





The Great Goddess is found in all water: "the sea of heaven in which sail the barks of the gods of light, the circular, life-generating ocean above and below the earth. To her belong all waters, streams, fountains, ponds and springs, as well as the rain.

The moon was sometimes perceived as a male deity which impregnated both women and the earth. But gynocentric pantheism imagined the sky itself to be female, with the sun and the moon as her sons. The female sky is the fixed and enduring element, in a number of myths: Egyptian, Aztec, Vedic, Babylonian. The Great Mother, the female principle, was originally personified both in darkness and in the light, in the depths of the water and the heights of the sky.⁸

THE UNTIMELY BIRTH the aquatic anchor

⁸Erich Neumann, cited by Rich, *Of Women Born*, ++108-09; ⁹Whitehouse and Wilken, *The Making of Civilization*, 25; and Sissa, "Subtle Bodies", ++143-153; ¹⁰Duden, *The Woman Beneath*, ++160-170; ¹¹G. Rachel Levy, *Religious Concepts of the Stone Age*, cited by Rich, +108; ¹²Merleau-Ponty, *The Primary of Perception*, intro., n.p.

The Aquatic Anchor attempts to create a dialogue of theoretical underpinnings which imply that, in pregnancy, a woman feels "in her element." Such an effort will be complemented when the pregnant body is *conjoined* with the swelling body of water. Levitated from the confines of gravity, a pregnant woman bobs effortlessly in this watery domain (swimming pools), she is light (buoyant) but anchored. Articulated by means of architecture, two counter forces tend to forge a balance: this pool zone is embedded into the earthen surface, while, conversely the bow truss roof structurally hovers, floats above.

Socially and psychologically, there is also a connection. Public baths houses, pools, and exercise areas are the most enduring holistic facilities suggestive of a retreat from the burgeoning stresses of daily life. In the bath houses of ancient Greece and Rome, it was common practice to designate and enforce segregation of the sexes: women and children bathed in the morning, and men in the late afternoon. While the disjunction was aimed at preventing sexual exploitation of women (particularly virgins), it also *forged* strong social domestic relationships among women.⁹ These bath houses were the focus of religious and secular encounters in which the *individual* psyche could be *bathed* in the *communal* waters of tranquillity. Throughout much of the world, ancient beliefs about water are deeply rooted in the image of Mother and the biological and spiritual endowment that she brings to the world by bearing the "fruit of life", children. But, as noted by Duden, the *passage* of pregnancy was seen as precarious: a woman who could *bear* fruit could equally *spoil* it. The waters could "stagnate" and induce death.¹⁰ An equilibrium was conceived in the air of tensions: a *fate* tenuously strung. Spiritual forces were thought to successively converge, creating a spiralling union, when the birth of a healthy child emerged.¹¹

Particularly noteworthy today is the rise of post/prenatal aquatic exercise and massage programmes which are offered across Canada in community fitness centres. Aquatic exercise and therapeutic massage is yielding impressive results throughout

pregnancy and the postpartum period. As such water, is being recognized as an alternate form of therapy and it is beginning to be incorporated into some hospital maternity wards and birthing clinics in North America (whirlpools and hand-held showers are reported to ease a woman's pain in labour without impeding natural contractions).¹³ Whether structured by classes, such as aquatic aerobics, or self-initiated by a woman through swimming, some of the remarkable benefits of water exercise/therapy include improved flexibility, lessened body discomfort, and raised self esteem. Most explicit is the psychological sense of *conjoining*. A pregnant woman, when placed in a large body of water, shares this notion with her swollen body, but can be otherwise tempered by medical definitions or cannons of fashion which lead her to an opposite understanding, perhaps even self-alienation. Rather than focusing exclusively on the impending birth, water activities give cause to *celebrate* a woman's pregnancy. "In water", says Nancy Brakke, "a pregnant woman is in her element....She is relieved from the physicality of the weight *bearing* on her body."¹⁴ Aquatic exercise is one of the few fitness regimes where even a woman who in her pregnancy *will feel levitated, free, uninhibited*. Thus, while her pregnant body and mind may signal a set of opposing impressions on land, her entrance into water can be said to form an equilibrium. An equilibrium, a steady state, paradoxically conjoined with a body which has undergone noticeable change, a transformation. The equilibrium is thus achieved by the dynamic interchange of compressive and tensile elements. Such a situation is suggestive of a *metaphoric* cantilever in which displacement and unison are central to the expression.

¹³Globe and Mail "Midwifery takes it Place", A8; ¹⁴Nancy Brakke, Interview with Pre/Postnatal Instructor at the Eau Claire Y.M.C.A., December 1994.

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With aspirations to enhance the sensorial communicative aspects of domesticity, the Aquatic Anchor, through a countering envisioned experientially and compositionally, is differentiated from the more tenuous clinical and diagnostic functions. Caught between the thorough of examinations, the pregnant subject's transition into the holistic bodies – defined here by the pools and massage or exercise studios – involves a congealing in the architectural body that is likened to the "calm of the storm." Through this induction, the effects of one system, especially seen by the spatial fluctuations of the *Central Complex*, subsequently effect the development of an adjacent body. This leads to the distinct sectional character. As the two programmatic zones align physically in the east, the architecture is thrust into a state of flux, creating a transitional point articulated by the crescendo wave of the triangulated lobby which eventually lessens. This is also seen in the ebbing handling of the pool's roof and the site. The composition of the *Central Complex* is, thus broken by the lower-grade wedge which hinges off the main spine and is partially fed by the culminations of the main stairwell and ramp system that pass beneath. From this point, the change rooms, pool area, and massage and exercise/studios can be accessed. Throughout this zone, there is a common theme of two bodies conjoining. Evident in the overlap-

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ping eave condition of the two truss systems of the lobby and pool, this sense of counterbalance, overflows into the handling of structural crossovers. The result is the creation of a canopy in the upper mezzanine which is used for public viewing and which further reinforces a sense of layering and transition.

t h e || p o o l s

Viewed from a whole, the pool area elicits the idea of elements which are brought together, "sharing the enlightenment of their components," yet existing in the realm between the earth and the sky. Based upon this premise, the *Aquatic Anchor's* main space, the pool, has been interpreted accordingly. The dialogue between these conjoinings (as mass/water) is central to this search of making the form and idea work in unison, as implied *metaphorically* by the pregnant embodiment which is a poetic construct of an spatial "in-between" or "dislocation," existing simultaneous of floating and earth-bound. Expressing this intention through architectural tectonics, the roof is spanned by steel bow trusses, raked upward creating a generous clerestory and reinforcing a material dislocation. Thus, the roof thus leaves a pause around it, a lit perimeter. It *emanates*, as in keeping with expressive qualities of the pool below. The roof, in one sense, displaces itself from the confines of the space, thrusting outward and beyond the structural line to form a southern canopy screen which extends into an outer courtyard. At the same time, however, being comprised of one large singular configuration, it unifies the space. This unity is meant to be dynamic, expressed by the roof's upward tilt and bowed inflection, creating a slightly curved underbelly. What is intended to emerge, in keeping to the theme of the ambiguous pregnant embodiment, as it was revealed in the earlier site sketches and prints which contain shapes suspended in fields of colour yet grounded by the reading of the whole (their composition). Similarly, this is also displayed in the east masonry wall whose full physical attachment to the roof is interrupted by the rim of clerestory. In so doing, this alters the reading "wall" to one of "plane."

The configuration of the main pool area is structured by simple material layering which integrates with the landscape. This can also be reinforced materially by the earthy tones of masonry and wood roof decking under the contrast of steel trusses, and dematerialized by the generous glazing conditions. The masonry wall and pool basin are rooted to the earth. Retaining the soil above, a gradually tapering wall extends beyond the pool structure to form a protective garden wall, creating a sense of enclosure. The pool is formed by two aquatic bodies: a training pool with a hydraulic floor which raises from 0-2 meters to accommodate infants or adult aquatic activities, and a 25m lap pool. Cast between is a terracing, spiral ramp system which connects the training and lap pool and also provides handicap access. The ramp forms a transitional space between the two pools. Into its spiralling mass, the circulatory flows of water and concrete intertwine, are redirected, conjoined, and drained. Neither solid nor fluid, the ramp metaphorically pays homage to the *Mudflats*.

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The pool's upper floor is molded to form a slight basin, causing any displaced water to return. This form elicits circulatory passing: we descend, wade, plunge, and return. This enveloping movement pays homage to a whirling site activity which incites a transitory nature: people come and go, move up, down and through. This leads to a particular attitude towards the sectional quality of the floor (undulating) and the tenuous conjoinings of the roof, meeting at skylight condition and aligning parallel to the spiral ramp. Access and egress to the pool are made from two nodes. The primary node connects the adjacent amenity core (change rooms) and lower viewing areas – with the pool. And the secondary concrete berme, upon which the southern glazing anchors into, leads to an outdoor courtyard (potentially used for sunbathing). Other forms of transition, however, are more subtle and ephemeral. For instance, the entire southern glazing may be opened up, to accommodate for natural ventilation. Doing so would transform this area into an outdoor pool condition in the summer. The facade, fluctuating with the seasonal vagaries, becomes a "skin" temporarily displaced.

the || m a s s a g e a n d e x e r c i s e s t u d i o s

Separated by a core that defines the lower change rooms and upper massage area, the two exercise studios are suggestive of a variety of symbiotic conditions and elicit a reciprocating process. Consisting of double volume space, stacked partially at the south end of the health and fitness offices, the classes are observed by the trainers along an open balcony. Simultaneously by virtue of proximity and timing, this dialogue can be reversed – views cast upward or downward overlap. This theme is repeated in the upper massage rooms, which project into one of the studios, enticing prospective clients weary from their workout, through these posturing forms. Likewise, the conceptual composite building of surfaces exhibits overlapping tendencies. The notion of a layered skin endowed with a life of its own – an independent structure – is reflected sectionally, but also explored throughout the overall design strategy. For instance, here the roof swells, descends, and then levels in reaction to an external entry condition. No longer steeped in former traditions where the surface is merely an environmental shield, the emphasis here has shifted to the surface which *appeals* to the senses: the overlaying of external wooden screens on top of skylights that, spilling onto a solid roof surface, fluctuate between a primary and secondary skin condition. In other instances, the wall filters and screens light, and acting as the *maker* of shadows: silkscreen panels, louvers, and frosted surfaces obscure vision but allow light to pass. This diffusion creates a dynamic interior mood, but one that also defines optimum diffused lighting conditions for studio exercise instruction and performance. In keeping with the attempts to embody principles of a pregnant skin, the layered facade acts as a transitional filter between the site and the internal programmes and can be vitreous in nature (thus somewhat participatory), while still remaining autonomous. The facade, in this way, is experienced as something which has depth and enters into a dialogue with any ingrained *layered* experience of *building* and *perception*.

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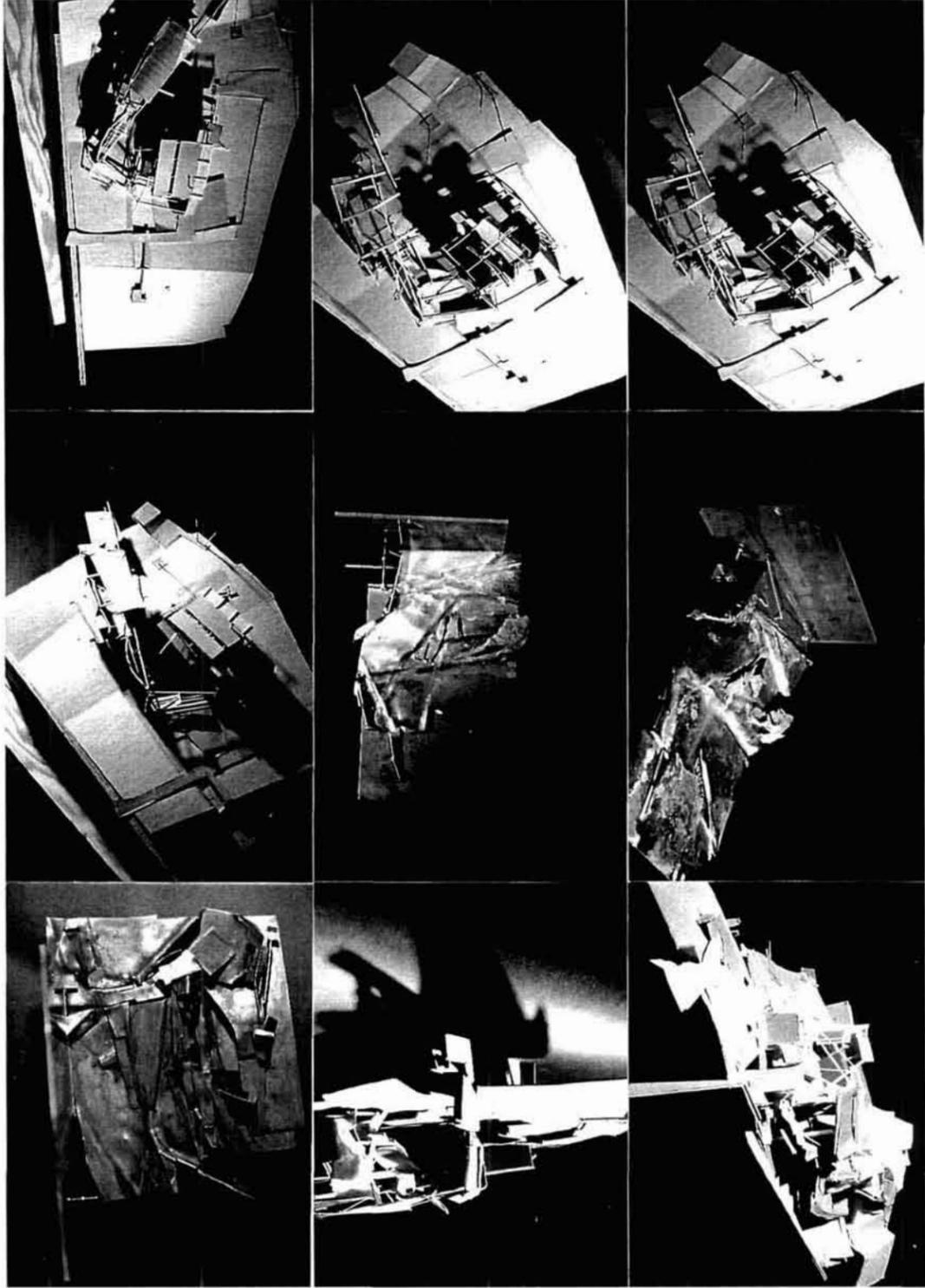
the PREGNANT
body

the pregnant passage in architecture
the architecture of the interval

the PAVILION spiral

a synthesis and a *dislocation* of form and space imply a gestation, a spiralling life force...one side marks the domain of the unborn, the other of the born.





Today I am having my amniocentesis and I have never been so scared in my life.

...I survived my amniocentesis, though I won't pretend it was painless...we watched the baby move around for a while before invading its space with that seven-inch needle. For the first time I felt *fiercely* protective, like a mother with her cub. He (doctor) put the needle in without numbing the area, which really hurt...I proceeded to dig a hole in Caresse's hand with my nails while the doctor withdrew the amniotic fluid. Instead of bumping into the needle, which was what I feared, the baby *instinctively* moved away from it and raised its hands into two little fists to hide its face. For some reason this gave me relief. When the procedure was finished we tried to determine the baby's sex by moving the camera between its legs, but it showed its complete and utter annoyance with this intrusion by turning away from the camera and refusing to give up any information.¹⁵

THE UNTIMELY BIRTH the pavilion

¹⁵Madonna, "Madonna's Private Diaries," on location in London filming *Evita*, +230;
¹⁶Duden, *The Woman Beneath the Skin*, +15.

The siting and architectural expression of the *Pavilion* – defining the ultrasound/diagnostic chamber, baby-well clinic/lab – is the outgrowth on the primary ramping bridge which partially grew out of a personal expression of landscape. This theme begins with the understanding of sonographic scans as kinds of digitized landscapes which overlay readings on the pregnant body. By accepting that fetal vitalizations have a considerable visual and psychological impact on the perceived construction of pregnant body – a "window" looking into the embryonic world – it seems appropriate that the *Pavilion* assumes a sensitive architectural positing. Biotechnological images or the recording of an infant's weight seem to offer an answer to a woman's concern: largely verifying whether her baby is healthy. Both activities speak of charting. Yet, these recordings are only markers along a path and *not the path itself*.

Early stages of pregnancy and motherhood are often wrought with anxiety and stress. These feelings are often difficult to empathize with if one does not understand the subject's viewpoint. Is it not enough that a woman feels emotional stress about the uncertainties of the pregnancy and motherhood, whether worried about her unborn/newborn's development or in angst by an unwanted pregnancy, that she must also endure further alienation in a medical setting which is usually structured to subordinate? Yet, concerns about the exploitative potential of reproductive biotechnologies is varied. For many women, when these procedures are delivered with sensitivity, they offer some amount of comfort in knowing that their baby is moving and breathing. Madonna found her anxiety quelled when her sonographic scan displayed her fetus exhibiting basic human survival maneuvers: demonstrating a will to live by instinctively retreating and recoiling from the advances of the amniocentesis needle. Nonetheless, feelings of "medical alienation" still persist among many women. Thus design strategies which lessen their effects need to be more greatly substantiated. As such, some design considerations were considered fundamental.

It seems to me that the motifs and images of the body unfold into two kinds of time, a historical and transhistorical time, and the body, especially at work – when labouring and suffering – is a bridge between these two realms of time.¹⁶

The *Pavilion* emphasis of a domestic character in its volume, use of a warm colour pallet and placement above a reflective pool that overlooks the river valley visually reinforce "well-being," comfort, intimate and personalized care, and the provision of a direct and fluid circulatory path to the ultrasound and *Baby-well Clinic*.

The *Pavillon* is not meant to be viewed as a container of space – a "womb" housing *Sonographic* labs and *Baby-well* clinic – but as an interpretative path bridging and congealing landscapes (bodily and natural). The *Central Complex*, then, is a counterpoint in the design where the *Pavillon's* circulation – a ramping bridge – passes over. The *Pavillon* is both a bridge, providing primary access from the escarpment into the *Central Complex*, and a space which is programmatically and spatially interwoven. Structured independently from the *Central Complex*, for instance, its bridge spans from the escarpment wall to a series of concrete piers onto which the *Baby-well Clinic* is cantilevered. The *Baby-well Clinic* comprises a very simple elongated open space where, underneath a small lab resides. By being raised from the ground, the *Pavillon* is detached from direct contact and thus reinforces a more internalized experience. In pregnancy, a woman can be said to walk through her own interior. She sees herself both as the sublime characterization of "self-reflection" and as the composite reflections that other forces operating in society and technology superimpose.

Here again, in spirit of profiling the comments above, the reading and structuring of the *Pavillon* works on many levels at once. The network of spaces, conceived through the process of design, brings about both a *synthesis* and a *dislocation* both formally and spatially, implying a kind of gestation or a spiralling life force. These qualities are most evident at intersecting situations where changes result: the path bends and splits, turning into stairs or develops into major programmatic elements. Viewed from the outside, the *Pavillon* encloses the West courtyard. Seen another way, its South terminus undergoes a kind of *metosis* by splitting in two and leading to the distinction of the core functions. Furthermore, the *Pavillon* ideologically infers a social issue. *In vitro* visualizations and the *Baby-well Clinic* services, managed by local health services, may well be the last publicly funded maternity vestige in an era touting notions of "privatization" of medical services and maternity care. This duality speaks of the current ambiguity of Canada's future universal health care status. This potentially introduces a partitioning of services which will alter established notions of maternity health care. This potentiality is reflected by the *Pavillon's* intentional physical dislocation and forking path. Such formal divisions are not meant to provoke differences in social classes, but to engage, perhaps anticipate, the problematic nature of belonging to a society undergoing the reconstruction of primary health care.

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the | ultrasound chamber

I really never suspected for a moment that I was pregnant... I was stunned when I saw on the ultrasound a tiny living creature spinning around in my womb. Tap-dancing, I think. Waving its tiny arms around and trying to suck its thumb. I could have sworn I heard it laughing. The pure and joyful laughter of a child. As if too say, "Ha-ha, I fooled you."¹⁷

The *Pavilion's* passage becomes an *interstice*, existing not only as a threshold between two spaces, but as the space itself. One side marks the domain of the *unborn*, the other of the *born*. Upon reaching the ultrasound chamber, the path funnels. Like the mouth of a river forming into a delta, it metaphorically drags and spreads water and silt into the basin (the outer chamber). The pathway swirls, the mud thickens, the banks fold. Conveying a sense of spatial enfoldment, the vortex shows potential in engaging architectural spaces. This metaphor results in the two primary situations: a place for meeting/receiving and another for surveying/unveiling. The building materials also reinforce this dichotomy. The fortified-like ultrasound chamber is constructed of masonry, while the *Pavilion's* outermost skin is wrapped in translucent panels. There is a difference between darkness and light. A curving ochre wall directs entry into the dark chamber and subdivides the amenity core (changing booths and a washroom) apart from the sonographic chamber. For scanning purposes the chamber must be dark and private. Le Corbusier, in his *Poeme Electronique* for the Phillips Pavilion at the 1957 Expo in Brussels, describes dark boxes as *boites des miracles*: empty boxes soon filled with the expectations, hopes and wishes that the viewer constructs in an encounter. The sonographic chamber issues *une boîte des miracles* but also feelings of *resignation*.

In contrast to the opaque masonry core, the outer chamber displays an aureate glow and openness which conveys a sense of gathering or waiting. It is the amniotic fluid of sorts, distilling both light and circulation, yet displaying itself. Through light, this space announces a kind of *transformational* presence. Radiating both warmth and light, the outer chamber is meant to convey comfort, without a sense of confinement. Unlike the transparent glazing which permits unlimited visual access, the outer *Ultrasound Chamber* is screened. The facade is treated as a veil emitting the salient qualities of human skin: light filters through. Exterior shading devices and translucent glazing maintains a visual privacy that protects the space from onlookers. The viewer is constantly aware of the fluctuating qualities of the space. The facade's skin, stairs, and external columns become active elements, casting shadows within and reversing this quality by evening. Similar to a house, the *Ultrasound Chamber* selectively frames some views and permits natural air circulation: fenestrations looking towards the reflective pool and the elongated external trough direct attention outward. Other aspects, however, are less accessible: one folded wall plane defines a consultation room and the balcony condition of the roof-terrace office above, while its inward lean creates a visual sense of security below.

¹⁷Madonna, "Madonna's Private Diaries," on location in London filming *Evita*, +228.

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These composite perspectives permit the formulation of multiple readings throughout. Today, it is possible, with the use of teleconferencing and digital processing, that health specialists in remote locations such as the hospital can be linked, via the modem, to "on-line" ultrasound recordings. *The Pavilion* resides in a bucolic landscape which conjures up notions of retreat from urban culture, but this is illusionary. This site demarcates collisions – expectations and disappointments – arising from the unavoidable crossovers between biotechnologies, nature, and culture surface. Here, images are generated, documented and framed from scanning techniques which resonate out of a natural body (the pregnant body) and are subsequently overlaid by perceptions inscribed by culture. This transit of information, from the body to screen/image to perception, affirms that most basic biological terms we use to describe our own bodies are, indeed, *cultural constructions*. "Human society," writes de Beauvoir, "is never abandoned wholly to nature."¹⁸ Today, the pregnant body is reconstituted into electronic signals which can be projected into and accessed from any space or remote location, perhaps the home computer terminal in the future. However, in practice, electronic interfacing is largely devoid of direct personal contact. Human contact is required in life processes which kinder socialization.

¹⁸de Beauvoir, *The Second Sex*, +484; ¹⁹Duden, *The Woman Beneath the Skin*, +183.

The perceptual ambiguity often expressed by parturient women today is largely influenced by the reconstruction of the body through biotechnologies. Pregnancy, as such, can no longer be thought of solely as embodying the flesh and immediate form, rather the body is now the *medium*, the *interface* upon which the world can scrutinize. It must be pointed out that, our society, so concerned about the disclosure of private information, has no mercy in exploiting fetal imagery for political or commercial means. Nevertheless, these exposed landscapes beneath the skin speak of a trace, a residue of presences from which people in contemporary society understandably construct perceptions. For many women (and their families), their real-time ultrasound scan is a means of dispelling anxiety about their fetus's health. On speaking about women's health (transhistorically), Duden implies that the body is a vortex upon which "complaints, anxieties, and self-perception culminate." The body as conception shap(es) these "sufferings."¹⁹ These are the many layered pathways which introduce, into our behaviour, an opportunity to express and communicate feelings of ourselves (should there be an outlet or receiver to hear).

The indignation lies perhaps, not in the machine, but in the diminution of parenthood, that is intensified by the voluntary segregation of children (and fetus) from adults characterized by Western life-styles. The *dislocated Pavilion*, offers an image that perhaps reminds us that the boundaries and borders transgressed are elastic and that they can be realigned and readjusted to the social and cultural circumstances and spaces encountered.

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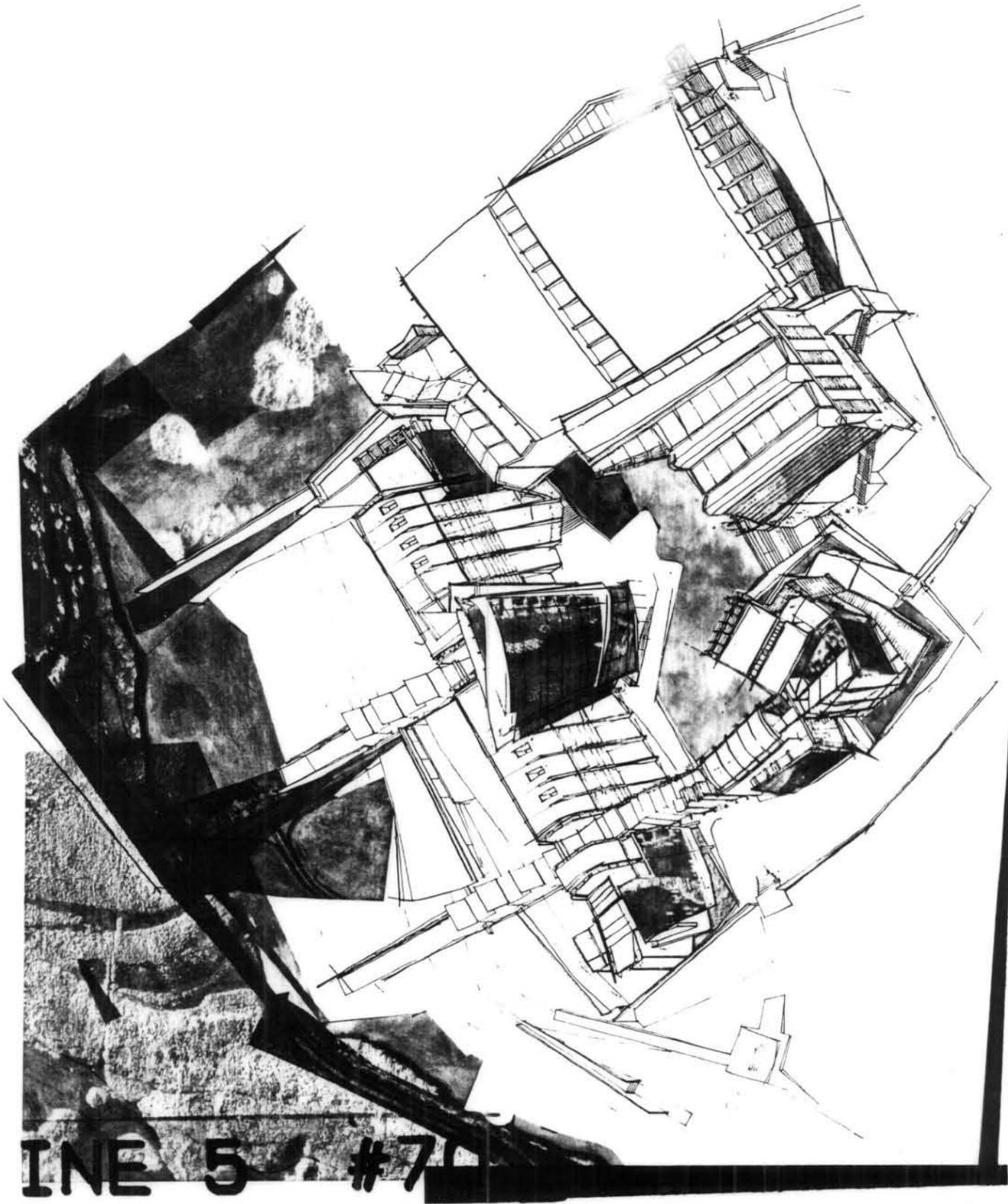
the pregnant passage in architecture
the architecture of the interval

the UNTIMELY BIRTH project

the severity of the overall design layout or typology is broken up by overlapping and extending programmatic elements, producing a compositional asymmetry—*legs and arms pushing into different directions.*

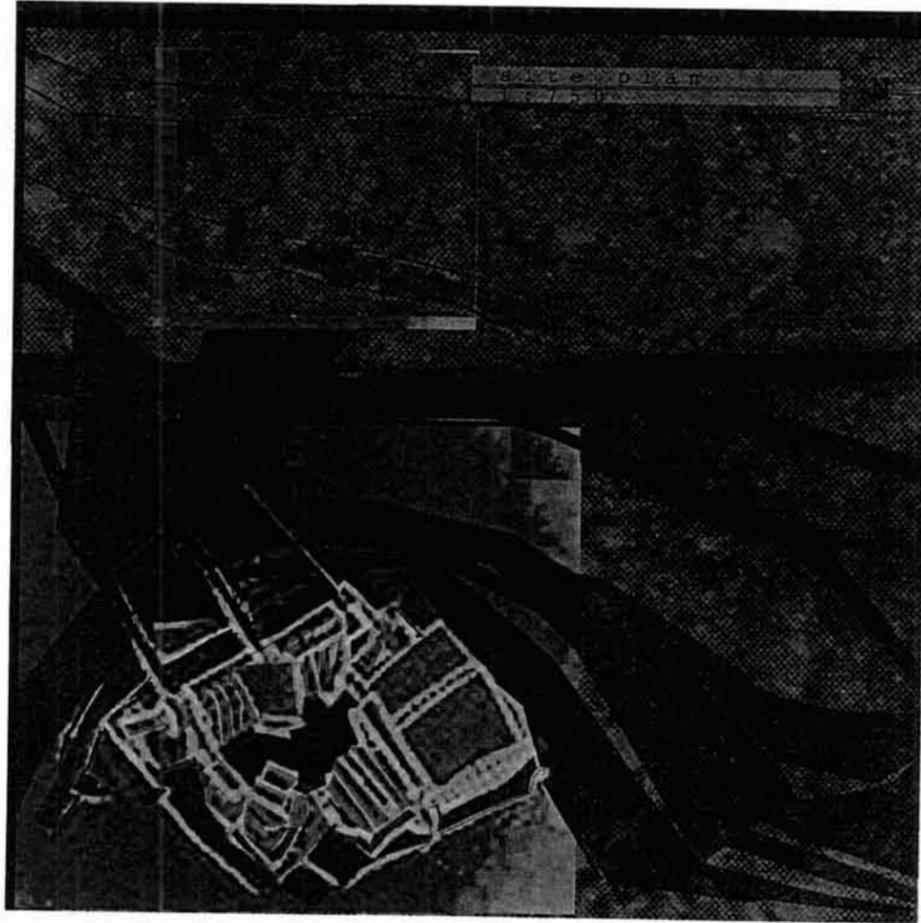


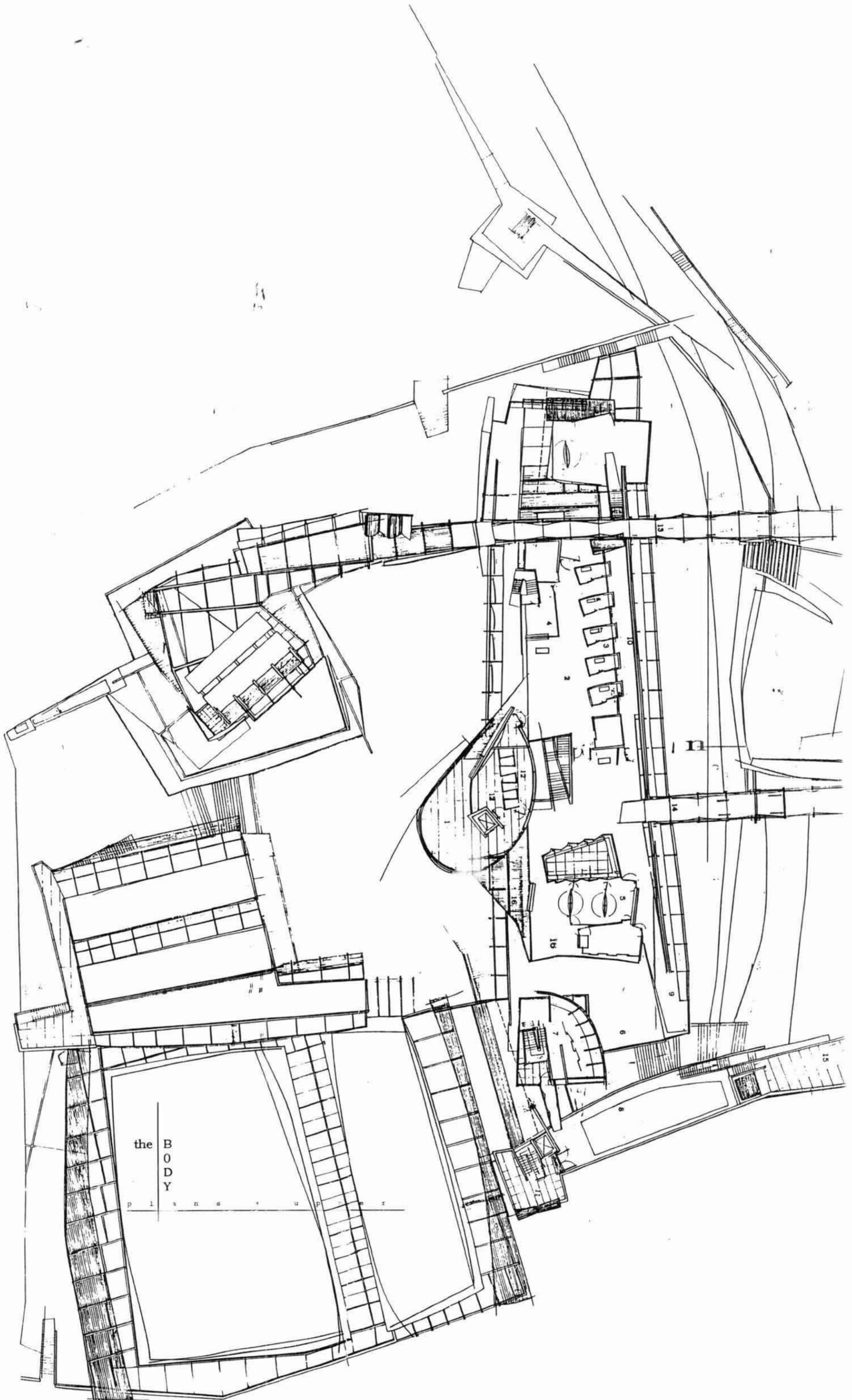
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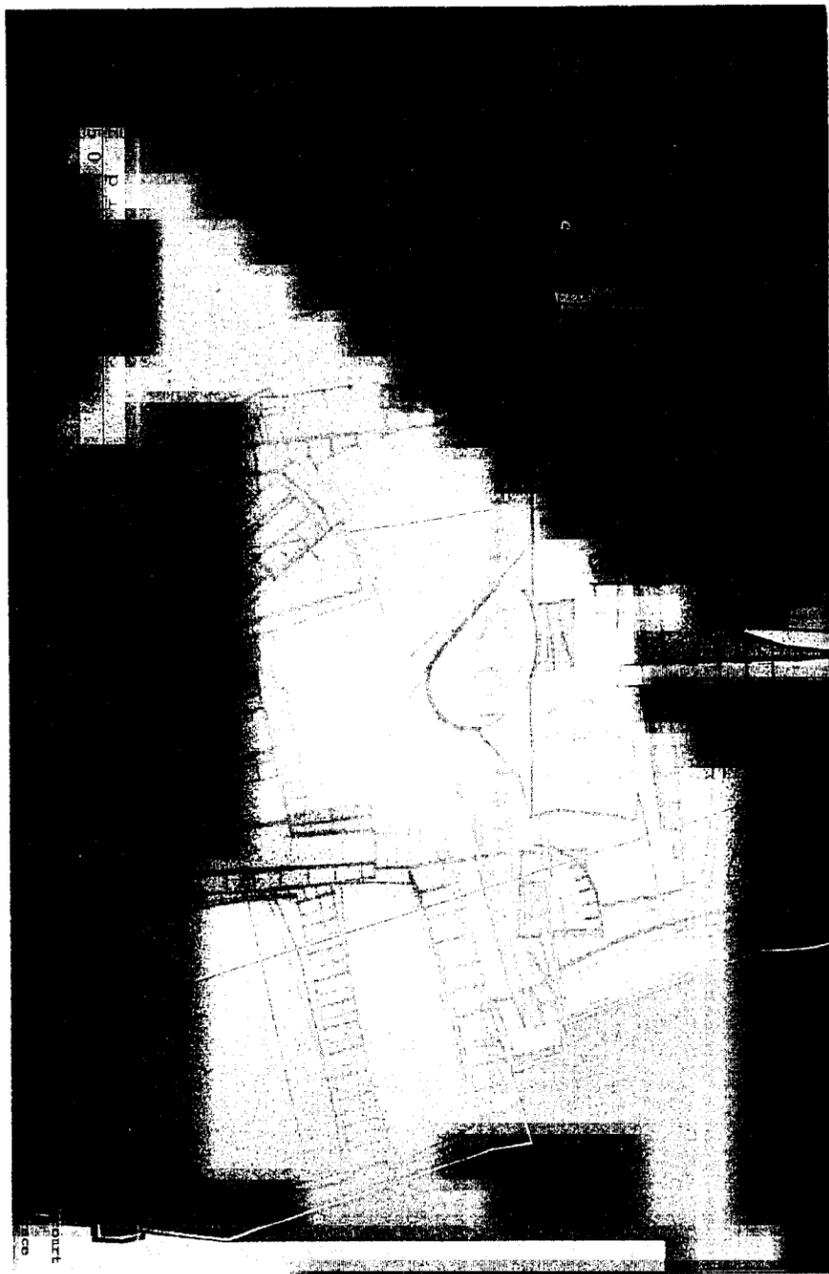
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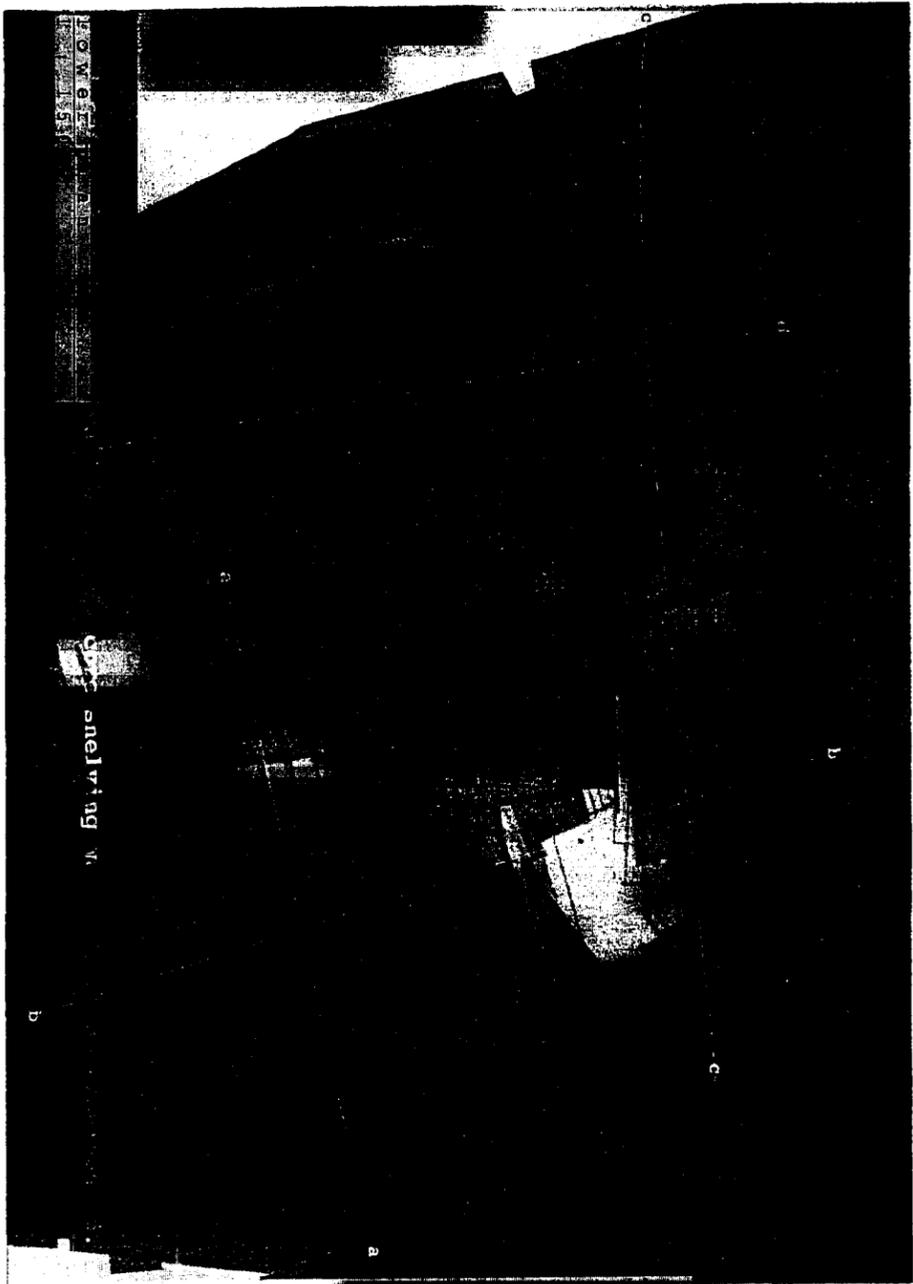


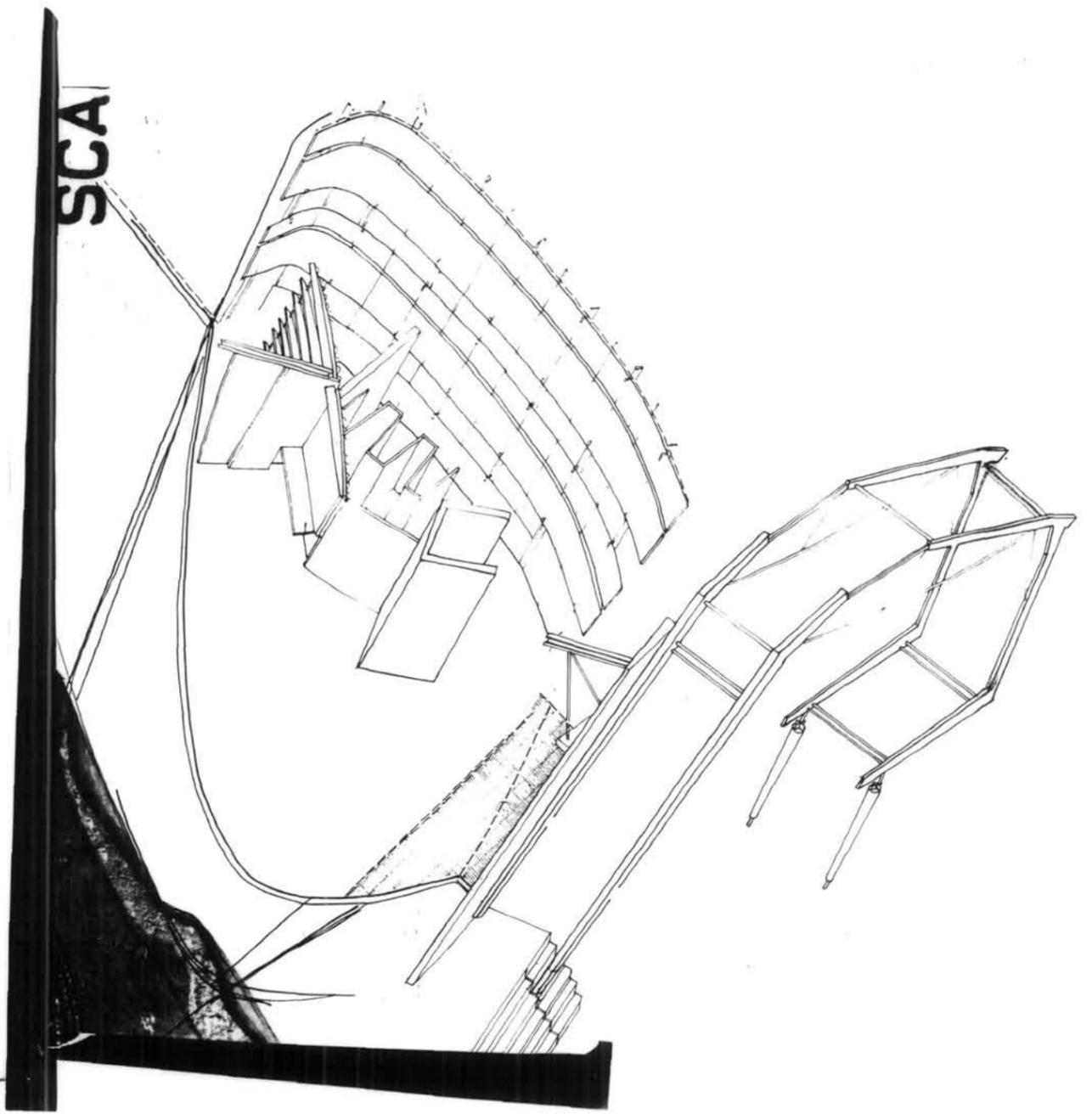
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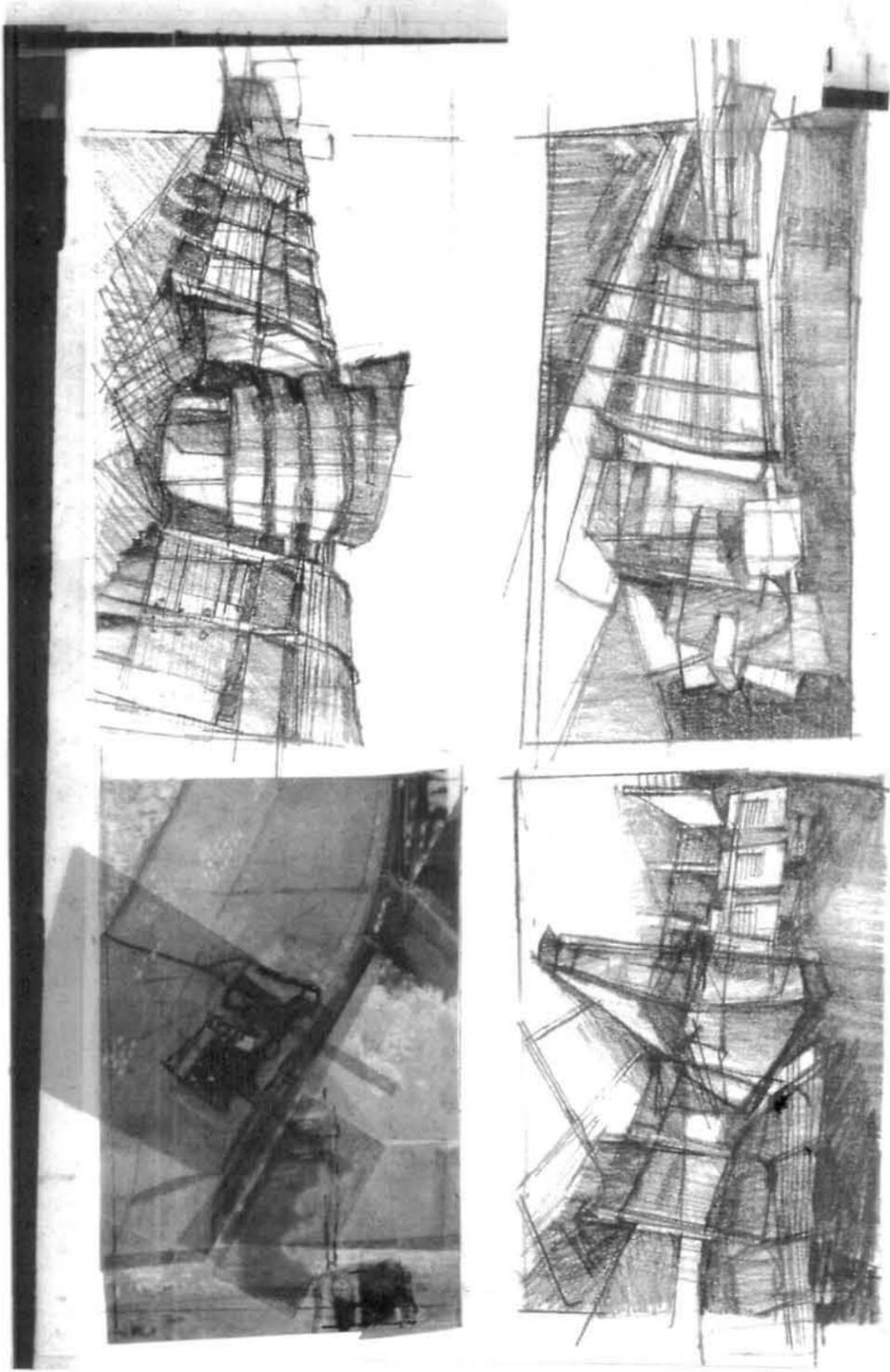






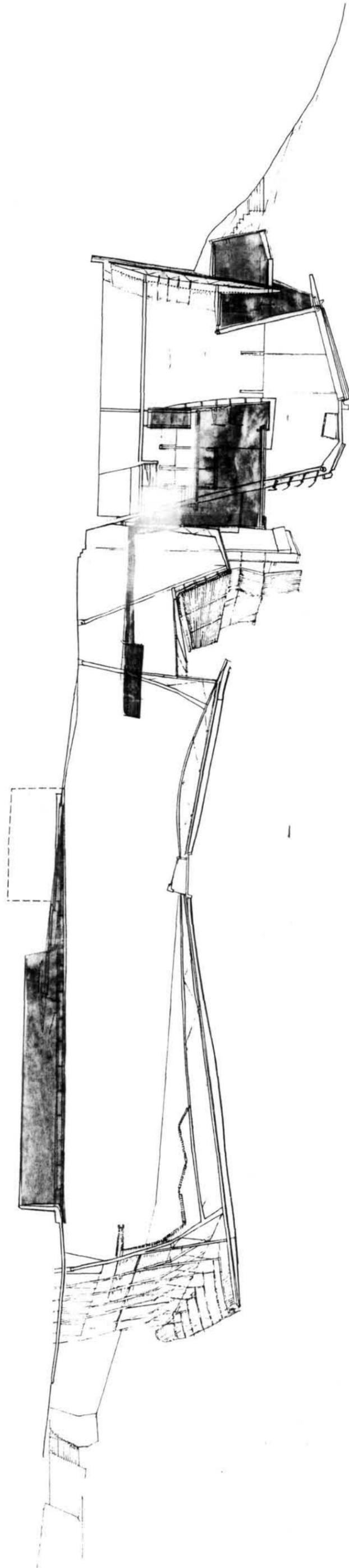
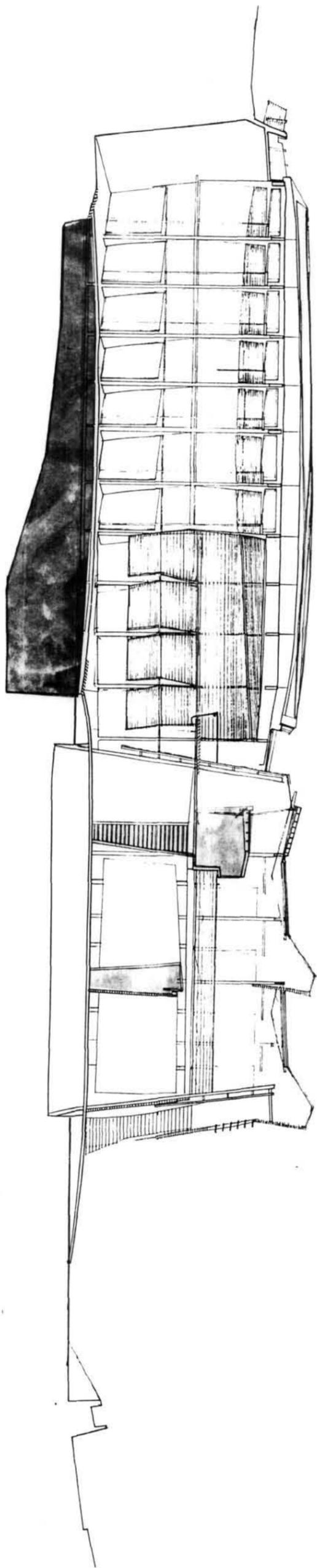
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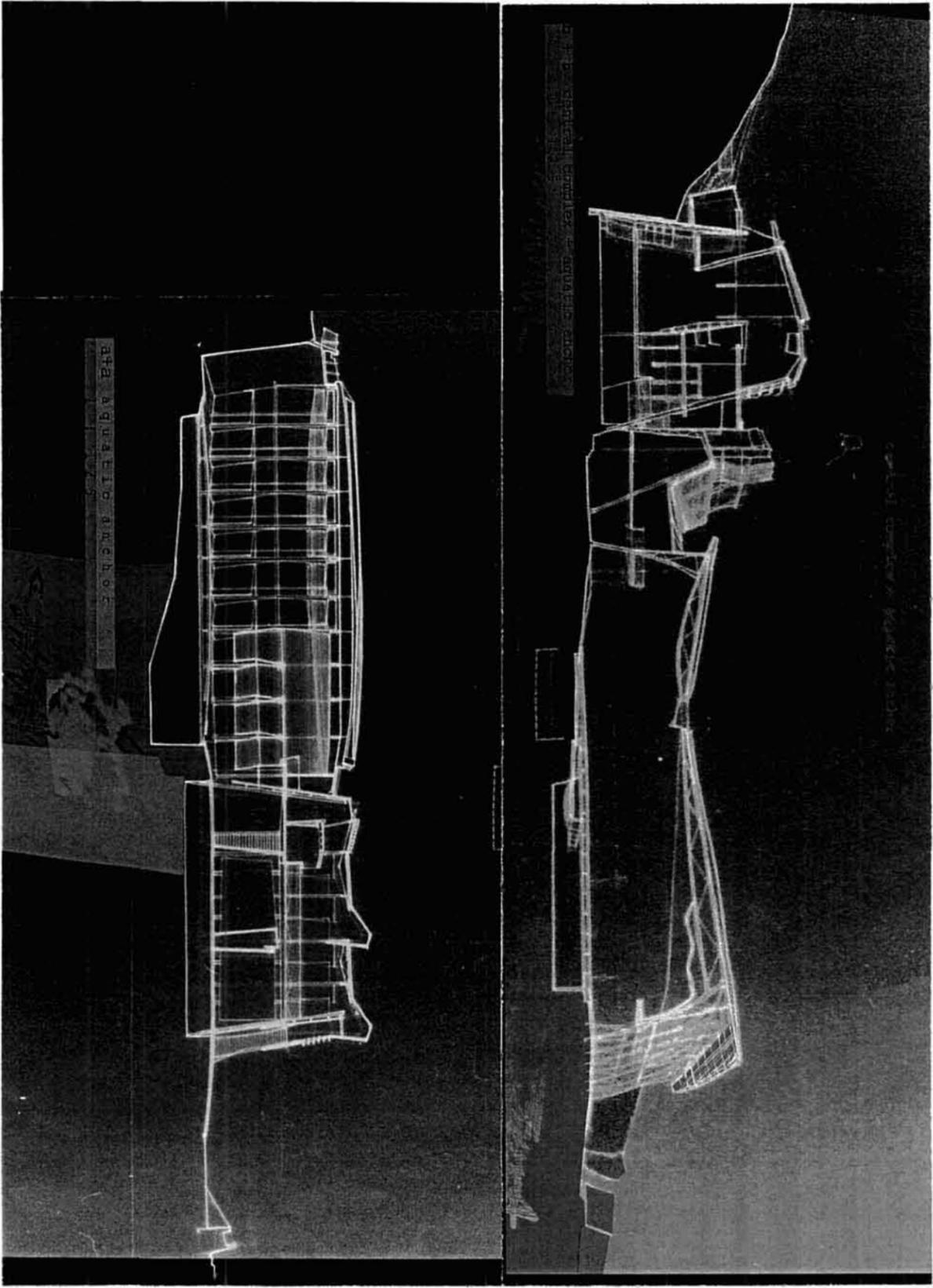
perspective + aerial site

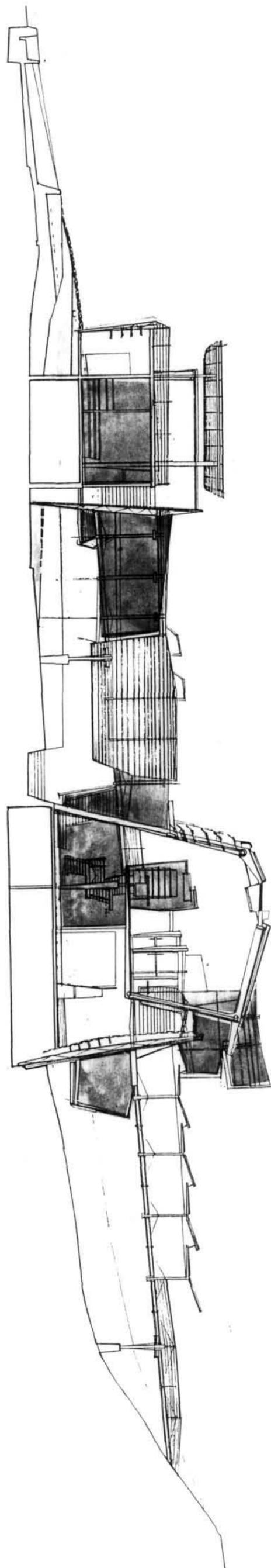
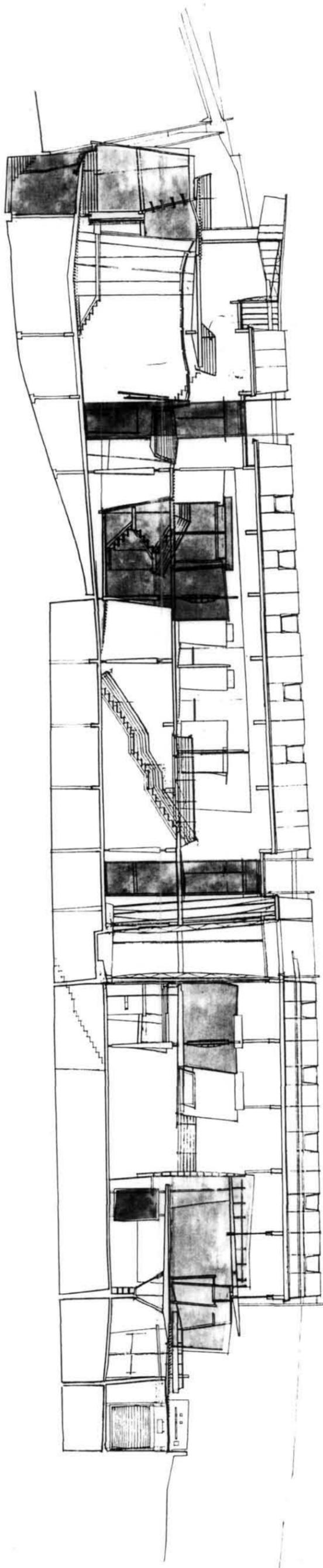


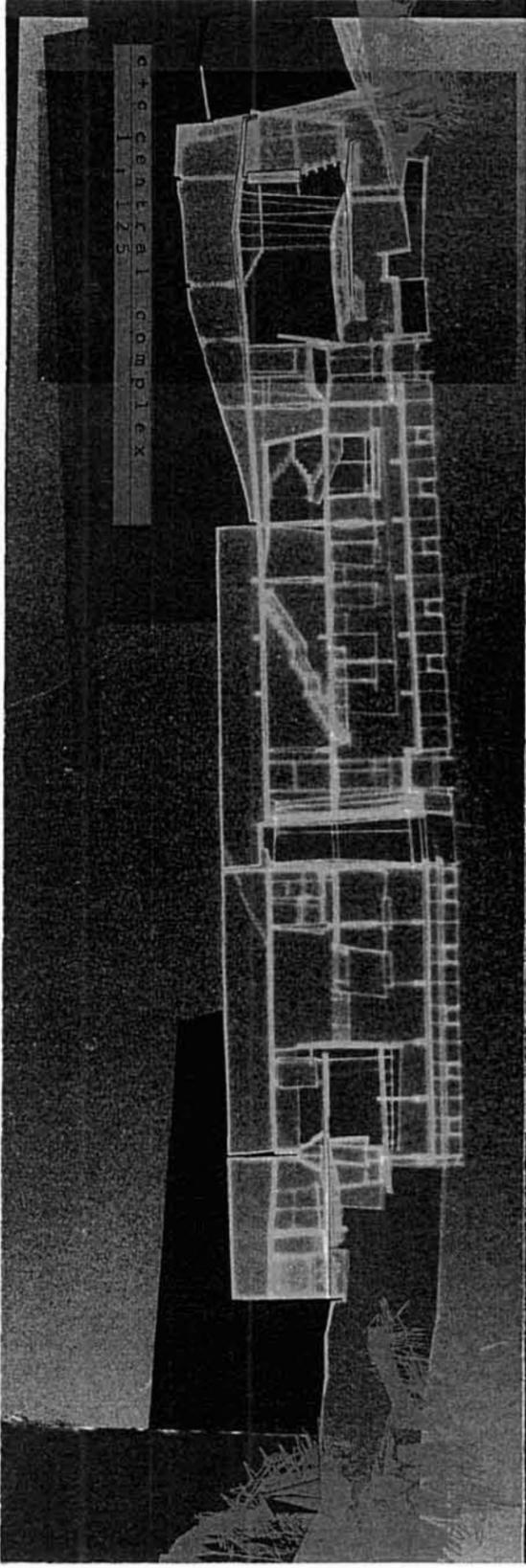
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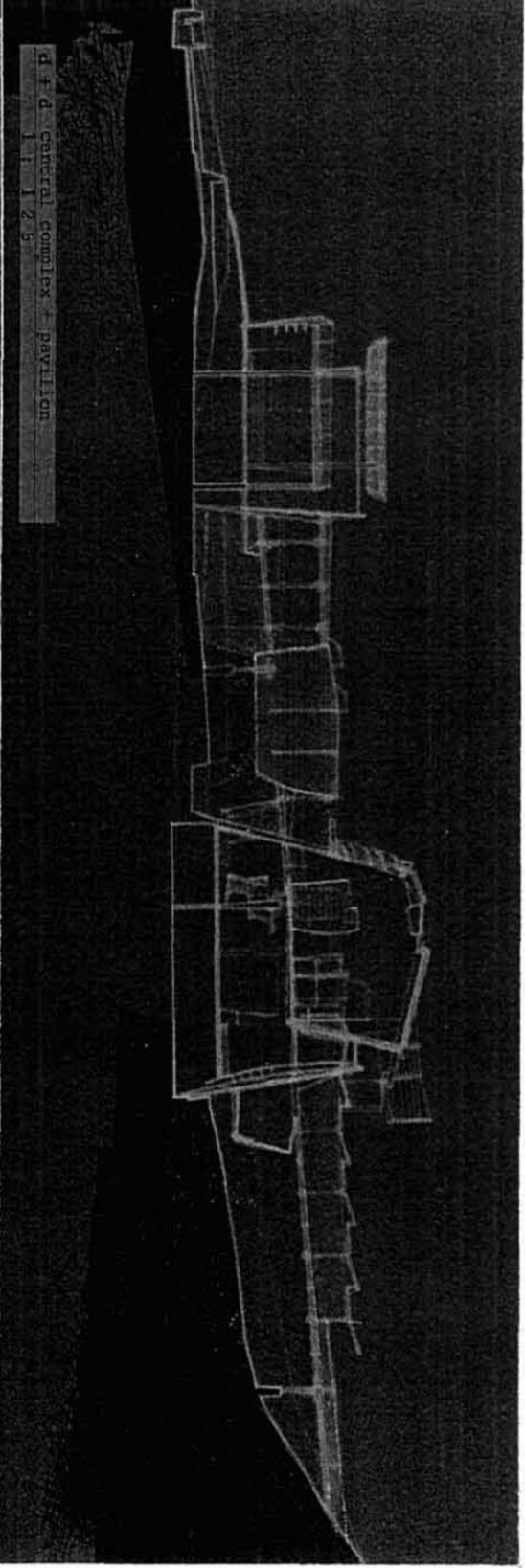








General Complex
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General Complex Pavilion
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POSTPARTUM the uncertain population

If we turn birth from a climatic personal experience into a personal disaster, it matters little that the result is more likely to be a live child. Women will not long continue to offer up their bodies and minds to such brutality, especially if there is no one at home to welcome the child, to praise the mother for her courage and to help her raise it. In fact peasant communities are more levelheaded and sceptical of us and our methods than we realize and they have resisted the intrusion of our chromium-plated technology more successfully than we think. They know that death attends to frequently in the traditional birthplace, but they also know that their are worse *fates* than death. Nevertheless, all that stops our technology from reaching every hut and hovel is poverty: the cultural hegemony of Western technology is total.

The voices of a few women raised in warning cannot be heard over the humming and throbbing of our machines, which is probably just as well, for if we succeed in crushing all the pride and dignity out of child bearing, the population explosion will take care of itself.¹

In March 1991 on route to Agra, I was first introduced to the overwhelming mass of human poverty from the protected vantage of a bus window near the outskirts of Delhi. Some itinerate Indians accompanying our travel, assured me that Delhi was the wellspring of Indian culture when judged in comparison to the festering slums of Calcutta or Bombay. Being a married Western woman travelling with my husband, I was given the standard warning to ward off any peasant woman carrying a child. This comment, though perplexing, I assumed was for reasons of petty theft since matters of security were faithfully doled out. Upon arriving in Agra our group was given final instructions to stay within a tight cluster formation. The perimeter was to be guarded by guides who would fend off the encroaching masses. As fate would have it the group was severed by a herd of garland embellished cows, loitering about for some local ceremony. Amidst their tightened hides and sagging udders appeared a pregnant woman who thrust a child upon me. A guide quickly scurried to my aid. The child was ousted from my hands back towards the woman whose actions were severely reprimanded with scornful clamour. As later revealed to me, her life was blighted by the ill-fate of bearing too many girls, one of whom she hoped a childless, married foreign woman would gladly welcome. The woman, who I mistakenly took to be roughly my age, was a weathered fifteen-year-old who had bore four children. How many other pregnancies she had passed I dare not ask. Her only solace, should she had succeeded, would have been a fair exchange. She was blessed by being a *fruitful* provider but cursed by poverty. In her mind, I on the other hand was blessed by the home that could provide a good dowry but seen as a woman *more* pitied than poverty itself: *childless*.

At the time I took her remarks to be no less than trite. An ignorant backward woman whose blind convictions did little to avert her from the world of poverty she inhabited. In all her immeasurable plight – the tragedy of the grinding poverty she ingested daily, the brutish tyranny of a culture which suffocated any empowerment she might have over her reproductive destiny, or might gain, through cultivating her mind – she *pitted* me! Over the many years that past, in travelling and living abroad in countries other than those technologically sophisticated, I have encountered a remarkably similar view of Westerners whose lives are for the most part quite literally viewed as selfish, antisocial and artificial. Life-styles to be *pitted*. Are we seen as illusionary as our digitized screens?

¹Greer, *Sex and Destiny*, ++29-30.

What we in the West have gained by our dominating markets and technological inventiveness must be equally measured against that which has been fractured; namely the intrinsic social dynamics grown from harvesting close and physical relationships embodied in our urban environment. Even the voice of a young Indian woman, wiser beyond her years, garners sufficient reasons to rethink the impact our *progress driven* philosophy has had on the *sacra* body and mind, the *sacra* family, the *sacra* space of domesticity in the broadest sense.

Empowerment to women and child-bearing families can be only achieved, in my mind, through self-education and dialogue exchanged between women and health specialists. Out of this dialogue arises the overlapping of design and theoretical concepts that may respond to a variety of issues and ongoing processes of modernization in maternity health. This thesis does not seek to find a formula for an architectural design process nor find an absolute resolution of the contemporary dilemma of maternity issues and parenthood, often ignored or forgotten in our society. Indeed, perpetuated in the design is an *open-endedness* and *unfinished* quality that is as much about discovering things along the way. It is an *accretive process* that while may anticipate the next stage, can never be understood as a conclusion reached. If anything, what has come out of this *passage* may have merit only to myself; a vision to balance the ideology of North American progress *with* empathy towards the body of humanity, as it were the **pregnant body**.



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