

INCORPORATING MOBILITY

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## abstract

The space of mobility is paradoxical; it provides fluid translation and exchange of persons, goods and information, yet forms a closed system of fixed interdependence. Mobility is largely the contemporary production of the space of determinate actions where absolute movement is based on absolute time and space relationships. Reminiscent are the writings of Walter Benjamin in regards to cinema and architecture consumed in a state of *distraction* mastered by *habit*; the mass participants have "produced a change in the mode of participation."<sup>1</sup> Lefebvre's argument in *The Production of Space* considers space as a product of *social* relationships. This relative space provides a way to formalize an understanding of an increasingly transparent and mobile environment in which space is never neutral, and considers means of resistance. In order to insert indeterminacy into space we could begin by considering the first means of resistance, 'movement' in the creation of differential space.

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<sup>1</sup> Walter Benjamin. Illuminations: Essays and Reflections Ed. Hanna Arendt Trans. Harry Zohn (New York: Harcourt Brace Jovanovich, 1968) 239.

*By your belief in singularities, in granular absolutes, you deny movement...[w]hen things change, your absolute universe vanishes, no longer accessible to your self-limiting perceptions. The universe has moved beyond you.*

*Frank Herbert*

*I would like to acknowledge my advisor Dr. Thomas Mical - how's are necessary, why's are fascinating... thanks MLC, there should always be movement in theory and practice, and "M" and "D".*

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## Introduction

The environment is an instrument of appropriation, it is participatory in that through this environment we not only orient but also reorient ourselves. Yet, in the space of mobility as a continuous condition, space becomes more readable as prescribed actions. In *The Production of Space*, Henri Lefebvre contests the notion of space as void and constructs an argument where space is constructed of social relationships, thereby refuting the notion of space as absolute. This thesis argues that mobility as the contemporary production of space often remains a fixed scene, and considers the role of the architect in the production of space through the incorporation of movement.

Architecture is a mirror of the body, a form of orientation... "Orienting begins with geography, but it reflects a need of the conscious, self-aware organism for a kind of transcendent orientation that asks not just where I am, but where do I fit in this landscape?"<sup>2</sup> Our bodies are extended in the contemporary space and become part of the space of mobility. In designing for mobility, architecture becomes subservient to a particular production of space: fluid, continuous, and transparent. This thesis considers liminal space through the primacy of movement in architecture and as a means of resisting the continuous space of mobility.

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<sup>2</sup> Stephen Hall "*I, Mercator*". Ed. *You Are Here*. Katherine Harmon. (New York, Princeton Architectural Press: 2004) 15.

## contemporary space relative space

"The society that molds all of its surroundings has developed a special technique for shaping its very territory, the solid ground of this collection of tasks. Urbanism is capitalism's seizure of the natural and human environment; developing logically into absolute domination,..."

Guy DeBord, *Society and the Spectacle*

Initially, it was the confrontation of an automated and mobile existence in the machine age, which exposed the need for change and flexibility in modern architecture. While certain modernist architects such as Le Corbusier, Buckminster Fuller and members of the Bauhaus sought flexibility in universal designs, other architects and philosophers such as the Situationists and the Frankfurt School considered the problem of flexibility as agency in absolute space. Architecture was driven to this inquiry only after figures of other disciplines; Kant, Lefebvre, Joyce, even Darwin had all embraced the idea of an existence based on change and relativity.

The introduction of World Standard Time would eventually revolutionize time as well as space through schedules, spatial maps organizing time, and simultaneity as 'the expansion of space' where more than one event is possible in the same location.<sup>3</sup> 'The

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<sup>3</sup> Stephen Kern, *The Culture of Time and Space 1880-1918*. (Cambridge, Massachusetts: Harvard University Press, 1983) 313.

first World War brought about several technological innovations including the telephone, wireless telegraph, x-ray, cinema, bicycle, automobile and air-plane.<sup>4</sup> These innovations along with production, industry, mass culture and standard time would eventually lead to our contemporary condition of displacement as part of a system of movements of bodies, goods and information.

In contemporary architectural theory the notion of *firmitas* is being challenged as a result of our increasing mobility, a contemporary space of mobility that is paradoxically fixed and determinate. To understand contemporary space is to consider the relativity of space. In *Questions on Space*, Bernard Tschumi queries the nature of space and asks: “[i]s space a material thing in which all material things are to be located? Is space an absolute?”<sup>5</sup> The Newtonian concept of absolute space as a pre-existing void, though challenged in its own time by Leibneiz’s relativity of space and Kant’s subjective space, remains a dominant concept of space to which even the Oxford English dictionary still ascribes. The awareness of space and its production emerged at the Bauhaus with a global concept of space that linked industrialization and urbanization and became rationally programmatic.<sup>6</sup> The modernists revolutionized space because they

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<sup>4</sup> Stephen Kern, The Culture of Time and Space 1880-1918. (Cambridge, Massachusetts: Harvard University Press, 1983) intro 1.

<sup>5</sup> Bernard Tschumi. Architecture and Disjunction. (Cambridge, Massachusetts: the MIT Press, 2001) 53.

interpreted it as formed by relationships a priori. Michel Foucault also contributes to questions of space and suggests in its relativity: "In other words, we do not live in a kind of void, inside of which we could place individuals and things...we live inside a set of relations..."<sup>7</sup> This view of space as referent becomes increasingly important as we become more involved in the design and control of our environments and in what Paul Virilio calls the *transparent horizon* of invisible boundaries.

"What used to be the boundary of a material, its 'terminus', has become an entryway hidden in the most imperceptible entity. From here on, the appearance of surfaces and superficies conceals a secret transparency, a thickness without thickness, a volume without volume, an imperceptible quantity."<sup>8</sup>

In *The Production of Space*, Henri Lefebvre refutes the notion of absolute space, as Leibniz did, and considers space as a product of social relationships. Lefebvre's examination allows for the ontology of space in critical theory to be considered where time and duration have remained central concerns. He sympathized with the Situationists in their inclination to challenge cultural boundaries of modern rationalist space. Situationists confronted the substitution of real experience and

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<sup>6</sup> Henri Lefebvre. *The Production of Space*. (Donald Nicholson-Smith. Malden, Ma: Blackwell, 1991) 124.

<sup>7</sup> Foucault, Michel. "Of Other Spaces," *Diacritics* 16 (Spring 1986), 23.

<sup>8</sup> Paul Virilio, "The Overexposed City", *Architecture Theory Since 1968*, ed. K. Michael Hays (Cambridge, Massachusetts: The MIT Press, 1998) 546.

advocated for a dynamic space of participation, an environment consciously recreated.<sup>9</sup> Whereas space contributed to fixing relationships, time, through lived experience provided the spontaneity of free will. For the Situationists, materializations of the space of modernity reinforced absolute conditions, an objective knowledge of space, by concretizing social, cultural and political relationships. The radical anti-architecture positions led away from questions of space to what they saw as the flexibility offered in investigations of time and duration.

Lefebvre attests to the inseparability of time from space, in which time as a relationship, forms a spatiality.<sup>10</sup> Generally, this discourse on the production of space continued predominately with the influence of Marxism in geography, with writings on social space by David Harvey and more currently Edward Soja. Spatial dialectic becomes a vehicle in understanding the production of '*non-places*' and '*transparent horizons*', and provides an argument in formalizing an understanding of our mobile ecology; the increasingly mobile relationships between bodies and their environments organized through systems of mobility.

The 'conceptual triad' of space and framework around which Lefebvre discusses *Spatial Practice, Representations of Space* and *Representational Spaces* is a means of

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<sup>9</sup> Constant and Guy De Bord: "Situationist definitions," ed. Ulrich Conrads Programs and Manifestos on 20<sup>th</sup>-century architecture. (Cambridge, Massachusetts: The MIT Press, 1999) 161.

understanding the increasingly abstract space of mobility where the body is extended and often removed. Emphasis is placed on the body as information and space as system of information. *Spatial practice* is that space we are born into in a society, a presupposition of space that aims at production, reproduction, and continuity, abstract and absolute. *Representations of space* are 'the dominant space in any society'<sup>11</sup>. It is the language of signs and codes of a conceptualized space, an order imposed by relations of production.<sup>12</sup> This includes gestures as body language shared by a society. *Representational spaces* are directly lived. These spaces have their own images and signs but it is a space that is described and does not aspire to do more than describe by its inhabitants who appropriate by imagination.<sup>13</sup> Each body, through experience, subjectively describes it.

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<sup>10</sup> Lefebvre, The Production of Space 175.

<sup>11</sup> Lefebvre, The Production of Space 38-39.

<sup>12</sup> Lefebvre, The Production of Space 33.

## the indeterminate event

The focus on event in architectural theory is attributed to investigations of the multiplicity of time, a term borrowed from Bergson and Deleuze to express indeterminacy. Influenced by Henri Bergson's philosophy of time and emphasis on 'becoming' and 'duration' as notion of change giving primacy to immanence over materialisation, Ignasi de Solà-Morales asks "[i]s it possible to think an architecture that is more of time than of space? An architecture whose objective would be not the ordering of dimensional extension but movement and duration?"<sup>14</sup> For Morales, architecture should be the production of an event, not as a question of producing 'ephemeral or fleeting architecture' but as a crossroad.<sup>15</sup> His interpretation of time is best understood in his definition of the term *limit*, as a place that "emerges at the very moment individual experience is made."<sup>16</sup> The term limit is spatial as it separates and forms boundary conditions. The limit is a relative space because the limit does not exist in isolation but rather as a condition. Morales's concern with 'moments' resides in the confrontation of foundation, memory and permanence through evasion of absolute or

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<sup>13</sup> Lefebvre, *The Production of Space* 39.

<sup>14</sup> Ignasi de Solà Morales, "Liquid Architecture," *Anyhow*, ed. Cynthia Davidson (Cambridge: The MIT Press, 1998) 36.

<sup>15</sup> Ignasi de Solà-Morales, "Place: Permanence or Production". *Differences* 104.

pre-established signification, "an experience stripped bare of references, disarmed in relation to the imitation of nature."<sup>17</sup> Essentially, it is in the flexibility between subject-object which Morales questions the absolute *relationships*. De Solà Morales emphasizes time because he suggests that the material of architecture should be fluid and of permanent fluctuations, in an experience of indeterminacy. Though he writes about experience and moment he is referencing a synesthetic and yet embodied experience:

"Finally, the event is grasping, the action of a subject who, within the chaotic flux of events, arrests those moments that most attract or impel, in order to hold on to them. It is a subjective action, producing a moment of pleasure and fragile plenitude. Although the event is always something that takes place in a global disorder devoid of meaning, this happy moment – at times accidental, at times the result of a willing intellect – constitutes an outstanding instant in a constant flux, a harmonious, polyphonic chord in a situation of permanent transition."<sup>18</sup>

The primacy of space is considered problematic because it is not dynamic, while time inscribed in 'movement' is, for an argument that aims to recover the dynamics of the body. Though Kwinter remains sceptical of the 'object,' in this case he speaks of the materiality of architecture, he inserts the following question into his dialogue; "[w]hat is an object's relation to the space immediately surrounding?"<sup>19</sup> Collectively the built

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<sup>16</sup> Ignasi de Solà-Morales, "Difference and Limit". Differences 114.

<sup>17</sup> Morales, Place: Permanence or Production 103.

<sup>18</sup> Inasi de Solà Morales, "Weak Architecture," trans. Graham Thompson. Differences: Topographies of Contemporary Architecture, ed. Sarah Whiting (Cambridge: The MIT Press, 1997) 102.

environment is a set of objects that order space. Kwinter then proceeds that "...it must not be forgotten that within every concrete architecture is embedded an abstract institutional "machine"...it is impossible not to consider architecture in an expanded sense as a technical object, ..."20 He is describing concrete architecture as the object and spatial device, and particularly in this case, as a potential control mechanism. For both Kwinter and Morales, while absolute relationships fix space, flexible relationships evade fixity and therefore produce a space defined in duration.

Likewise, the great distinction between Bergson's Becoming and Being for Sandford Kwinter, rests on his definition of the "event" as the dynamic potential for indeterminacy, acquired through time and movement.

"To approach the problem of "the new," then, one must complete the following four requirements: redefine the traditional concept of the object; reintroduce and radicalize the theory of time; conceive of "movement" as a first principle and not merely a special, dismissible case; and embed these latter three within an all-encompassing theory and politics of the "event"... "21

As a third example, is Bernard Tschumi's use of the term event, which he concedes influence by the Situationist discourse and by the May events of 1968, *Les*

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<sup>19</sup> Kwinter 11.

<sup>20</sup> Kwinter 12.

<sup>21</sup> Sandford Kwinter, Architectures of Time: Toward a Theory of the Event in Modernist Culture (Cambridge: The MIT Press, 2001) 11.

*événements*.<sup>22</sup> He defines 'event', as a *turning point*, subversion of what is and as a possibility for new experience. Opposing the notion that form follows function, combined with space and movement, event provides the possibility of different settings, a 'disparate multiplicity'<sup>23</sup>. The event is the difference between the social spaces that exist and controlled actions versus the potential for new actions, which is described in Tschumi's architecture of the Pyramid and the Labyrinth. The Pyramid is architecture as dematerialized concepts of the mind, and the Labyrinth, the experience of space. When Tschumi uses the word dematerialization of architecture in regards to the Pyramid he references directional movement of architecture towards a framework of the determinate and prescriptive. Dematerialization for his purpose is explained as something quite formal and fixed, whereas the Labyrinth retains subjective aspects, 'unfolding against reason', it is the open ended experience of space which he terms 'hole'.<sup>24</sup> The Pyramid/Labyrinth duality is also referred to in the writings of Bataille where "[t]he labyrinth does not hold still, but because of its unbounded nature breaks open lexical prisons, prevents any word from finding a resting place ever, from resting in some arrested meaning, forces them into metamorphoses where their meaning is lost,

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<sup>22</sup> Tschumi 255.

<sup>23</sup> Tschumi 257.

<sup>24</sup> Tschumi 39.

or at least at risk."<sup>25</sup> Therefore, the term 'event' is the modern labyrinth, the space in movement.

The notion of time as an inquiry in architecture is directly related to the acknowledgment of a production of space and fixed environments that closed systems, autonomous of outside relationships and based on repetitive action, produce. Architecture is complicated in the construction of continuous relationships versus the construction of holes. It is paradoxical that once we are able to understand space as something other than void we are able to see the need for lacunas of connectedness for an 'open city' as proposed in, *Ladders*, by Albert Pope in 1997. Pope's dialectic on space and form of the city is a critique on the primacy of form over space as the unseen city in extension. He suggests a redefining of form in terms of unseen relationships as well as the importance of space in terms of open relationships, within this new form. Open spaces though frequently characterized by the absence of visual relationships are often regulated by transparent relationships that in turn regulate our actions therein. "We apparently move towards transcendence oblivious to determinist narratives which strictly direct an opposing course."<sup>26</sup> The challenge for architecture in

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<sup>25</sup> Denis Hollier *Against Architecture: The Writings of Georges Bataille*. Trans. Betsy Wing. (Cambridge Massachusetts: The MIT Press, 1989) 60.

<sup>26</sup> Albert Pope, *Ladders*. (New York: Princeton architectural Press, 1996) 29.

search of indeterminate events is the production of open space as open relationships within the infinite connectedness of the space of mobility.

## supermodern space

The space of supermodernity defined by the "anthropologist" Marc Augé is the present situation of 'accelerated transformations' in time and space. He describes the acceleration of history as a problem in overabundance of time and its immanent 'snapping at our heels', while the acceleration of space or excess space, is paradoxically remote through 'a distancing from ourselves'.<sup>27</sup> The result of these accelerated transformations for Augé is expressed in changes of scale, which have physically modified our environment through urban concentrations, movements and non-places.<sup>28</sup> *Non-places* are defined in their opposition to place, where a place is defined as relational, historical and concerned with identity, and a space that cannot is therefore, a non-place.<sup>29</sup> He also emphasizes that places contain organic societies, and non-places

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<sup>27</sup> Marc Augé, *Non-Places: Introduction to an Anthropology of Supermodernity*. Trans. John Howe. (New York: Verso, 1995) 30,31.

<sup>28</sup> Marc Augé, 34.

<sup>29</sup> Marc Augé, *Non-Places* 77-78.

deal with individuals.<sup>30</sup> Augé speaks specifically of the places of passage, where he argues we spend more of our time. We spend our time in transit, interchange and crossroads because these relationships form the contemporary condition. Distance is not eliminated as much as it is appropriated and organized by acceleration and spatial programming. Mobility is production. The concept of non-place is important in our discussion because, in seeking to describe and define current conditions the term describes a space of mobility. Augé, as anthropologist is also concerned with *difference, which implies* for his discussion, a reference to *journey* and *movement* and the potential of subjective narratives. The term, difference is used here as a reference to Derrida's relativity of difference which questions the stability of the 'absolute'. As anthropologist, Augé is describing conditions and not prescriptions. The problem for Augé is that the removal of relation, history and identity is effectively the removal of difference: "[t]he space of non-place creates neither singular identity nor relations; only solitude, and similitude."<sup>31</sup> A contrast between the arguments of Augé and de Solà-Morales is the role of history and prior reference in contemporary space. Morales sees the 'moment' as the potential for subjectivity relieved of precedents. Augé's non-place

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<sup>30</sup> Marc Augé, *Non-Places* 111.

<sup>31</sup> Marc Augé, *Non-Places* 103.

is not neutral: “[h]ere the word does not create a gap between everyday functionality and lost myth: it creates the image, produces the myth....”<sup>32</sup> Where space is mediated by pre-established codes it becomes an instantaneous spectacle organized through objective relationships.<sup>33</sup> Paul Virilio’s argument on contemporary space is focused on the consequences of speed through acceleration and standardization.<sup>34</sup> What is important for this research is his emphasis on the loss of control over space as a result of acceleration and instantaneous transmissions and its reciprocal effect on the body in the form of disengagement of real experiences. The concept of relative space, space produced through relationships, emphasizes our responsibility in the production of space. If we can control space by fixing relationships, we should also be able to produce flexible and indeterminate spaces through dynamic relationships.

“Experience of the remote has taught us to de-centre our way of looking, and we should make use of the lesson. The world of supermodernity does not exactly match the one in which we believe we live, for we live in a world that we have not yet learned to look at”<sup>35</sup>

The question is how architecture approaches the notion of Foucault’s heterotopias.

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<sup>32</sup> Marc Augé, *Non-Places* 95.

<sup>33</sup> Guy Debord, *The Society of the Spectacle*, trans. Donald Nicholson-Smith (New York: Zone Books, 1995) 12.

<sup>34</sup> Virilio’s perspective, often related to war, is significant in that war, it could be argued, has been a major transformation and in effect producer of time and space in its effects and affects. see Kern.

<sup>35</sup> Marc Augé 35-36.

Heterotopias are defined as the 'different' or 'other spaces', real places where the space of society is inverted or contested. They are like 'mirrors' in that they present our social space as well as its counter spaces.<sup>36</sup> The relationship between non-places and heterotopias is that, some non-places can be considered as heterotopias, the airport as place of transience was once a heterotopia because it was a 'different space.' Today the space of travel becomes a rather ubiquitous condition of social space, which eliminates boundary, or rather the boundary condition itself has become ubiquitous through remote surveillance.

Foucault describes the museum and the library as contemporary heterotopias because in museums and libraries space is formed by particular relationships associated with accumulation, which through their specificity differ from other spaces.

"By contrast, the idea of accumulating everything, of establishing a sort of general archive, the will to enclose in one place all times, all epochs, all forms, all tastes, the idea of constituting a place of all times that is itself outside of time and inaccessible to its ravages, the project of organizing in this way a sort of perpetual and indefinite accumulation of time in an immobile place."<sup>37</sup>

He contrasts these spaces to the transitory condition of the festivals: "These

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<sup>36</sup> Michel Foucault. "Of Other Spaces" 24.

<sup>37</sup> Michel Foucault, "Of Other Spaces" 25.

heterotopias are not oriented toward the eternal, they are rather absolutely temporal [chroniques]."<sup>38</sup> But today even the idea of accumulation becomes more transitory. For example, today many libraries have auxillary warehouse in which the books are actually stored, material is ordered online or at a kiosk and subsequently delivered. In this case it's the warehouse that becomes the heterotopia of accumulated time. The library no longer localized becomes part of the connectivity of contemporary social space. The notion of Heterotopias are important to this thesis because they challenge the notion of 'open space' and propose liminal and yet unfixed boundaries, which can subvert the absolute space of mobility.

## counter-space

Lefebvre considers the possibility of *resistance* to the idea of absolute space, through the notion of 'counter-space'. Lefebvre's counter-space calls to mind the space in Jacques Tati's *Playtime* in a scene where the latticework begins to fall in a corner of the Royal Garden. Patrons who form a new social space under the debris then appropriate the area (figure 1). Tati reveals how the body: individual, social as well as architectural, is capable of forming and transforming space. Discussions of 'event space', 'non-place', and 'counter-space' as well as Virilio's 'transparent horizon'

reveal the roles of the body in claiming agency through movement as action but more profoundly by the role of the subject in resisting determinate space by questioning program, history and control. How do bodies participate in mobile systems and relationships in our built environment? Lefebvre's notion of social space redefines space, control and boundaries in terms of decentralization as well as relationships that are impermanent. Flexibility and *firmitas* of relationships define the difference between the production and reproduction of space. "Repetitious spaces are the outcome of repetitive gestures (those of workers) associated with instruments which are both duplicatable and designed to duplicate..."<sup>39</sup> For



figure 1 *Playtime* 1967  
Dondey, Marc. Tati. Paris: Ramsey Cinema 1985

Lefebvre, the body takes revenge on the controlled space as an experience of knowledge through perception. "We are concerned with what might be called a 'sense': an organ that perceives, a direction that may be conceived, and a directly lived

<sup>38</sup> Michel Foucault, "Of Other Spaces" 25.

<sup>39</sup> Lefebvre. The Production of Space 75.

movement progressing towards the horizon...."<sup>40</sup> Perception and participation are the movements by which indeterminacy can be claimed by the subjective body. Figure 2 shows the appropriation of the entrance of Herman Hertzberger's Apollo school in Amsterdam. In providing a place to sit, and light to filter through one side of the staircase, Hertzberger sets up a quality of space to be appropriated by the school children. Design is a reciprocal relationship between the body and the built environment and a means to engage perception. When asked



if he saw any particular architectural

figure 2 Apollo School (1980-83) Herman Hertzberger

projects as forces of liberation or resistance Foucault replied, "Liberty is a practice"<sup>41</sup>. The body as "point of departure and destination" is Lefebvre's 'resistance' and Foucault's 'liberty'. There is a mediation that occurs between the physical environment and the body in providing agency for the mobile subject in contrast to the directional absolute of the 'Pyramid'; the mediation of the absolute space of mobility with contingent occurrences.

<sup>40</sup> Lefebvre. *The Production of Space* 423.

<sup>41</sup> Micheal Foucault. "Space Knowledge and Power: an Interview with Michel Foucault," Paul Rabinow. *Skyline* (March 1982) 18.

For Lefebvre “[e]ach living body is space and has its space: it produces itself in space and it also produces space.”<sup>42</sup> “We grasp external space through our bodily situation.”<sup>43</sup> It is through our senses of perception that the body first comes to understand concepts of time and space outside representations and abstract constructs. Maxine Sheets-Johnstone argues that movement is central to all perception and agency and the sources of our notions of time and space.<sup>44</sup>

“The materiality of my body both coincides with and struggles with the materiality of space. My body carries in itself spatial properties and spatial determinations: up, down, right, left, symmetry, dissymmetry. It hears as much as it sees. Unfolding against the projections of reason, against the Absolute Truth, against the Pyramid, here is the Sensory Space, the Labyrinth, the Hole.”<sup>45</sup>

Therefore, what is the relationship between space and movement? Is space the void in which movement occurs? What of the objects in space? If they order space as Kwinter suggests, then they also order movement. “What is an object’s relation to... its own component parts, to the other objects with which it is combined...?”<sup>46</sup> Objects as

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<sup>42</sup> Lefebvre. The Production of Space 170.

<sup>43</sup> Merleau-Ponty. The Primacy of Perception Ed. James.M. Edie. (Evanston, Ill: Northwestern University Press, 1964) 5.

<sup>44</sup> Maxine Sheets-Johnstone. The Primacy of Movement. (Philadelphia, PA: John Benjamins Publishing, 1999) intro xv

<sup>45</sup> Bernard Tschumi. Architecture and Disjunction, 6<sup>th</sup> ed (Cambridge: The MIT Press, 2001) 39.

<sup>46</sup> Kwinter 11.

## Incorporating mobility

environment, form space through their relationships with the body and counter-space is formed in the appropriation of objects. For Lefebvre social space is an object in that it has formal, structural and functional qualities, it is this object quality of space that allows for its production as well as its reproduction. The object as built form can be understood as a form of control over, as well as a means of resistance for, the body. It is because of the decentralized and mobile nature of the contemporary environment that it remains largely invisible as built form. In reformalizing an understanding of mobility as built form, the body is able to engage through movement, in the appropriation of space.

## mobility and movement the body in movement

The space of the body is not only an occupation of space, through what Lefebvre calls the body's deployment of energies, 'the living body, creates space'. As Merleau-Ponty states, "[b]y considering the body in movement, we can see better how it inhabits space (and, moreover time) because movement is not limited to

submitting passively to space and time, it actively assumes them, it takes them up."<sup>47</sup> There is in this discussion a return to phenomenological assertions: "existence" is the movement through which [the body] is in the world and involves [itself] in a physical and social situation which then becomes [its] point of view on the world".<sup>48</sup> Proprioception as the perception that one has of occupying his or her own body, is how we navigate through the world, as a 'mindbody'<sup>49</sup>, in which apprehension and human consciousness take place in the body as a whole. This section considers the relationship between body and space in terms of movement.

Examining body space Lefebvre writes, "spatial indicators are first qualified by [the] body".<sup>50</sup> The terms that he uses for the qualifiers of space are *gestures*, which modify orientation, *marks*, as readily available means of demarcating space, and *traces* as other means. He argues that the human body has an innate sense of orientation in its bilateral composition of dualities (left-right, up-down) as well as in rotation. In these dualities the body carries the other within itself.<sup>51</sup> The body itself is the reference, which gages opposing conditions. The production of space is the distribution

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<sup>47</sup> Maurice Merleau-Ponty *Phenomenology of Perception*. (New Jersey: the Humanities Press, 1962) 102.

<sup>48</sup> Maurice Merleau-Ponty "The Battle Over Existentialism" Trans. Hubert L. Dreyfus and Patricia Allen Dreyfus. *Sense and Non-Sense*. Ed, John Wild. (Evanston, Illinois, 1964) 72.

<sup>49</sup> term adopted from mark Hansen, used by Katherine Hayles in *Flesh and Metal*, *Data Made Flesh*. Ed Robert Mitchell and Phillip Thurtle. N Katherine Hayles p.230

<sup>50</sup> Henri Lefebvre, *The Production of Space* 174.

<sup>51</sup> Henri Lefebvre, *The Production of Space* 175.

of energies and flows, which are relative to the body's environment. In this sense the boundary is dynamic. Orientation of the body is therefore an adaptive response and mediation to a mutable environment. The conception of the body in dance, if we look at an interpretation of Rudolf Laban,<sup>52</sup> is that of a body in constant motion, only the dead body is still.<sup>53</sup> In dance the ability to invent new forms cannot be separated from the ability to appropriate space. This is one of the reasons that dance is a topic of interest in architecture. It should also be noted that though dance and gymnastics were studied as free flow movements of the body,<sup>54</sup> research was also pursued in regards to industrialized task-oriented optimization of Taylorism and Fordism, which calls to mind the regulated body movements in Charlie Chaplin's (1936), *Modern Times*, eventually giving rise to the study of ergonomics and setting standards for the production of everyday objects.

*Movement* is directly kinaesthetic, an awareness of ones own movements, which acts in all areas of perception, and is therefore a basic process of knowing.<sup>55</sup> Even the slightest of movements, such as gestures orient as much as they communicate.

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<sup>52</sup> Rudolf Laban (1879–1958) philosophe-choreograph trained in music and architecture.

<sup>53</sup> Martha Davis, "Movements as Patterns of Process" ". Main Currents, 31.1 (Sept 1974): 18–22.

<sup>54</sup> Paul Souriau. Foreword. The Aesthetics of Movement By Francus Sparshott. (Amherst, MA: The University of Massachusetts Press, 1983) x–xi.

<sup>55</sup> Algis Mickunas, "The Primacy of Movement". Main Currents, 31.1 (Sept 1974): 8–12.

Internal movement such as those associated with vision are ultimately orienting devices. Though, in *The Primacy of Movement*, Maxine Sheets-Johnstone states that Merleau-Ponty reflects only in passing on the relationship between perception and movement.<sup>56</sup> In *Eye and Mind*, Merleau-Ponty writes about the movement in vision, with a profound discussion of seeing as cognition. In regards to painting he writes that “[t]he eye is an instrument that moves itself, a means which invents its own ends; it is that which has been moved by some impact of the world, which it then restores to the visible through the offices of an agile hand”,<sup>57</sup> and quoting Malebranche’s dilemma, “the mind goes out through the eyes to wander among objects...”<sup>58</sup> But to include conversely, vision as a *part* of movement is a significant reversal that presents movement itself as cognition.

Vision is relative to movement through the interrelationships it forms with other sensory receptors such as the vestibular system, which regulates balance, associated with vision as well as muscle control. All body receptors including mechanoreception and the somatosensory, detecting vibrations pressures and temperature, are governed by dualities or differences which the body sets out to balance: “we stand upright so that

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<sup>56</sup> Maxine Sheets-Johnstone 241.

<sup>57</sup> Maurice Merleau-Ponty “Eye and Mind” trans. Carleton Dallery ed. James M. Edie The Primacy of Perception (Illinois: Northwestern University Press, 1964) 165.

<sup>58</sup> Maurice Merleau-Ponty “Eye and Mind” 166.

we are constantly falling".<sup>59</sup> The importance is in the feedback towards equilibrium.

"The actions of each individual involve... basic constitution, with its dual aspect: first, the axes and planes of symmetry, which govern the movements of arms, legs, hands and limbs in general; secondly, the rotations and the gyrations which govern all sorts of movements of trunk and head..."<sup>60</sup>

As Lefebvre suggests, in duality we carry our "others" inside ourselves. It is this balancing act derived from a flexible system in search of equilibrium, which controls mobility from bilaterality to the microscopic balancing of ion concentrations across permeable membranes resulting in muscle impulses.

In *The Primacy of Movement*, Maxine Sheets-Johnstone, builds upon Edmund Husserl's notion of animation as a means of spatialization. She argues that movement is a source of knowledge and animation the originating ground of knowledge "movement is in effect the foundation of our sense of ourselves as agents within a surrounding world. But even more basically the epistemological foundation of our sense of who and what we are. We literally discover ourselves in movement. We grow into our bodies."<sup>61</sup>

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<sup>59</sup> R.L.Hall and V.E.Cobey, "The World as Crystallized Movement". Main Currents, 31.1 (Sept 1974): 4-7.

<sup>60</sup> Lefebvre. The Production of Space, 213.

<sup>61</sup> Maxine Sheets-Johnstone, 136.

While Husserl uses the term 'animate' in reference to living beings and underscores movement as a means of knowledge of space, Sheets-Johnstone suggests that in Husserl's interpretations of movement as perception, his analysis remains incomplete because he references external perceptions and is not in effect considering self-movement.<sup>62</sup>

Husserl does not actually consider self-movement as such; he considers only movement with respect to external perception, that is, with respect to perceived objects in the world. His estimation of kinaesthesia is thus clearly restricted...when he speaks of kinaesthetic flows, he often does so in terms of a visual object so that kinesthetic flows are aligned rather narrowly with eye movements...<sup>63</sup>

An example in understanding her criticism is found where she considers the inappropriateness of the following quote from *Phenomenology of Perception* "there would be no space at all for me if I had no body."<sup>64</sup> Essentially what she means to question is the paradox of the 'I having no body', which renders the *I* and *the body*, two and not the same, a duality of body and mind which seem to contradict the premises of the phenomenological body. In any case, we must recognize the importance of Merleau-Ponty's work in bringing forth a kinaesthetic dialogue leading to the discourse and

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<sup>62</sup> Maxine Sheets-Johnstone. 140.

<sup>63</sup> Maxine Sheets-Johnstone. 140.

<sup>64</sup> Maurice Merleau-Ponty. Phenomenology of Perception 102.

questions on the relationship between the body, consciousness and effectually the place of *self-movement* therein. Sheets-Johnstone's criticism of Merleau-Ponty, is one towards only fleeting reflections on movement and averting self-movement for a more passive description of objects in motion. She criticises his use of pathological case studies of others, in this regard, instead of his own kinaesthetic experiences. His argument in the attempt to overcome the objectification of movement is acknowledged, but she concludes that in the end he does not in fact overcome it. As such, the following quote of his is foretelling: "it is clearly in action that the spatiality of our body is brought into being, and an analysis of one's own movement should enable us to arrive at a better understanding of it."<sup>65</sup> Movement is a means by which the body recognizes itself and its ability to produce space.

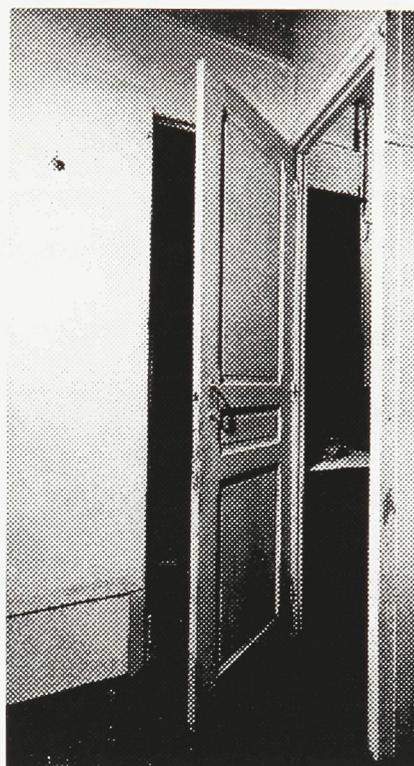


figure 3 *Door 11: rue Larrey 1927*, by Marcel Duchamp, Arturo Schwarz, The Complete Works of Marcel Duchamp (New York: Delano Greenidge, 2000) 389.

Habit as discussed by Merleau-Ponty is neither a form of knowledge nor an

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<sup>65</sup> Maurice Merleau-Ponty Phenomenology of Perception trans. Colin Smith (New Jersey: Humanities Press, 1962. 102

involuntary action, but a bodily understanding of movement. The spatial habit which Merleau-Ponty references are those actions which in the examples he adopts from Grünbaum allow our bodies to move through standard doorways without question that we will fit. There are also the objects we incorporate in our perceptual habits such as the car whose size becomes incorporated into that of our own bodies so that we navigate around and between other objects. Habit therefore, is understood as the direct relationship between the body and its environment acquired through familiarity. The space of habit as discussed here becomes an interesting problem not as something to be solved or eliminated but as a source of play. An example is the *Door 11: rue Larrey 1927*, (figure 3) by Marcel Duchamp, a paradox contradicting that a door must be either open or closed. The hinge of the door is at the corner of the studio so that when the door is closed to the bathroom it is open to the bedroom and vice versa. It is brought up here as an example of the appropriation of the familiar and standard object and action of walking through a doorway into an unfamiliar relationship and experience, as a subversion of a typical body habit, a reorientation.

Gestural systems differ from habit because they embody ideologies that bind them to practice. "Through gestures, ideology escapes from pure abstraction and

performs actions...[g]estures are also closely bound up with objects..."<sup>66</sup> Gestures, are used by the body as symbols, which form space and communicate their representations. Gesture acts as a language and signifier of space. The notion of body in gestures encompasses a social body so that the body space becomes the social space. We are speaking here of organized gestures or movements. Organized gestures are therefore, a choreography, like an architecture which seeks to organize space for legibility. The production of social space for Lefebvre is intertwined with the production of knowledge. "(Social) space...subsumes things produced, and encompasses their interrelationships in their coexistence and simultaneity..."<sup>67</sup> The repetition of social space produces repetitive relationships hence the reproduction of space.<sup>68</sup> Furthermore, the reproduction of space produces repetitive movements, less action than reflex.<sup>69</sup> Frascari writes, "just as we think architecture with our bodies, we think our bodies through architecture."<sup>70</sup> The built environment mirrors ourselves back to us; it is a reciprocal relationship in which the environments we create in turn create us.

The essential companion to movement is orientation, the knowledge of distance and direction in relation to your surroundings; the ability to keep track of

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<sup>66</sup> Lefebvre The Production of Space 215.

<sup>67</sup> Lefebvre The Production of Space 73.

<sup>68</sup> Lefebvre The Production of Space 422.

<sup>69</sup> 'reflex' referred to here as an automatic response resisting change

<sup>70</sup> Marco, Frascari. Monsters of Architecture: Anthropomorphism in Architectural Theory. Savage, MD: Rowman & Littlefield Publishing; 1991 1.

spatial relationships as they change while you move about.”<sup>71</sup> Orientation as part of cognition is a ‘mindbody’ experience. Orientation then is movement as a constant re-orienting, a communication through movement between the body and the environment, a subjective balancing based on difference. Wayfinding, explored by Kevin Lynch and Romedi Passini, is a term that references the notion of mobility as an objective orientation through space. Though not exclusive to signage, wayfinding principles are essentially biased to the dominant perception of vision. They are devices, architectural or otherwise, that organize a legible hierarchy of space. In Arthur and Passini’s *Wayfinding: People, Signs and Architecture*, though referencing tactile signs they reference rather exclusively braille and haptic maps in wayfinding for the blind and focus mainly on the ‘reading’ and semantic approach to experiencing the environment. There is, in passing, a reference to a study done at Georgia Tech in the 1980’s in which it was found that changes in texture on floors go rather undetected by the blind.<sup>72</sup> Arthur and Passini briefly propose instead the more distinguishable effects of ‘resiliency’ which ‘is manifested both aurally and tactilely’ giving the example of

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<sup>71</sup> Jane England, “the map is not the territory” *Reader on the Aesthetics of Mobility* Ed. Anthony Hoete (New York: Black Dog Publishing, 2003) 56.

<sup>72</sup> Paul Arthur and Romedi Passini, *Wayfinding: People, Signs and Architecture*. (Toronto:McGraw-Hill Ryerson, 1992) 219.

rubber which is distinguishable in sight as well as sound and in tactility.<sup>73</sup> Basically, the principles of Wayfinding seek to control space and "that which control space also controls the "living body and the deployment of its energies."<sup>74</sup> Though wayfinding principles are representations of space based on ideologies and a reading of space, they remain necessary especially for the condition of mobility. The question then is how to incorporate wayfinding into a representational space of experience, which considers the *qualities* of space. The aim of the thesis proposal includes wayfinding as a body experience of the qualities of space so that orientation is based on difference much like the oppositions, which govern our body movements.

Since cartographic representations replaced embodied observations of the environment, orientation has become synonymous with representations of geographic space. The immediate relationship between body and environment is often and with greater influence invaded by signs and symbols of direction. The body oriented through horizon and gravity, is reincorporated through extensions of technology and specifically those involving mobility. Firstly, those automatic modes or vehicles of mobility decentre our relationship with gravity because the body is relieved of effort in horizontal as well

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<sup>73</sup> Arthur and Passini, in this short section, refer us to another section 16.3.3, which is unfortunately left out of the 1992 edition.

<sup>74</sup> Henri Lefebvre, The Production of Space 170.

as vertical translations. Secondly, our modes are incorporated into our spatial bodies so that when, say, in riding my bicycle the bicycle becomes the extension of my body space, orientation is now incorporated into a body on the bicycle: I re-orient the turning of my body to include the moment of the bicycle.

The horizon as spatial indicator is an embodied orienting device, but in underground systems such as the subways or network such as the 27 kilometer pedestrian path and shopping complex located underneath Toronto's downtown core, horizon becomes an orienting threshold. In the extreme case of change in elevation, for example the Channel tunnel, which runs 23 miles under underwater and 150 miles under the seabed, a threshold is barely distinguishable. Mobility redefines the horizon through abstract orienting devices. Virilio writes that "[m]an...carries the expanse of the environment around with him, in motion, in animation,"<sup>75</sup> effectively the contemporary condition of mobility *carries us*, a major point to be discussed in the next section on movement and mobility.

Significant to this thesis is an examination of how bodies participate in the space of mobility and where *movement* challenges fixed orientation. The absence of space/territory expressed through bodies, whether in biological warfare, by suicide

bombers or against architecture, or that violence would seek debilitation by targeting mobility are evidence that the space of the body remains a source of control and power.

So far the effect still belongs to the actions of the body. "The human and the material intersect in various combinations and networks, which in turn vary greatly in their degree of stabilisation over time and across space."<sup>76</sup> The body participates through appropriation of the space of mobility, complicating the idea of mobility as a continuous space.

The problem of agency in architecture is where it seeks to control space by dictating movements. This considered, would benefit from a return to Power, Knowledge and Space considerations in Foucault stating that social problems cannot be solved through architecture alone, they are never neutral, but dependant on convergence between space and its users.<sup>77</sup> This then becomes a question of how to think about space as open, as movement and flexibility between experience and function.

How does the architecture involve the user? How does architecture appoint the moving body as part of an experience? Architecture engages movement where it confronts preconceived notions in revising the relationships between the body and the

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<sup>75</sup> Paul Virilio, *Open Sky* 64.

<sup>76</sup> John Urry, *Sociology beyond Societies: Mobilities for the twenty-first century* (New York: Routledge, 2000) 78.

<sup>77</sup> When a certain philosopher's friends were hung in a square he was latter asked if he was not angered by the injustice to which he replied that the same collective force also produces its opposite.

environment. In *The Ecstasy of Communication*, Baudrillard writes about absence of the mirror as the object that reminds the body of its own opacity and conviction.

"It is the end of interiority and intimacy, the overexposure and transparency of the world which traverses him without obstacles. He can no longer produce the limits of his own being, can no longer play nor stage himself, can no longer produce himself as a mirror. He is now only a pure screen, a switching center for all the networks of influence."<sup>78</sup>

"Spaces are qualified by actions just as actions are qualified by spaces...[e]vent and space do not merge but affect one another."<sup>79</sup> Conversely, space, in turn, is altered by events and actions. Where it is said that architecture controls space it must also be understood that social space controls architecture. Merleau-Ponty writes that although freedom stands out against a background of history and social practice, our freedom exists in how our actions stand in relation to this structure. "Nothing determines me from outside, not because nothing acts upon me, but, on the contrary, because I am from the start outside myself and open to the world."<sup>80</sup> Architecture though able to control space can also give agency to the body. Lefebvre writes that our desires to act can only occur in space and through its production.<sup>81</sup> The objects

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<sup>78</sup> Jean Baudrillard, "The Ecstasy of Communication" trans. John Johnston The Anti-Aesthetic ed Hal Foster.(Washington: Bay Press1983) 133.

<sup>79</sup> Tschumi, Architecture and Disjunction, 130.

<sup>80</sup> Merleau-Ponty, Phenomenology of Perception. 455.

that control space also effect our appropriation of it our ability to reinterpret relationships. "Objects...appear to be crucially part of how humans effect agency.

Agency is...brought about through various objects..."<sup>82</sup> This thesis considers the object quality of mobility and manipulates that object to include movement by considering open space in the continuous and closed space of mobility. The space of contemporary mobility is hidden because relationships appear indiscernible and as such we concede to the idea that time has overcome space. Therefore, space remains a mechanism of control, hidden because of our fixed notions of space. The body relinquishes agency by abandoning notions of space.

## the contemporary space of mobility

"We are at a moment...when our experience of the world is less that of a long life developing through time than that of a network that connects points and intersects with its own skein".<sup>83</sup>

In *Monsters of Architecture*, Marco Frascari quotes Dino Fromaggio, "I believe

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<sup>81</sup> Lefebvre, *The Production of Space* 393.

<sup>82</sup> John Urry, *Sociology beyond Societies: Mobilities for the twenty-first century* (New York: Routledge, 2000) 78.

<sup>83</sup> Michel Foucault, "Of Other Places," *Diacritics* 16, trans. Jay Miskowiec (1986): 22.

that an architectural revolution could only take place because of a new conception of corporeality. It is no more the Renaissance idea of body, neither the modular-body of Le Corbusier<sup>84</sup>. The contemporary body has become increasingly embedded within various systems of information and exchange. “[B]odies and information continually graft themselves onto one another in a number of different cultural domains.”<sup>85</sup> The idea of exchange is transformed through acceleration as well as information. Since the First International Architecture Biennale “Mobility: A Room with a View” held in Rotterdam 2003, issues of mobility have regained attention and interrogation. Focusing on the design aspect of mobility, the Biennale in reconsidering various relationships, social, historical and geographic, also made visible the space of mobility. The argument for this chapter is the paradox of *movement* and *mobility* as it defines the contemporary body. Here, *mobility* is defined as a condition or state, which implies relationships of extension, communication, removal, and kinaesthetic in a state of distraction<sup>86</sup>: manual, mechanical, or digital<sup>87</sup>. For our purpose mobility is a translation that differs from movement in that mobility is an objective condition designed as part of a system

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<sup>84</sup> Marco Frascari, *Monsters of Architecture* 1.

<sup>85</sup> Philip Thurtle and Robert Mitchell, “data Made Flesh: The Marterial Poiesis of Informatics,” *Data Made Flesh*, (New York: Routledge, 2004) 1.

<sup>86</sup> In reference to “The Work of Art in the Age of Mechanical Reproduction” in *Illuminations*. Walter Benjamin uses the term distracted to signify perception and participation in the collective state of the masses.

<sup>87</sup> Venn diagram of mobility (manual mechanical and digital) in *Reader on the aesthetics of mobility*. editorial by Anthony Hoete page 19.

exterior to the body proper whether social, political or cultural. *Mobility* and *movement* are not completely separate conditions; they are often juxtaposed. Body actions are produced largely by social and cultural codes but the body also resists determinate action by active participation sometimes resulting in conflicting movements.

With the increasing development of modes and infrastructures of mobility, the interpretations of the term 'flow', as the continuity in the circulation of information and bodies, have been central in architectural design strategies. Foucault attributes the substitution of localization by extension with the opening of space by Galileo in the seventeenth century, which dissolved the hierarchy and opposition in the representations of space of the middle ages.<sup>88</sup> Bernard Tschumi explains that we spend our time in the spaces of abstraction, and describes the 'abstract' as a condition of no place preceding Augés non-places, as places defined by their lack of concern with history, identity or relational aspect of a location. Tschumi explains no place as a space to abstract oneself, suggesting that "[a]irports are places of floating, non-committal comforts...compounded by the liberating sensation of imminent departure, culminated in a smooth and anxiety-repressing effect."<sup>89</sup> In no place we are in the world and yet removed, in a continuous space where there are no boundaries, or rather they remain

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<sup>88</sup> Micheal Foucault, "Of Other Spaces" 22.

<sup>89</sup> Ben van Berkel and Caroline Bos, "Radiant Synthetic Effects". Ed. Cynthia C. Davidson. Anything, (Cambridge: MIT Press, 2001) 112.

hidden such as electronic surveillance boundaries. We are driven to heterotopias because they oppose non-places, which are public yet alienating, because they offer liminal experiences.

The argument of this thesis is that contemporary space is formed in mobility. Architecture in the contemporary space of mobility is the design of the interconnectivity of the body and its relationship to the environment. "The spatial task is no longer to embed the road in the landscape, but to design a mobility landscape, in which infrastructure, urban development and landscape are combined..."<sup>90</sup> In considering the role of architecture and mobility, architects should also consider the production of social space and consciousness in movement of the body. This thesis investigates the space of mobility as a mirror of the body, in the sense that it reveals to us our substance and reality by engaging the physical body in movement.

Mobility is sustained through repetition of actions and contemporary situations. De Solà Morales ask "[w]hat has [the] question of repetition and difference meant in recent architecture, if not the constant problematizing with which the new work or architecture can establish itself precisely at the crossroads of these two opposed

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<sup>90</sup> Paul Meurs, "Parkways and Polderways" Mobility: A Room with a View ed. Francine Houben, Luisa Maria Calabrese (Rotterdam: Nai Publishers, 2003) 430.

terms?"<sup>91</sup> Difference is a means proposed as the detail in the environment that engages the mobile body it reinstates limits for its experiential qualities. "[A]rchitecture of the limit is the most fragile and the surest path leading back to the encounter with the profound aesthetic experience, that is to say the technics and poetics, *technē* and *poiēsis*, of architecture."<sup>92</sup> The dissolution of the boundary confronted by differences provides the otherness and the 'other space'.

"The more carefully one examines space, considering it not only with the eyes, not only with the intellect, but also with all the senses, with the total body, the more clearly one becomes aware of the conflicts at work within it, conflicts which foster the explosion of abstract space and the production of a space is the *other*."<sup>93</sup>

The emphasis of articulation in mobility addresses movement, as an interruption of the continuous. The intentions of Frederick Kiesler with the Endless House in 1959 were to construct a continuous space in order to counteract the absolute space that had become the result of fixed frames in architecture. His theories and work have been influential to contemporary space. The notion of continuity and absolute space lies in fixity over aesthetics. Program for example might be defined by the quality of the

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<sup>91</sup> De Sola-Morales, *Differences*. 110,111.

<sup>92</sup> De Sola-Morales, *Differences*. 115.

<sup>93</sup> Lefebvre, *The Production of Space* 391.

space or through the relationship between spaces. The discontinuous inserts movement through subversion of the changing metaphor. The thesis proposal therefore, aims to insert movement, and to subvert the condition of mobility as the continuous, through articulations that qualify actions. The space of mobility influences architecture because it treats the body not only as information but paradoxically as a fixed entity. Architecture in the space of mobility often aims to control and therefore prescribe movement, whereas an architecture that seeks to qualify actions must also seek to qualify space. In this thesis continuous space is interrupted with moments that mirror the body by considering architectural elements of orientation and how we qualify difference. The difference between up and down, and left from right is superseded by the quality of space, knowing here from there. The thesis considers movement within the space of mobility and the notion of open space, as the varying degrees of aperture in architecture.

## mediated environments

Mobility, as a dependent relationship between organisms and their environment, is an ecology of circulation in communication and the exchange of goods. With the agricultural revolution having localized the nomadic state, our contemporary world is a hybrid between the two. Goods and production processes are localized but then rely on a system of interconnectivity between locations for distribution. In 2004, Bruce Mau, and the Institute without Boundaries, a telling name, in the dissolution of limits put together the compilation *Massive Change*. The ideas proposed in *Massive Change* are the continuation of McLuhan's notion that we would live in a 'global village', by affirming that we live in a 'global economy'. *Massive Change* emphasizes interconnectivity and refers to the notion of economies of movement.<sup>94</sup> The term movement used in this quote does not reflect our definition of movement, but instead parallels our definition of mobility: a condition designed as part of a system. *Massive Change* is concerned with the masses, though the idea includes a creative response to interconnectivity it fully accepts and encourages the design of a global space of mobility and considers this the

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<sup>94</sup> Bruce Mau, Jennifer Leonard and the Institute without Boundaries. Massive Change (New York: Phaidon, 2004) 16.

most optimistic view of human prosperity. The idea of an inclusive global system of exchange, comes across as a socialist enterprise but is dependent on the space of capitalism. Though the idea is that the global economy has the potential to insure the welfare of the entire human race, it does so through the interconnectivity of capitalist space. A dominant point in *Massive Change* is that all aspects of the world are designed; dwelling, materials, markets, images, information, even wealth are designed systems, the production of space.

Mobility is a condition that increasingly tends towards absolute continuity. Though this continuity favours ease of translations, exchange, and predictability it fixes relationships. "Yet at the same time, the body takes its revenge."<sup>95</sup> The body, in movement forms it's own space. In order to engage experience the architect should consider perception in the space of mobility, experience beyond the purely visual, and the role of movement in the experience and production of space.<sup>96</sup> In the space of mobility perception of the detail as an articulation is transformed. Detail here is defined as the parts of the systems which maintain the condition of mobility, and more explicitly how these parts come together and how they interact with the body. The

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<sup>95</sup> Lefebvre, *The Production of Space*, 384.

<sup>96</sup> Bernard Tschumi's well know advertisements for architecture reference the relationship between architecture and the body, "architecture is defined by the actions it witnesses as much as by the enclosure of its walls" Bernard Tschumi 1978.

transformation of the detail through mobility occurs due to acceleration (the blurred detail) and the dissolution of boundaries (invisible detail). The detail is essentially removed or transparent which negates a direct relationship to the body, but contributes to the notion of a continuous space. As an example of this condition consider the movement of bodies through turnstiles as a detail of passage. The quasi-violent act of the turnstile on one's body passing through articulates the relationship between the body and the control of movement.<sup>97</sup> The turnstile remains an object of action whether one is pushed through or hurdling over it as a form of resistance. Consider now, the evolution of the turnstile to the electronic or digital passage onto which one inserts a card and then to the completely remote scanning of bodies where there is virtually no contact between the body and system of regulation. This describes the progression of absolute continuity in the age of mobility. The idea then is not to return to the mechanical turnstile but to insert qualities of space as thresholds that engage the body. Though the topic of surveillance has a hidden agenda in that its design attempts to evade detection, it demonstrates a relationship between the body and one aspect of mobility in the dissolution of the boundary.

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<sup>97</sup> In Jacques Tati's *Playtime* 1967, a film about the modernization of Paris, there's a scene in which the main character gets caught in a turnstile effectively demonstrating the regulating conditions of this mechanism on the body.

The body increasingly reproduces actions to sustain the space of mobility, that in turn, sustains an ecology of capitalism. The notion of body is not so much absent in terms of *presence* as it is in *agency* through the directed space of mobility. The body free of regimentation is a source of potential movements, which surveys the environment for possibilities.<sup>98</sup> Therefore the architect's role is to provide possibilities for orientation and to engage movements in experiences of our environment.<sup>99</sup> To return agency to the body through architecture is to consider the role of architecture as media.

"Media are a way to inhabit time as it were, a movement connected with our own movements, something far more sensitive and responsive than architecture of frames, crystals and solids that is only capable of returning always the same answers to an experiential body."<sup>100</sup>

Fuller and especially McLuhan brought the digital narrative to architecture in the

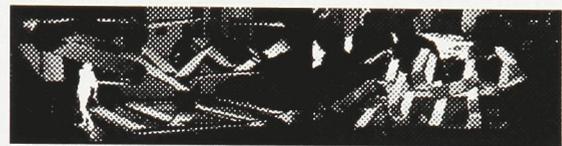
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<sup>98</sup> R.L.Hall and V.E.Cobey 5.

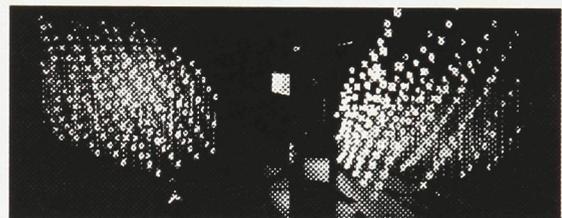
<sup>99</sup> In *The Metamorphosis*, Kafka shows how perception of space changes as Gregor's perception of self-changes. Ayad Rahmani's reading of the "return" in Kafka's work suggests a parallel between the story and the notion of an architecture with multiple expressions because the experience of the room changes with Gregor's metamorphosis, physically and mentally. "Navigating one's place in the world one had frequently to re-enter the very intellectual moments that one had constructed for oneself, examining them for what they are and the assumptions and virtues on which they had been built."<sup>99</sup> Kafka's story describes the relationship between consciousness and space, where a new body must re-orient itself. 9 Ayad Rahmani, "Rooms and the Question of Return in Kafka's Work". Built Environment 31.1 (March 2005) 72-78.)

philosophy of the changing sensory experience of the electronic age.<sup>100</sup> Media, the plural of medium constitutes that which is in between self and other. In asserting that the 'medium is the message'; that technologies effect our experience, habit and condition in the world, McLuhan transformed our contemporary views of perception through an extended body. With an extended view of perception and media as synonymous with networks and technological systems, architects began to question the relationships between the virtual and the tectonic, an ongoing debate. The pervasiveness of the term media with its emphasis on extension tends to negate the tectonic as media, but recent exploration concentrate on possible incorporations.

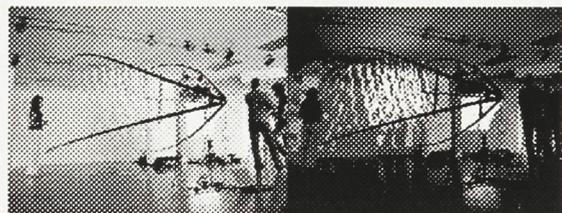
The following is a brief description



V1 The Fish Tank



V2 Distributed Projection Structure



V3 the fishing Kit

<http://www.aether.hu/inductionhouse/>

Figure 4 Induction House

<sup>100</sup> Andrea Ruby, "Where Space Get's Lost" interview with Lars Spuybroek. [V2 Archive](http://www.aether.hu/inductionhouse/).  
<<http://framework.v2.nl/archive/archive/node/text/default.xslt/nodenr-70173>>

and analysis of some contemporary media projects that deal with 'digital tectonics'<sup>102</sup>. Though all aiming to incorporate media and the actions of the body, the most practical difference is found in the dichotomy between a material versus the idea of a dematerialized space and how it engages participation and movement. The projects are examined here by considering how they engage the body and movement.

Adam Somlai-Fischer of Aether Architecture, seeks to treat digital media as physical matter with Induction House, first presented at the Venice Biennale of Architecture 2004. The project consists of 3 prototypes of projectable volumetric surfaces that collect and measure information from visitor movements, which correspondingly change the projected pixels.<sup>103</sup> The prototypes focus on perceptions of movement and vision and though Somlai-Fischer argues for the prospect of a non-screen based media environment, Induction House is ultimately presented as a series of novel forms of interactive screens. The projections act as an extension of the body rather than a mirror of the body; reflecting the body as part of a system outside itself. The body becomes the image. Somlai-Fischer asserts that it is unavoidable that media

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<sup>101</sup> Coyne Richard, "The embodied architect in the information age" *information technology* 3 (1999) 175-185.

<sup>102</sup> *Digital Tectonics*; title of the publication under Neil Leach, David Turnbull and Chris Williams. Wiley 2004.

<sup>103</sup> aether architecture. aether Induction House. 23 August, 2004 <<http://www.aether.hu/inductionhouse>>

saturates our environment, influencing our perceived reality..."[t]hink of how many things you have seen for real and how many have been images or film."<sup>104</sup> Induction house is presented more as a spectacle than as an "interactivity [which] places at its centre the subject."<sup>105</sup> A notable conclusion drawn from the three different versions of Induction house are that though the projects attempt to engage movement as recorded changes in the digital media, all projects constitute a physical embodiment onto which the images are projected. The physical object engages the body with or without projections; the object itself is media. The question then is to consider not how many images we have seen as opposed to their real counterparts but to consider the extent to which architecture has mediated extension. Contemporary investigations of embodiment proposed with the integration of the digital and tectonic invite new possibilities to incorporate movement into the space of mobility. The Media House (Barcelona 2001), collaboration between Metapolis Group from Barcelona, the MIT Media Lab, and the Fundacio Politecnica de Catalunya, the consortium I2Cat and the Elisava Design School, is a prototype domestic setting for the integration of the digital into everyday life. The idea in Media House was to integrate media into the physical space and to build

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<sup>104</sup> Lucie Bullivant, "Induction House" Architectural Design Jan 2005: 97.

<sup>105</sup> Antonio Saggio, "Interactivity at the Centre of Avant-Guard Architectural Research" Architectural Ideas Jan 2005: 23.

computers from the building elements, concept...<sup>106</sup> Media House examines the limit between the technological object and the body subject where the technology serves the needs of the occupant. The environment contains information and carries information but retains the body-object relationship in a physical sense. The flexibility proposed by the system is based on detailing the boundaries of structure and infrastructure. Research into the incorporation of the electronic into the everyday is the central objective which fuels the research at the MIT Lab that continues through consortiums such as "Things that Think", investigations for seamless interfaces between electronic and the physical and for example, in "Gray Matter," a project which focuses on these same issues aimed at the older generation, the "third age". Though the overlap between the digital and the physical in the home is still far from our ubiquitous experience, this condition is fast taking over the places of work, as work practices based on knowledge become inseparable from communication devices. Does the mobility in electronic communications render the permanent office obsolete? If we do not *go* to work, are we always there? Lucy Bullivant suggests:

"...as the work environment becomes increasingly immanent as well as responsive, it is at the same time far more capable of sensing and monitoring activities...[s]o it is not difficult to see the contemporary work

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<sup>106</sup> Lucie Bullivant, "Media House Project: the House is the Computer, the Structure is the Network" Architectural Design Jan 2005: 52.

environment potentially as a form of invisible panopticon...The reality of the smart lifestyle offered by enabled environments risks proscribing staff behaviour even than if we were constantly physically present in offices in between clocking in and clocking out."<sup>107</sup>

Mediums need not be visible in influencing our notions and experience of space, not only in the case of the electric or the digital but as Lefebvre suggests, the social and political spaces. It is important to consider the definition of media as the articulating instrument between the body and the environment. Though it's interesting to consider the implications of the digital and the tectonic, media is not exclusive to them. Media as we learned from McLuhan among others, includes sound, language, transportation as well as money and weapons for example. In understanding these medias the architect can engage the space of mobility and decide which of these mediums holds the possibilities in producing qualities of experience that engages human experiences.

"[P]lace emerges through...phenomenological and kinaesthetic experiences during interactions with objects in it and with other[s]...the meaning of places emerges through and, critically supports, collaborative play...understanding place as practice may help to account for relationships between the representation of...movement through space and the evolving...experience."<sup>108</sup>

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<sup>107</sup> Lucie Bullivant, "Intelligent Workspaces: Crossing the Thresholds" *Architectural Design* Jan 2005: 39.

<sup>108</sup> "Knowing your Place: Experiential Spatiality in Games" Nicola Bidwell, Martin Gibbs, Bernadette Flynn and Luke O'Donnell. 2006 [http://srvcns.it.jcu.edu.au/nic/session/session-Proposal/-CGIE06Bidwell\\_final.pdf](http://srvcns.it.jcu.edu.au/nic/session/session-Proposal/-CGIE06Bidwell_final.pdf)>

This quote, from a proposal to co-ordinate a session on Cybergames, raises the question of experience through embodiment. While the physical world often seems inclined on moving towards immanence, it seems the Cyberworld is considering kinesthetics and phenomenological questions. Still, there remains at the centre of argument, the subject, and the body in the world.

## site unscene contemporary parks

In the Athens Charter 1933, Corbusier proposed four key functions to town planning: housing, work, recreation, and traffic.<sup>109</sup> That these categories remained largely separate even after modernist criticism, explains why the effects of mobility on architecture remain obscure. The contemporary space of mobility is redefining the boundaries between these terms. The term urban park has had a long standing relationship between industry and the public leisure space as well as mobility and

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<sup>109</sup> CIAM. Programs and manifestos on 20<sup>th</sup> century architecture. ed. Ulrich Conrads (Cambridge, Massuchessets: The MIT Press, 1999) 139.

movement. With the Greensward Plan for Central Park in New York City begun in 1858, Olmstead and Vaux, embedded a 843 acre lung for the city. Though inspired by the idealized versions of natural settings from English Romantic landscapes of Rempton and Paxton, it was the first of such kind in America.<sup>110</sup> The plan integrated architecture and proposed separate circulation systems for various mobilities within the fabricated greenspace. Today, vehicular movement in the park is prohibited from 7am to 7 pm. The park provides a heterotopia from the vehicular infrastructure, noise, and the corporate pace of the island of Manhattan. The ongoing history of the park is one of transformation in efforts to maintain the area, a large feat for the size of the park. The term open space becomes ambiguous, with the intensive upkeep required for the park, restrictions have been implemented. In 2004, a protest against The War in Iraq was banned from the Park, authorities inciting that the masses would kill the grass. Throughout the park's undulating history of popularity and recessions, it the prolific spread of the privately owned car with which the park met a decline. Though the Park in its inception included the aspect of various means of moving through the park, it is the notion of mass mobility that begins to change our view in geographic planning as well as articulations through for example materials, revealing in this particular case the

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<sup>110</sup> Barlow Rogers, Elizabeth. Introduction. *Rebuilding Central Park: A Management and Restoration Plan*. (Cambridge, MA: The MIT Press, 1987)

paradox between grass and social space.

La Villette in Paris 1987–1991, by Bernard Tschumi, is an example of the contemporary redefinition of the urban park and its use, from the garden tradition. La Villette was built over a period of fifteen years and selected among other projects in a competition to design for the “Grand Projects” economic, and cultural renovation of Paris.<sup>111</sup> The 1982 competition for a 21<sup>st</sup> century urban redefining of the park came

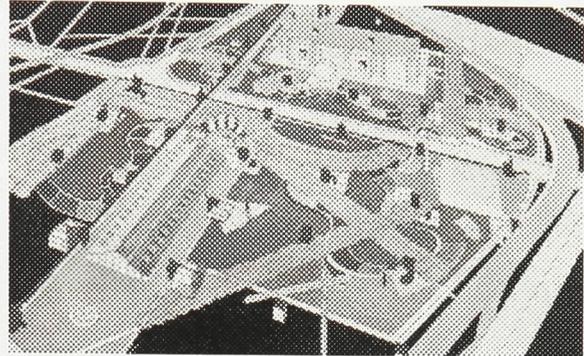


figure 5. Plan, Parc de la Villette  
K. Micheal Hays and Giovanni Damiani, Bernard Tschumi (New York: Rizzoli, 2003) 43.

six years after the 1976 competition for its initial plan on the 55 hectar site, in which Tschumi entered the plan for “Le Jardin Don Juan”. The Don Juan proposal conceived of “architecture as a language game that is not in search of meaning, but maps where conflict overcomes order, where concept collides with the movement of the body in space.”<sup>112</sup> The current park houses La Cité des Sciences et de L’Industrie, one of the largest science museums in the world but also accommodates various other culture elements and 25 architectural follies strategically placed on a grid over the park. The follies, are three story structures with neutral programs. The concept of the park is

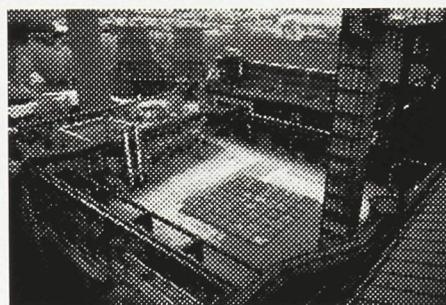
<sup>111</sup> K. Michael Hays and Giovanni Damiani, Bernard Tschumi (New York: Rizzoli, 2003) 42.

<sup>112</sup> Gevork Hartoonian, “Bernard tschumi: return of the object.” Architecture and ideas. 4.2 9 (2003). 29.

based on point, line and surface as orders (figure 5). Through distortions and superpositions, "[t]he idea of order is constantly questioned, challenged, pushed to the edge."<sup>113</sup> The design proposal drawing on theories of disjunction and deconstruction sought to breakdown traditional notions of park in their passive aesthetics. "For Tschumi, concept trumped context, ideas and activity trumped form, and Olmstead had no influence."<sup>114</sup> The lack of fixed program *is* the program, the goal being that of "emptying the object from its conventional connotative context, and reinterpreting a given program free from its formal contingencies."<sup>115</sup> But despite

its intentions, the park has been criticized as dull and inhuman and described as one of the city's least used parks.<sup>116</sup> The Park is also criticized by Georges Bataille who refutes Tschumi's intentions of the park as architecture

figure 6. Duisberg-Nord  
Lhttp://www.archidose.org/Sep00/latz2.jpg



against architecture. For Bataille the park undoes the existence of heterotopia and condones homogenization because the park sanitizes the historical heterotopic

<sup>113</sup> Bernard Tschumi, Architecture and Disjunction 209.

<sup>114</sup> George Hazzelrigg, "Living with Deconstruction." Landscape Architecture, June 2005: 168.

<sup>115</sup> Gevork Hartoonian, "Bernard tschumi: return of the object." Architecture and ideas, 4.2 9 (2003). 29.

<sup>116</sup> George Hazzelrigg, "Living with Deconstruction." Landscape Architecture, June 2005: 168.

slaughterhouses, over which the park is constructed. But recently the park has shown an increase in visitors attributing its success to its location between suburb and city.<sup>117</sup> Park de La Villette is an example that architecture while taking space also takes time, but it is not a passive action. In evading an immediate reading the object of architecture forms a dialogue with the body. Rather than reading a particular function the body in movement experiences the space formed as a result of its relationship to the object of architecture. Though it has taken fifteen years at La Villette, bodies have come to appropriate the architectural space by re-establishing relationships.

It is significant to note that at the time of the competition for Park de La Villette, landscape architects protested the participation of architects in the development of a park. Consider conversely, rather than the tabula rasa of La Villette, the conversion and reuse of the industrial site as park by landscape architects in Duisburg-Nord, Germany by Latz and Partner 1991-2000 (figure 6). This highly contaminated area of 230 hectares was transformed following the obsolescence of the coal and steel production in the Ruhr area.<sup>118</sup> From industry to leisure, the park uses biological and chemical interventions for example, of polyaromatic hydrocarbons by

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<sup>117</sup> Serge Goldberg, "Living with Deconstruction" qtd in Landscape Architecture, George Hazelrigg, June 2005.168.

spreading dolomitic limestone chips, due to their high pH values, to immobilize heavy metals.<sup>119</sup> What this project has in common with La Villette is its programmatic disjunction. The contemporary restoration of brownfields occurs through various remediation strategies including vegetation as well as the appropriation of infrastructures such as ore bunker walls as climbing elements, and a gasometer where scuba classes are held. Peter Latz describes the working method for the project as "a metamorphosis of industrial structures without destroying them..."<sup>120</sup>. These spaces are symbolic but also because they are formally different they are potentially kinetic in engaging the body and movement. The park is arranged as paths through the site, one long and one short, which cross motorways,

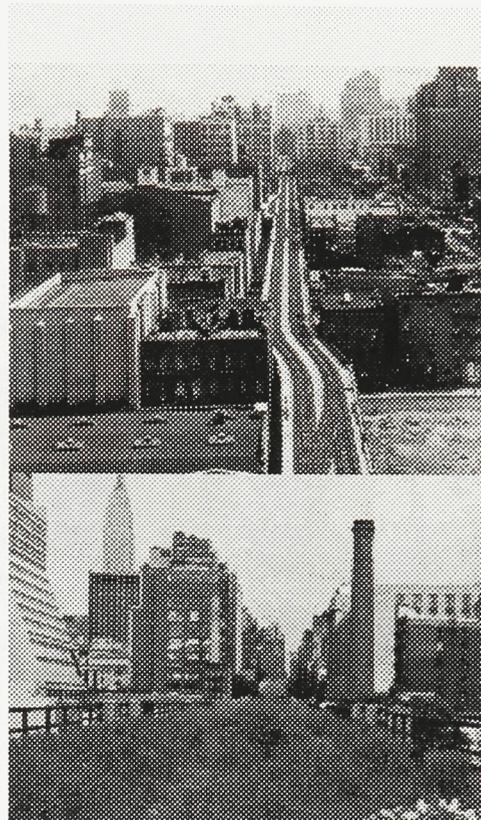


figure 7. High Line NYC top 1934, below current photo by Joel Sternfeld in *Dwell* Sept. 2005.

<sup>118</sup> Stefan Leppert, "Landschaftspark Duisburg-Nord, Germany." *Domus* 802 (1998): 32.

<sup>119</sup> Peter Latz, "Landscape park Duisberg-Nord: the metamorphosis of an industrial site" *Manufactured Sites*. Ed. Niall Kikwood (New York: Spon Press, 2001) 153.

<sup>120</sup> Peter Latz, "Landscape park Duisberg-Nord: the metamorphosis of an industrial site" *Manufactured Sites*. Ed. Niall Kikwood (New York: Spon Press, 2001) 151.

railways, sewers, furnaces, bunkers plants and monastic gardens.<sup>121</sup> The paths are spatial devices for framing particular views and in this sense call to mind the production of space of the English Gardens.

At the same time, obsolete vehicular infrastructures, railroads, viaducts even some highways are being reconsidered in their potential as leisure parks. The High Line, in New York City, an obsolete rail infrastructure, is one of these projects (figure 7). The rehabilitation of 1.45 miles of elevated strip of land 30-60 wide and 18-30 feet high currently closed to the public<sup>122</sup>, and overgrown with

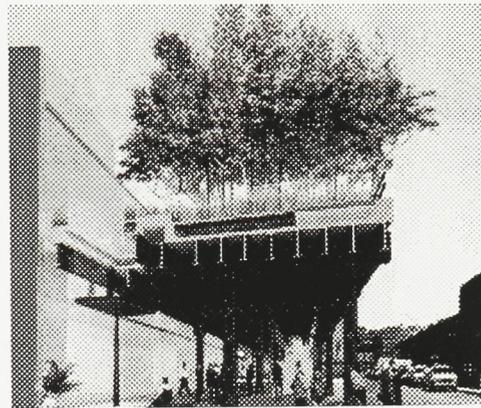


figure 8. High Line winning entry proposal Diller Scofidio + Renfro

grasses and weeds. Its natural succession has transformed the line into 6.7 acres of greenspace above the skyline. It is the underside of the line that confronts the city as a dark and unsafe place therefore the park will include programs that span vertically as well as along its horizontal path. The Highline will include a gallery, a hotel as well as residential programs. The first phase schedule for completion is for late 2007. The competition won by Field Operations with Diller Scofidio + Renfro with Olafur Eliasson,

<sup>121</sup> Stefan Leppert, "Landschaftspark Duisburg-Nord, Germany." *Domus* 802 (1998): 34.

<sup>122</sup> Open to trespassers

Piet Oudolf and Büro Happold aim to maintain the highline as unusual, we could say in the sense that it is currently a heterotopia, "wild in the sense of plant resilience, as well as slow to contrast the fast pace of the city underneath."<sup>123</sup> Other such parks and proposals for parks on old infrastructure include Promenade Plantée in the 12<sup>th</sup> arrondissement in Paris, the Reading viaduct in Philadelphia, the Bloomingdale Trail, in Chicago and Hofpleinlijn Rotterdam, Netherlands.<sup>124</sup> Hans Ophuis asks "do we still need parks" and answers, "people need them, in order, as it were, to lose and find themselves."<sup>125</sup> This quote reveals two important aspects of our contemporary mobile conditions in which we seek an ongoing movement of escaping the materiality of our bodies in extensions while recovering it through objects that mirror our bodies back to us.

Recently, the term parks has been adopted into the public-private space of work as 'office park,' 'innovation-park', and 'work park.' The term park adds the element of informality to the idea of scheduled and controlled work space and attempts to redefine the office condition as a mobile relationship between parts in close proximity, the central idea being communication by reciprocity by centralizing a decentralized network.

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<sup>123</sup> [http://www.thehighline.org/design/prelim\\_design/index.htm](http://www.thehighline.org/design/prelim_design/index.htm)

<sup>124</sup> Stefan Leppert, "Landschaftspark Duisburg-Nord, Germany." *Bonus* 802 (1998): 34.

Comprehensive list of parks can be found at <<http://www.thehighline.org/about/similarprojects.html>>

<sup>125</sup> Hans Ophuis. Qtd by Leppert, Stefan. "Landschaftspark Duisburg-Nord, Germany." *Domus* 802 (1998): 34.

The work park brings people together in an increasingly mobile system of production. Usually large complexes which house a variety of facilities, their existence is based on conferencing, meetings and largely for work with large physical equipment or collaborative work and forms a type of infrastructure in the mobility of the work place.

Though not yet obsolete, the personal office is getting smaller. The idea of hotelling offices provides space for mobile office workers on an as-needed basis. Not all practices can "afford a thousand square feet on a subway line in a metropolitan area" says David Crow with efforts underway to set up what is being called a "third working space" in Toronto, to which Crow adds that "Culture is the most important thing...it's got to be somewhere you want to be around, physically and cognitively...[t]his cultural element is what should differentiate third working spaces from "hotelling" services...satellite offices far outside urban cores".<sup>126</sup> The Toronto example follows that of Charlottetown based Queen Street Commons, which provides private work space, common and meeting rooms as well as kitchen, eating and amenities areas. It works based on a membership at \$35 per months which is allocated in 6 month blocks, one day is \$20 and a week \$80, which includes IT services, equipment and even a mailbox, private voice mail and locker at an additional cost.<sup>127</sup> The community is housed under one

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<sup>126</sup> Shane Schick, "New Type of office lures workers from homes, cafes," Globe and Mail, 8 June 2006  
<<http://www.theglobeandmail.com/servlet/story/RTGAM>>

appropriated 100 year old, three story Victorian house.<sup>128</sup> What the concept provides through locality, is the potential for embodied cooperative exchange rather than isolation, as well as a distancing or physical boundary from other aspects of a private life. Shane Schick describes these environments as “physical representations of the collaboration that blogs, wikis and related technologies have fostered over the internet...” adding that, they could change what we expect out of the working experience.<sup>129</sup>

## invisible sites

To what degree does site influence a project? Despite its success, historically, the implementation of Central Park in New York displaced emigrant populations that were living in the areas such as Seneca Village. The Park was a completely man made transformation of the area into a greenspace. La Vilette similarly distances itself from the site context with tabula rasa and concept in a process that places a grid over the

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<sup>127</sup> <<http://queenstreetcommons.org/>>

<sup>128</sup> Dan James, “224 Queen Street-Charlottetown” *CEO Blues*, 25 January 2005.  
<<http://www.ceoblues/archives/2005/january/224queenstreet>>

site in a complete transformation from slaughterhouses and industry to technological leisure park. The transformation of Duisberg–Nord as a reclamation project as well as the High Line, work with the site by transforming its use and engaging the history and geography of the site through the process of remediation as formal elements. Although engaging redevelopment into everyday life Duisburg becomes partly museum in displaying the objects by the guided paths through the site.

The response to the influence of site orients the intervention and is dependent on defining the meaning of site. In *Architecture of the City*, Aldo Rossi writes about the city as an artifact in which *time* is a material force in its' development, giving prominence to a historical relationship. Current views on the topic of site introduce the importance of '*geography*' in architecture as a socio-spatial dialect. This is what Edward Soja refers to as a triple dialectic of space, time as well as social being.<sup>130</sup> The contemporary discourse of space in Geography involves an examination of its own language and representation and its effects within social and cultural space.

In contemporary space, orientation is displaced from internal indicators to

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<sup>129</sup> Shane Schick <<http://www.theglobeandmail.com/servlet/story/RTGAM>>

<sup>130</sup> Edward Soja, Postmodern Geographies: the reassertion of space in critical social theory. (New York: Verso, 1989) 12.

external abstract indicators technological<sup>131</sup> as well as representational.<sup>132</sup> Decentralization has affected the body of production, state as well as the self. Decentralization is in effect a deterritorialization. In the *Production of Subjectivity*, Felix Guattari writes about the contemporary subjectivity as a 'machine addiction' which influences power, knowledge and self-reference. He notes that this deterritorialization gains consistency because it is based on a flexible system of ideological references fundamental to its survival.<sup>133</sup> The examples he uses are the following three 'machines' /systems which become spaces of social practice. The first is *Christianity*, through the deterritorialization of a God who is transcendent and everywhere, the second is *Capitalism*, which deterritorializes through print, mobility, and the manipulation of time, and finally *Computerization*, which deterritorializes through the democratization of data and modes of knowledge. These systems afford lasting representations of space as long as their ideologies remain flexible. Paradoxically, these representations of

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<sup>131</sup> "They placed a gypsy woman at one end of the village and set up the telescope at the entrance to the tent. For the price of five reales, people could look into the telescope and see the gypsy woman an arm's length away. "Science has eliminated distance," Melaquíades proclaimed."<sup>131</sup> From *One Hundred Years of Solitude* By GabrielGarcíaMarquez.

<sup>132</sup> For example, a topographical map reveals changes in elevation at 'n' increments specified in the legend. If part of this map is selected and there is no indication of a reference elevation the map is liable for 'mis' readings. When we look at a topographical map the distance is measured as a straight line, and yet the embodied distance entails may other variables such as the change in elevation or access.

<sup>133</sup> Felix Guattari, "The Production of Subjectivity" in *Incorporations*. Ed Jonathan Crary and Sanford Kwinter. (New York: Zone, 1992)

absolute space remain absolute because they are flexible.<sup>134</sup> Fixity lies in the *process* of the production of space. "The spatial practice of a society secretes that society's space; it propounds and presupposes it, in a dialectical interaction; it produces it slowly and surely as it masters and appropriates it."<sup>135</sup> Despite change, this directed process results in a closed system, a continuous system that ultimately transforms and disguises notions of difference.

"...the notions, crucial in architecture, of **inside** and **outside**, ... are gradually losing their importance... even the difference between **high** and **low** is being eroded, despite the fact that this difference is a major part of putting buildings up!"<sup>136</sup>

"...all partitions between inside and outside have collapsed...[w]ithin and without have melted into transparency, becoming indistinguishable or interchangeable...The sphere of private life ought to be enclosed, and have a finite, or finished, aspect. Public space, by contrast, ought to be an opening outwards. What we see happening is just the opposite."<sup>137</sup>

While commenting on this disintegration between inside and outside, for Lefebvre, the clear distinction between dualities of space such as inside/outside, open/closed, movable/fixed are *representations of space* based on the concept of space-as-matter,

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<sup>134</sup> An example of this is the production of space in George Orwell's book *Animal Farm*, 1945.

<sup>135</sup> Lefebvre, *The Production of Space* 38.

<sup>136</sup> Paul Virilio, *Open Sky*, trans. Julie Rose (New York: Verso, 1997) 55.

in which absolute space carves out distinct oppositions.<sup>138</sup> He reveals the dualities as a deceptive spatial concept that reinforces the idea that space is readable. "This is a society which... aspires to be, loudly proclaims itself to be, and perhaps even believes itself to 'readable' and transparent, whereas in fact it is the very epitome of opacity, indecipherability and 'unreadability' "<sup>139</sup> to which he states as examples the oppositions in the institutions of 'justice' the 'military' or the 'police.' His explanation is that social space is tied to the relationship between form, function and structure, which though seemingly producing the 'readability' of space, actually 'hides' and obscures relationships. Therefore, when he says that inside and outside have melted into transparency he is acknowledging the obscurity behind what gets proposed as readable space.

Orientation and movement must also be realized in context of their social space. The two important issues are: the body and social space because behind them lie contemporary questions in regards to the role of the architect. Merleau-Ponty criticizes Lefebvre<sup>140</sup> in his focus on social space with the following allegation:

"M. Lefebvre lives subjectively just like everyone else, though he would like to ignore this fact. Even he must sometimes stop thinking about

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<sup>137</sup> Lefebvre 147.

<sup>138</sup> Lefebvre 163.

<sup>139</sup> Lefebvre 149.

<sup>140</sup> It should be noted that *Sens et non-sense* was first printed in 1948, twenty-six years before the first publication of *La Production de l'espace. The Critique of Everyday Space*, is a collection which spans from 1933 -1992 (post-humous)

politics for a few hours and return to it afterwards as to a duty. If his life has for him a political meaning, it is because he gives it this meaning through decisions of his own."<sup>141</sup>

But the conclusion of *The Production of Space* seems to respond to this criticism. For though focused on social space Lefebvre's argument is contemporary in that it embodies a dialogue for those affects remotely controlling perception:

"I speak of an *orientation* advisedly. We are concerned with nothing more and nothing less than that, We are concerned with what might be called a 'sense': an organ that perceives, a direction that may be conceived, and a directly lived moment progressing towards the horizon. And we are concerned with nothing that even remotely resembles a system."<sup>142</sup>

It is Lefebvre's concern of the subjective body that he turns to examine its overriding influence through political and social practices of space. As Merleau-Ponty turns to pathologies to explain spatiality and the body, Lefebvre turns to politics. The politics of spatial practices becomes increasingly important through geographical examinations of deterritorialization, more specifically reterritorializations of mobility.

The contemporary space of mobility involves a complex geographic information system. The radical confusion of architecture and networks is marked, by Mark Wigley, in the meeting of Buckminster Fuller and Marshall McLuhan in 1963 with the mutual

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<sup>141</sup> Merleau-Ponty "The Battle over Existentialism" 80.

interpretation that communication and the evolution of technology was the evolution of the body into a new organism which should correspondingly form new spatial systems and architecture<sup>143</sup>. The premise was the control and organization of data in a world whose growth had become chaotic.<sup>144</sup> Despite the underlying understanding of the relationship between growth and movement and an interest in the mobile species and circulation, it is telling that the Delos meetings, as the symposiums where Fuller and McLuhan first met were called, asserted to begin from the place where the rationalist CIAM left off on it's last key function of urban planning from dwelling, working, recreation to traffic.<sup>145</sup> Though the Delos meetings questioned the integration of the electronic with the human scale, what becomes important after acknowledging the space of mobility and networks is the reversal of the above statement: the integration of the human scale with the electronic. Which brings us from a discourse on the social body to ethics. Though this thesis will not delve into ethics, to paraphrase William J. Mitchell, the networked planet is not a global village and differs profoundly in it's civic arrangements in that reciprocity as spatial experience, meshes with networks of spatial representations of the city which have become the spatial and material embodiment of

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<sup>142</sup> Lefebvre. *The Production of Space* 423.

<sup>143</sup> Mark Wigley "Network Fever", *Grey Room* 4 (2001) 83-116.

<sup>144</sup> Bergson is quoted in *Learning from Las Vegas* "disorder is an order we cannot see" pg 52.

<sup>145</sup> Wigley 95.

relationships without boundaries.<sup>146</sup> The significance in the physical boundary lies in its immediate relationship between the body and the experience of its environment. Distance creates natural boundaries but there is no point to boundaries if there are no differences.<sup>147</sup>

[T]he standard for location on the earth ...has now become the earth's centre of mass around which satellites orbit...[but] in the end one must calibrate the orbits of one's satellites against something taken...for the most pragmatic reasons to be on the face of the earth."<sup>148</sup> The abstraction of locations to information points based on global projections and positioning systems localize the body as one of these points. The system incorporates the information of the point as a signal so that it is no longer the body but the signal, which is oriented. This thesis does not attack the geographical positioning systems as a representation of space, but only emphasizes this space as a social practice, which as it becomes more prevalent, approaches the notion of an absolute space when effectively it is a single representation. The implication of which is that architecture would follow a similar representation of space.<sup>149</sup> Soja criticizes architects in overlooking the implications of what he terms 'constructed geographies'.

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<sup>146</sup> William J. Mitchell, 19.

<sup>147</sup> William J. Mitchell, 19.

<sup>148</sup> Micheal R Curry, Digital Places: Living with Geographic Information Technologies. (New York: Routledge, 1998) 44.

<sup>149</sup> Antagonistically, buildings literally get in the way of GPS signals.

"...the city as an expansive urban system of movements and flows, of goods being produced and people living not just in built environments but in constructed geographies characterized by different patterns of income, unemployment, education levels, ethnic and racial cultures, housing and job densities, etc. All these things are often pushed aside in the obsession – sorry, the passionate concern – architects have for design..."They miss

the power of these multiple scales that go from the local to the global, the micro to the macro. They're pretty good with the micro-scale. Some architects have done excellent work, for example, on the body and bodyspace. But to get up into a more comprehensive multiscale logic is far more difficult."<sup>150</sup>

This geographical space is the space of mobility. At the International Architecture Biennale in Rotterdam 2003, vehicular mobility was investigated beginning with a collection of data from the Randstad Circuit<sup>151</sup> later published in 2003 as *Holland Avenue*.<sup>152</sup> The collection of data was taken under two categories of 'hardware' and 'software'. *Hardware* was the collection of facts and figures pertaining to policy and ownership and *Software* was collected on film where a camera was placed at the driver's eyelevel registering data on tempo, depth of field, landmarks and gas stations,

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<sup>150</sup> Edward Soja, "Restructuring the Industrial Capitalist City." *TransUrbanism* Interview with Arjen Mulder. (Rotterdam : Nai Publishing, 2002) 90–91.

<sup>151</sup> Holland Avenue study (The Fun Road) Project by Mecanoo, commissioned by the Ministry of transport, Public Works and Water Management Delft 2002. The Randstad is the agglomeration of the major cities in the Netherlands and the study included routes joining Amsterdam, Leiden, Den Haag, Delft, Rotterdam, Gouda and Utrecht.

<sup>152</sup> Francine Houben, "Holland Avenue" *Mobility: A Room with a View*, ed. Francine Houben, Luisa Maria Calabrese ( Rotterdam: Nai Publishers, 2003) 47.

lanes and green space.<sup>153</sup> The aim of the collection culminated in *Visionware*; “design approach to the motorway from the point of view of the user”<sup>154</sup> The Biennale took Holland Avenue to the ‘World Avenue’ project with ‘a broad comparative study of the international issues on the topic of mobility in nine world cities; Los Angeles, Tokyo, Beijing, the Pearl River Delta, Jakarta, Beirut, Budapest, the Ruhr area and Mexico City’.<sup>155</sup>

“...teams of researchers and designers, each of which, in accordance with a fixed set of criteria, examined and made a visual record of a vital mobility route with an average length of 100 km. In addition, each university wrote an essay in which the questions asked were subjected to closer consideration.”<sup>156</sup>

Their investigations, which began as the collection of data on vehicular movement, ultimately lead to encompassing understandings of the particular relationships in regards to the condition of mobility and to new questions to include the affect on bodies. What is the relationship of mobility to architecture? The question of whether architecture can solve the problems of mobility is tied to the way in which the discipline defines

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<sup>153</sup> Francine Houben, *Mobility: A Room with a View* 47,49.

<sup>154</sup> Francine Houben, *Mobility: A Room with a View* ( Rotterdam: Nai Publishers, 2003) 49.

<sup>155</sup> Francine Houben, forward, *Mobility: A Room with a View* 13.

<sup>156</sup> Francine Houben, forward, *Mobility: A Room with a View* 13.

these problems. Mobility discussed here is the challenge of an absolute space. Architecture as a mirror of the body can challenge this space or contribute to its production. How is the space of mobility controlled? How does it control architecture as well as the body? The study reveals the diversity in the conditions of mobility and the spaces that they produce, differing in light of varying political, social and technological differences.

The background and essays from the case studies of the 'World Avenue' project describe site conditions of the spaces of mobility. The issues propose interesting relationships in regards to architecture and mobility facing interventions on infrastructures of mobility, in this case that accommodate vehicles, while providing liveable conditions for all degrees of mobility. They are brought up in this section in order to demonstrate mobility as site and social space. As unique narratives the descriptions reveal the extent to which relationships influence the production of space.

What is most interesting about the 'World Avenue' study is the different social spaces produced by mobility, because they are affective and yet transparent. For example, over 90% of drivers in Los Angeles are alone in their vehicles and listening to the radio.<sup>157</sup> While signs indicate boundaries, it is the radio that produces an auditory perception of limits on the freeways of Los Angeles. This transparent medium produces a particular social space depending of the type of radio one listens to which is divided

into the categories of Entertainment (urban music or classic rock and oldies) or Information (classical/jazz or country). Cell phones enable participation from drivers who call in to win contests, for advice or general information.<sup>158</sup>

Another example of the social space of mobility produced through transparent relationships is the clash between the two contradictory political regimes in Jakarta, the first believing in the importance of large scale infrastructural renovations to accommodate mobility, the second, lacking the vision to continue such renovations.<sup>159</sup> These conflicting views of mobility have produced significant barriers to free circulation, environmental problems and have created their own social spaces. In Jakarta mobility is synonymous with the privately owned car.<sup>160</sup> “[S]ocial problems that emerge from economic crisis situations spill over to the roads as part of the experience of mobility.

Sidewalks as well as “...two out of four lanes are taken up by street peddlers.”<sup>161</sup> “...Jakarta is the kind of city where walking is discouraging and bicycling is unthinkable”<sup>162</sup> Because of street congestion a law was introduced to promote carpooling.

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<sup>157</sup> Mobility: A Room with a View 146.

<sup>158</sup> Mobility: A Room with a View 146.

<sup>159</sup> Mobility: A Room with a View 144.

<sup>160</sup> Mohammad Danisworo, Achmad D. Tardiyana and Heru W. Poerbo, “A Room With Contrasting Views”, Mobility: A Room with a View, ed. Francine Houben, Luisa Maria Calabrese (Rotterdam: Nai Publishers, 2003) 244.

<sup>161</sup> Mohammad Danisworo, et al. “A Room With Contrasting Views”, Mobility: A Room with a View, 250, 251.

<sup>162</sup> Mohammad Danisworo, et al. “A Room With Contrasting Views”, Mobility: A Room with a View, 244.

The 'three-in-one' government policy prohibits entrance into busy parts of the city during rush hours for vehicles with less than 3 passengers, the response has been a social phenomenon where people line the streets to provide the service of 'passenger'.<sup>163</sup> Any concern for the body commodified by mobility, is complicated in Jakarta where the body offers itself up as a moving good.<sup>164</sup> The body appropriates the space of mobility without resistance it relinquishes its own space into the space of economy by choosing to participate as a form of information. It could be argued that this action is the body's own production of non-place.

In Beirut, the road is appropriated by drivers. The city had been without traffic lights until the 1990's when they were reintroduced as blinking lights to encourage awareness.<sup>165</sup> "However, the Lebanese habit of driving without traffic lights...dies hard...drivers still do not take kindly to this imposition of sporadic imposition of order"<sup>166</sup> The 'World Avenue' workshop mapped the chaotic movement by videotaping from inside the moving vehicle. According to its director there, Ciro Najle, the study "attempts a

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<sup>163</sup> Mohammad Danisworo, et al. "A Room With Contrasting Views", 244.

Mobility: A Room with a View, 251.

<sup>164</sup> This topic deserves a documentary

<sup>165</sup> Mohammad Danisworo, Achmad D. Tardiyana and Heru W. Poerbo, "A Room With Contrasting Views", Mobility: A Room with a View, 272.

<sup>166</sup> Mohammad Danisworo, Achmad D. Tardiyana and Heru W. Poerbo, "A Room With Contrasting Views", Mobility: A Room with a View, 272.

decodification of legal conventions and jargon, and the rethinking of the material components and organisation of the road system as a physical condition."<sup>167</sup> In this case the body through its vehicular mode of extension appropriates the space of mobility through resistance. At the risk of chaos each body produces its own space resulting in conflicts of movement. This case materializes mobility as a condition, which can be manipulated and emphasizes that the space of mobility as absolute space is largely a condition of adopting a representation of space.

The conditions in both Jakarta and Beirut produce very different results in the vehicular spaces of mobility yet both appropriating the infrastructure with the body. The implications for architecture are that architecture too, produces infrastructures of mobility. Information, people and goods all pass through some built form, which attempts to control their circulation. When architecture reproduces the spaces of mobility, as a condition designed as part of a system exterior to the body for the body, it treats the body as part of that information system and not necessarily as an experiencing body. The discipline of architecture is most recently being consulted in the enterprise of designing road infrastructure among other infrastructures for various modes of mobility. This consultation is often a result of the understanding that

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<sup>167</sup> Mohammad Danisworo, Achmad D. Tardiyana and Heru W. Poerbo, "A Room With Contrasting Views", Mobility: A Room with a View, 272.

architecture affords visual and organizational applications in the production of space. The emphasis on the relationship between mobility and design as providing a visual experience is due to the primacy in perception attributed to vision. The eye achieved its dominant role in the practice of architecture with the emergence of the detached observer, brought about by technological extensions of the eye.<sup>168</sup> Through representation, mechanical ocular devices suppressed the effects of the other senses. The microscope and printing press were significant in upholding the primacy of vision but steam engine and film, as ocular devices, would concretize particular representations of our experiences of the world. What film and steam rail offered were representations of the world in movement. These visual representations are detached from the body of the observer: the static subject perceives movement. Tamás Török criticises the focus on the aesthetics of mobility in the 'design atlas' of the Holland Avenue Project that gave rise to the World Avenue Project published as "Mobility: A Room With A View" in 2003 in its aims to engage the viewer from the road, thus concentrating on visual stimuli:

"The slogan "A Room with a view' suggests a situation very similar to watching television. This is also detectable in the drawings illustrating this idea in the book Holland Avenue. A person set into a passive state, isolated from the world and his/or her own senses, watching images,

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<sup>168</sup> Juhani Pallasmaa, The Eyes of The Skin: Architecture and the Senses. (West Sussex England: John Wiley & Sons, 2005) 27.

listening to the accompanying sound...we shall understand that the common drive for money, spare time and endless comfort are not necessarily valid." <sup>169</sup>

Yet, the role of architecture in mobility is also significant in that it mediates movement as a relationship between the body and its environment. Architecture resists the body. This is an aspect which architecture relearns and reinterprets from investigating its role in mobility and movement. In questioning mobility as an embodied experience the questions raised after Holland Avenue in the World Avenue Project seek to establish the spatial conditions of mobility. Besides attempting to solve the problems of mobility through architecture Török ask why have these problems become questions for architecture. "This is of great importance, when we are about to solve problems; we might be uselessly trying to solve the symptom instead of the problem individualism that have to be widened, spread out..."<sup>170</sup>

For Lefebvre, site as it is allotted to the architect is by no means innocent it is in fact preconceived space, 'the space of the dominant mode of production'<sup>171</sup>. This relationship orders a preconceived graphic representation.

'Within the spatial practice of modern society, the architect ensconces himself in his own space. He has a representation of this space, one which is bound to

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<sup>169</sup> Tamás Török, "Simpli-City", Mobility: A Room with a View 304.

<sup>170</sup> Tamás Török, "Simpli-City", Mobility: A Room with a View 304

<sup>171</sup> Lefebvre 360.

graphic elements - to sheets of paper, plans, elevations, sections, perspective views of façades, modules and so on. This conceived space is thought by those who make use of it to be true, despite the fact - or perhaps because of the fact - that it is geometrical...<sup>172</sup>

Space is produced less than it is reproduced by representations and social forces. Contemporary space produces the 'freedom' of mobility where the ultimate goals remain those of Capitalism. The challenge then, remains to produce counter space within that mode, to produce resistance from the limiting space of the absolute. To counter the absolute space of mobility is to incorporate movement through difference, which produces gaps in the continuous space of mobility. Incorporating mobility requires 'the other', or many simultaneous 'others', a space for heterotopias.

## site & proposal



figure 9. site. photomontage from the roof of existing building

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<sup>172</sup> Lefebvre 3

The physical site for this thesis is a former brownfield located near the Niagara Escarpment in Hamilton, Ontario. Hamilton is the tenth largest city in Canada with a population of over half a million people. Historically an industrial centre, the blue-collar city became known by theonyms of Steeltown and Hammertown because of the steel industry, which was its main employer until recently decentralized by the health



Figure 10. Representation of proposed Innovation Park

industry, research and education.

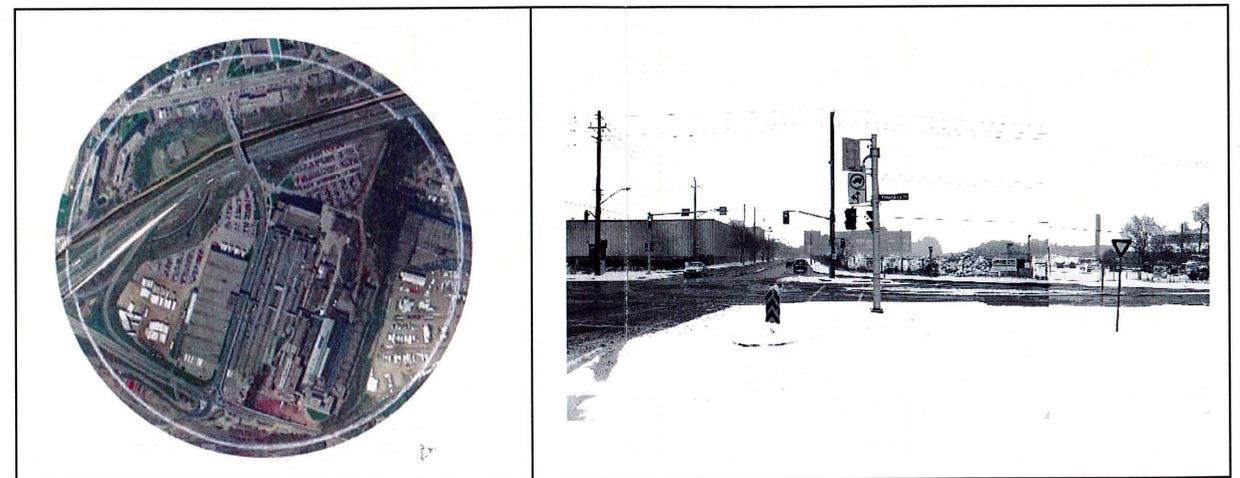
McMaster University and Hospital are physically located adjacent to each other near the proposed site in the West end of downtown Hamilton supporting one another as research and private sector and consequently on the opposite side of the city in terms of the Steel Plants in

the East end. The proposed site at Longwood Road South and Aberdeen

Avenue was selected in response to the social space of this site, a space transformed by its new lease as 'McMaster Innovation Park.' Previously an industrial site for Westinghouse and later Camco Industries, which manufactured appliances, the industries closed under 'global pressures'.



figure 11. Hamilton Orthophoto NRC, NAPL 2005. site area before demolition circled, central downtown area dashed



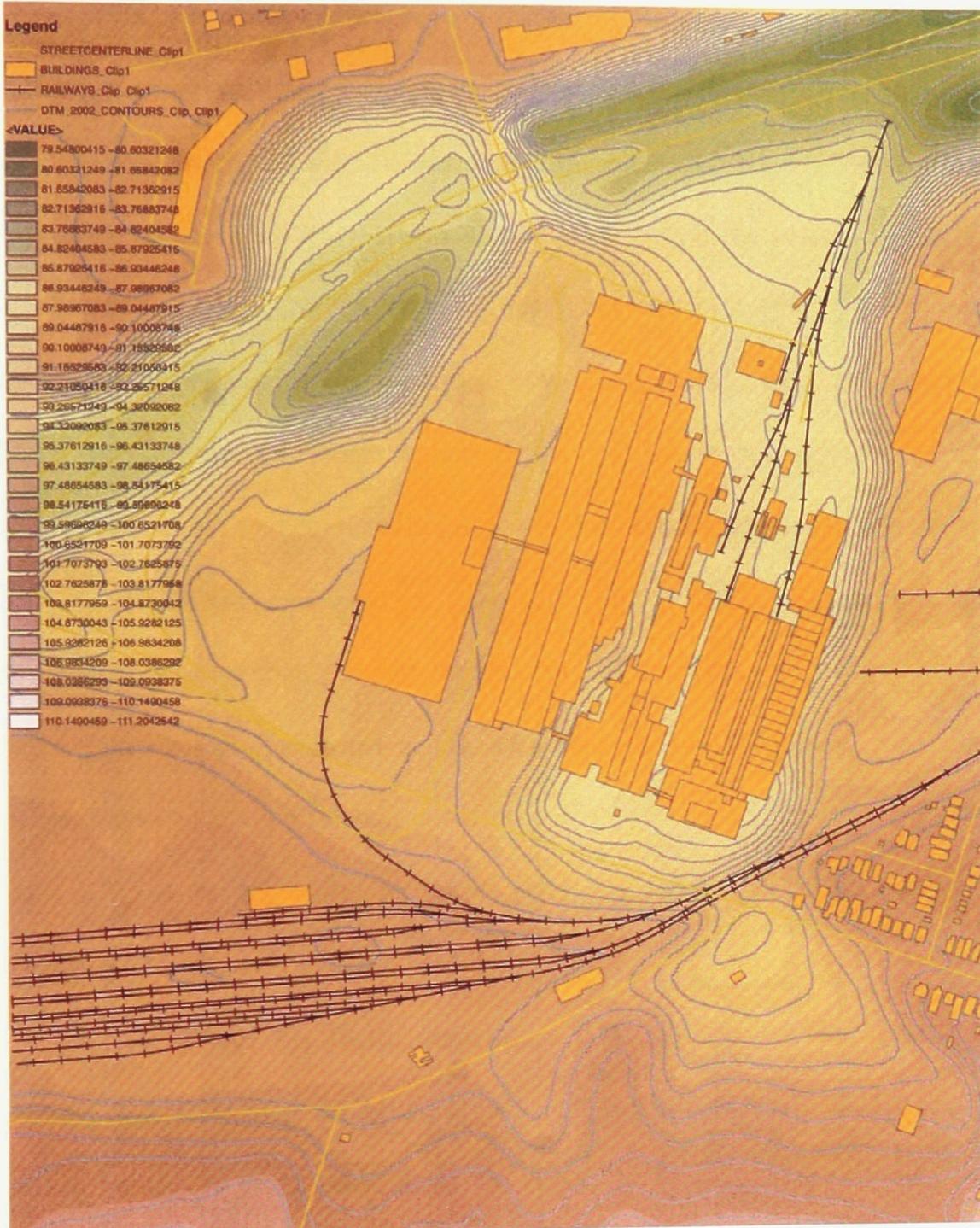


figure 12. Topographical map of site using 2002 data

It is the combined program of research and industry that defines the site because it forms particular relationships with its surroundings. In general, research and industry are associated with private space, regulated and fixed. The thesis proposal, therefore, is significant to the *site* in that it considers the proposed *open* space for the Innovation Park, a central park, by questioning the notion of 'open' as unfixed and questions the program of the term park. The site is flanked by the QEW to the North-West and the Canadian national Railway to the East and West (figures 11 and 12).

The current architectural proposal for the site by Diamond + Schmitt Architects Inc. will be considered as existing, along with the main office and smaller coal building which have been retained.<sup>173</sup> Their proposal follows the grid with the park running East-West (figure 10) at the centre of the site, and intersecting Longwood road, which runs perpendicular to the park. Also noted here is that in the process of demolition 5 piers were located in the proposed park area with estimated depths of 23-28 feet underground.

The goal of the thesis proposal is to appropriate the park of the proposed Diamond + Schmitt plan as an instrument that engages the body in movement and as counter space to fixed experiences of mobility. The boundary between the thesis proposal and plan for the Innovation Park is in questioning the notion of boundary, through phenomenological thresholds for the body that propose in turn,

questioning program. The program combines 'third working space' offices with the notion of park. The Diamond + Schmitt proposal for the site accommodates over one million square feet of building space, in a plan that follows the grid of the city and functional planning principles through various patterns of mobility; circulation of pedestrian, vehicular and even bicycle lanes while incorporating sustainable design initiatives such as green roofs and the collection of storm water.

The thesis investigation accepts the plan as an existing condition and treats the appropriation of the park as an infill project. The proposal stems from the statement of planners that the central park is to have a key role as part of the planning "open spaces...will become a landmark in the city... [I]t will be a place to work and play while encouraging interaction and creativity."<sup>174</sup> The thesis questions the



figure 13. Former bridge across Longwood road.

interpretation of open space as traditional notions of space as the void around the buildings. The park, a 30-meter wide space, which runs along the centre, becomes a representation of openness.

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<sup>173</sup> areal plan of the proposal at <http://www.mcmaster.ca/research/mip.htm>

<sup>174</sup> << [http://www.mcmaster.ca/research/draft\\_plans.htm](http://www.mcmaster.ca/research/draft_plans.htm)>>

This thesis focuses on openness as a condition of indeterminacy with open relationships while expressing limit through the quality of space.

Taking, the example of The World Avenue Project, the site was filmed on various occasions from a car dashboard revealing the role of Longwood not only as a street bisecting the site but also as a part of the site. In light of this, the thesis proposes a bridge extending the park over the street. Historically, the site was joined by an enclosure that formed a gateway over the site but was torn down in the process of demolition. The re-implementation of the bridge is the starting point of the project: a park as gateway and a gateway to appropriating the site (figure 13).

## representation and the construction of techniques

The question of representation in architecture seeks to reconcile denotation and connotation but also to form an open process that engages experience. As opposed to representations of space, conceptions of space as Lebevre's definition of *representational* spaces, combine the perceived, the conceived and the lived experience and resist absolute representations through the participation of body as physical as well as mental processes. The task in representing experience involves an embodied process of making. The condition of mobility as a fixed translation and as an extension

of the body permeates production practices and the process of architecture. An important aspect is to consider movement as active participation. A particularly important question, which refers to architecture as media, considers whether film and animation are passive notations of movement. Movement is defined as participation not only as translations of the body but through subjective interpretation. Films and digital animations that engage interpretation are effectively participatory. *Play Time (Tati 1967)*, shot intentionally in wide angle at 70mm, allows the viewer multiple readings of the film. The events in *Play Time* in their multiple and simultaneous occurrences, force the viewer to choose where their attention will be or what sounds to concentrate on.

Watching the film twice is like experiencing the film from another perspective, which confronts the idea of the cinema as 'a spectacle projected within an enclosed space on a depthless screen.'<sup>175</sup> Similarly, if seen at the cinema, the wide format actually changes the viewing experience depending on where one is seated in the centre or at the edges of the movie theatre.<sup>176</sup> Participants appropriate their own experience of the film. The exploration of experience in film can inform the traditional modes of architecture in the appropriation of plan, section and elevation so that they not only

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<sup>175</sup> David Harvey, "Time and Space in the Postmodern Cinema," in *The Condition of Postmodernity*. (Cambridge, MA: Blackwell, 1989). p. 308

<sup>176</sup> Joan Ockman, "Architecture in a Mode of Distraction", *Architecture and Film*. Ed. Mark Lamster. (New York: Princeton Architectural Press, 2000).p.186

represent experience but engage us in experience. The representation should engage the viewer in movement as a subjective interpretation within the representation of mobility as the objective framework. Images like objects produce space, the most ubiquitous example being the conventional geographic map. While producing space, both social and geographic, the image has a modern history of inciting questions of the production of space challenging its production versus its representation. The works of Max Ernst remain unique in his various processes that appropriate space. His technique of *overpainting* involves a process of subtraction in which elements of existing commercial prints are opaqued to form new readings.<sup>177</sup> In his colonization of the encyclopedia Ernst criticizes the logic of categories by transforming the representation of the absolute space of knowledge (figure 15, 16). Ernst comments on our conditioning in the reading of images 'a mechanical seeing'<sup>178</sup> Max Ernst's overpaintings are of particular interest in his use of relative formation (deformation) of space. He appropriates rational space by transforming relationships. A second technique Ernst uses is frottage, a physical transfer of texture. In combining these two techniques Ernst produces space through figure ground relationships. As vehicles, the transformation of Ernst's construction of techniques express Lefebvre's idea of

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<sup>177</sup> Rosalind Krauss. The Optical Unconscious (Cambridge, MA: The MIT Press, 1993) 46.

<sup>178</sup> Rosalind Krauss. The Optical Unconscious 53.

representational spaces, the characteristic of representational space being their openness to interpretation. It is in terms of appropriation that the works of Ernst, as well as Duchamp, meet Lefebvre's philosophy

in the production of space the ready-made as site for counter space. Representational space therefore includes 'non-representational' works such as spatial relationships in the works of Paul Klee

claiming: "...original movement, the agent, is a point that sets itself in motion. A line

comes into being. It goes out for a walk, so to speak, aimlessly for the sake of the walk". Paul Klee writes about the mark of the drawing in terms of an undirected movement, a kind of *derivée*. The question then, lies in representing an open interpretation that demonstrates an embodied experience. De Solà-Morales considers the experience of movement beyond gaze: "[c]onventional representation, perspective, continues to be entirely wrong, even when it makes use of sophisticated computer design programs. It is no use continuing to present visions, even if they are animated,

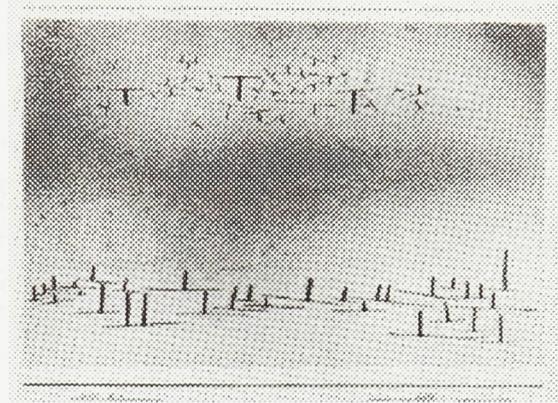


figure 14. Paul Klee, Lote, 1925 Paul Klee 1879-1940 Haus Der Kunst. Munchen

in motion, virtual, etc. The experience of the place of flow is synaesthetic...<sup>179</sup> Because architecture is formed in the realm of representations a theoretical discussion begins in the process of producing representations. Walter Benjamin writes:

"[l]et us compare the screen on which a film unfolds with the canvas of a painting. The painting invites the spectator to contemplation; before it the spectator can abandon himself to his associations. Before the movie frame he cannot do so. No sooner has his eye grasped a scene than it is already changed".<sup>180</sup>

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<sup>179</sup> Liquid Architecture. Anyhow. 43.

<sup>180</sup> Walter Benjamin. Illuminations 238.

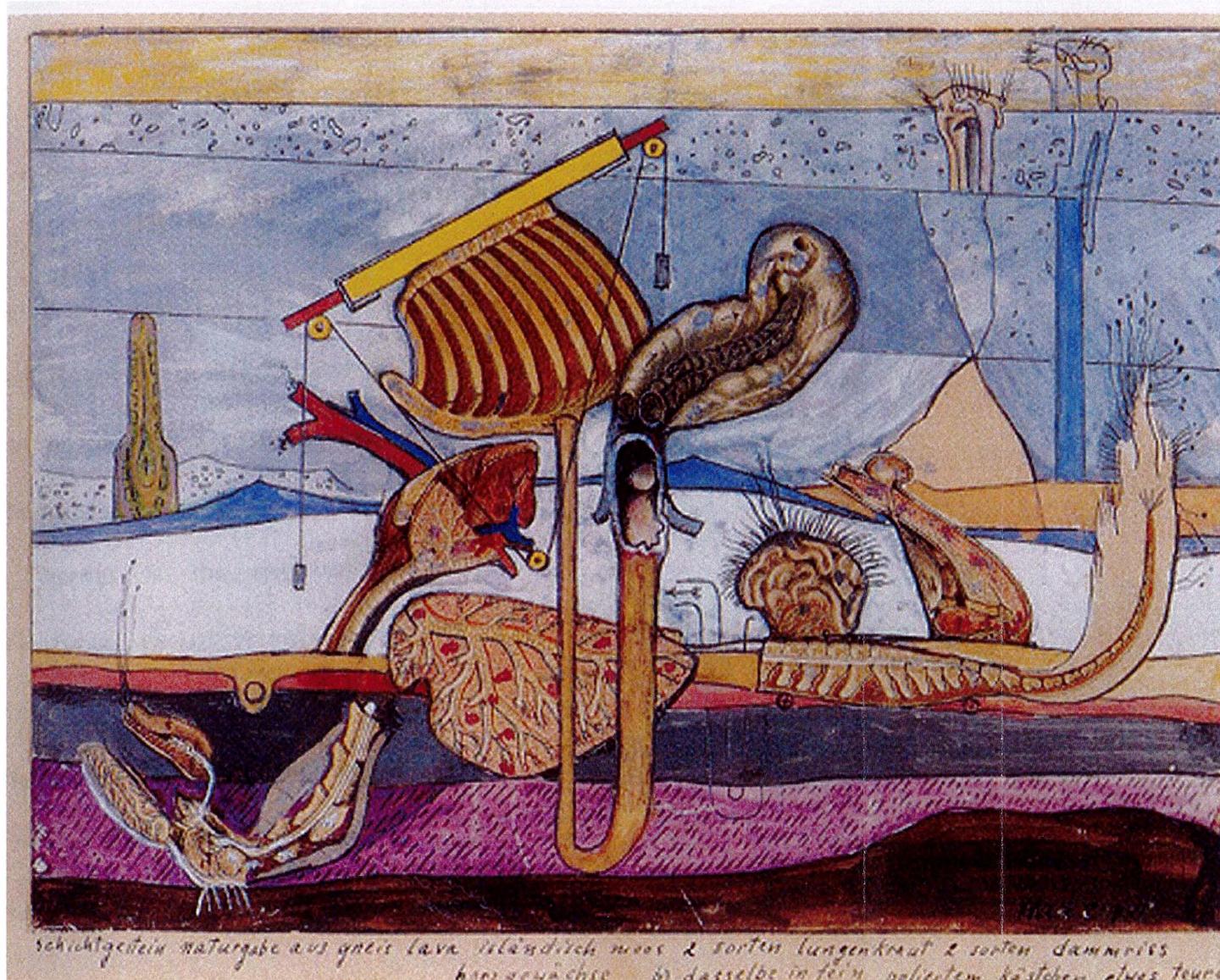


figure 15. Max Ernst, Stratified Rocks, Nature's Gift of Gneiss Lava Iceland Moss...ca.1920

Max Ernst A Retrospective (New York: Yale University Press, 2005)

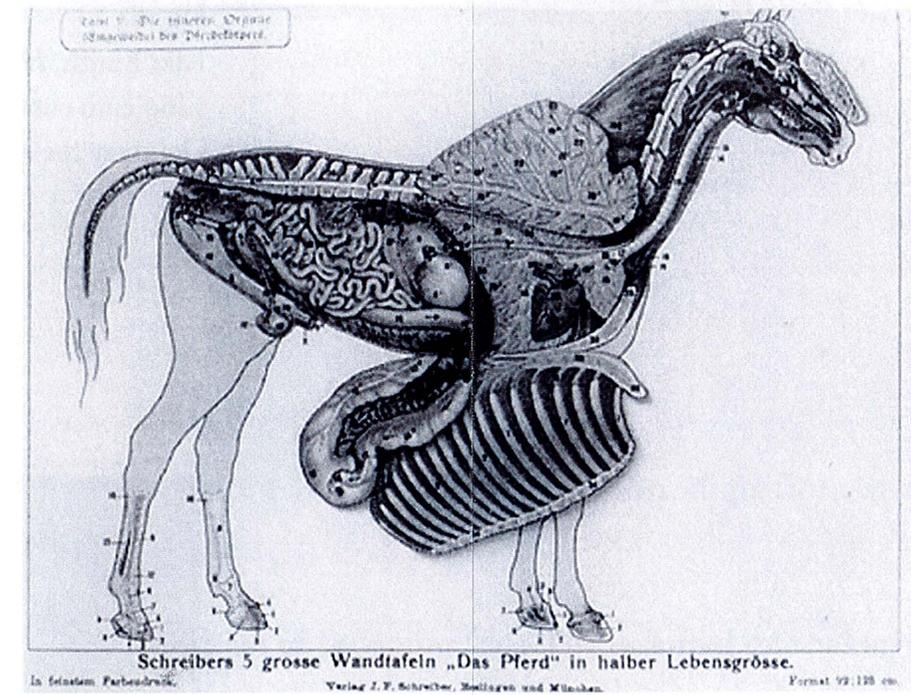


figure 16. Horse anatomy from Bibliotheca Paedagogica, 1914

Max Ernst A Retrospective (New York: Yale University Press, 2005)

## p r o c e s s

Hermes, the grandson of Atlas in Greek mythology, is known as the god of travel, merchants, weights and measures, oratory, literature, roads and boundaries, in effect he is the god of mobility but he is also the god of thieves. Quite the paradoxical myth, he leads the dead to the underworld and brings the living their dreams. Hermes is the mediator of movement and exchange. He creates instruments of stolen materials in the act of appropriation, turning a tortoise shell into a lyre or a syrinx from reeds. Hermes is the contemporary moving subject appropriating his environment as an instrument.



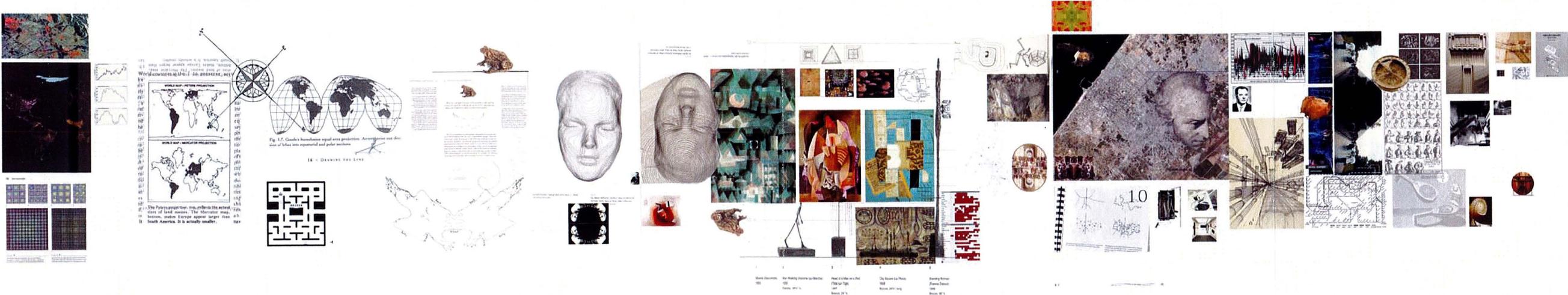


plate 1. collected spatial representations

This thesis began by considering maps and geographic information systems in their influence on the production of space in architecture. The argument is a consequence of this influence: the contemporary space of mobility is largely fixed, and in movement, the body reclaims space. Architecture, like mobility and movement, forms a paradoxical relationship to the body through its ability to form space and through its continuous transformation.

Investigation in representations of the space of mobility; the train

Plate 2. the train ride

OC Transpo, Ottawa 2006.



The train cuts a section through the city, a linear narrative in which mobility provides a visual experience of the environment as screen: the experience of mobility for the distracted masses.

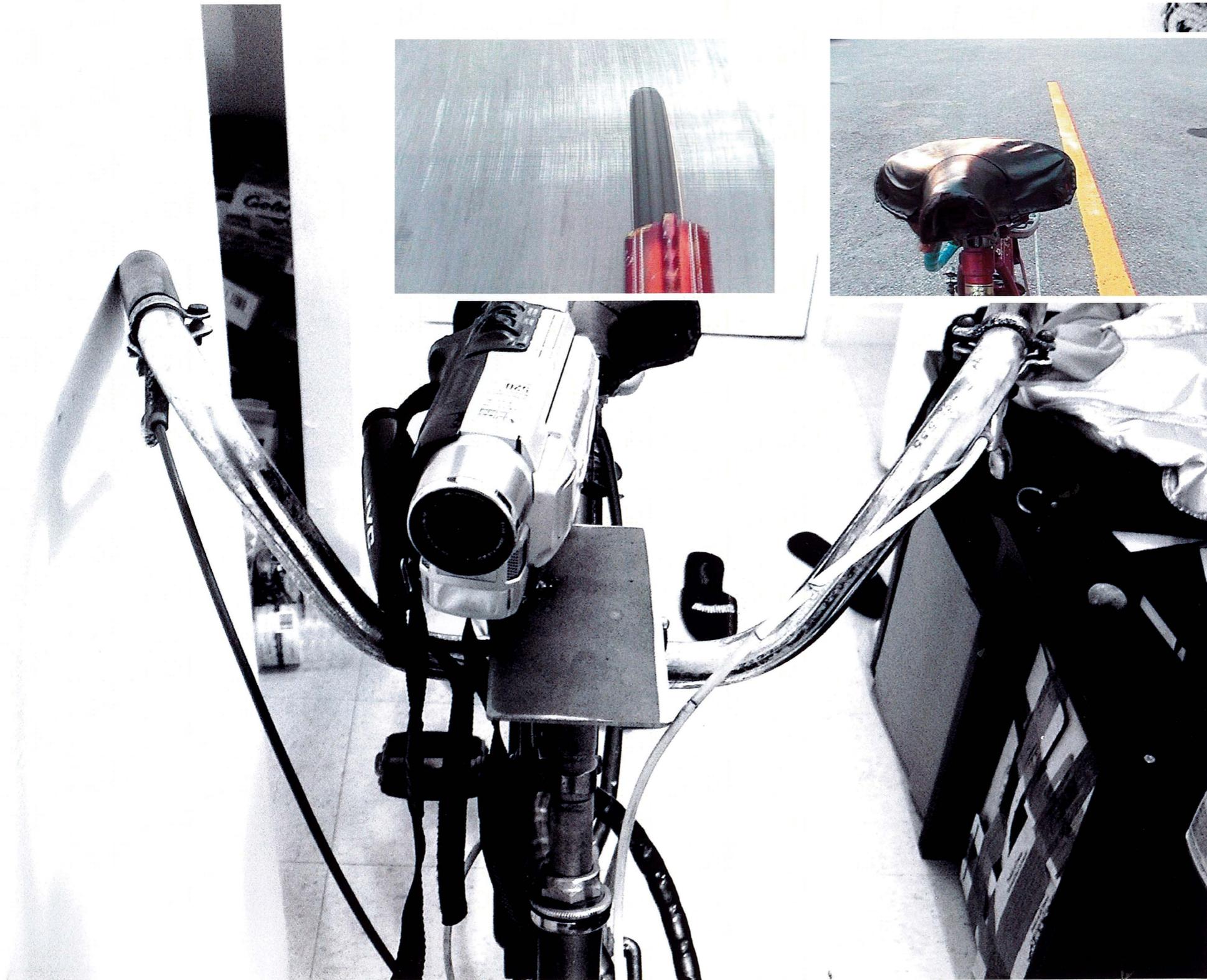
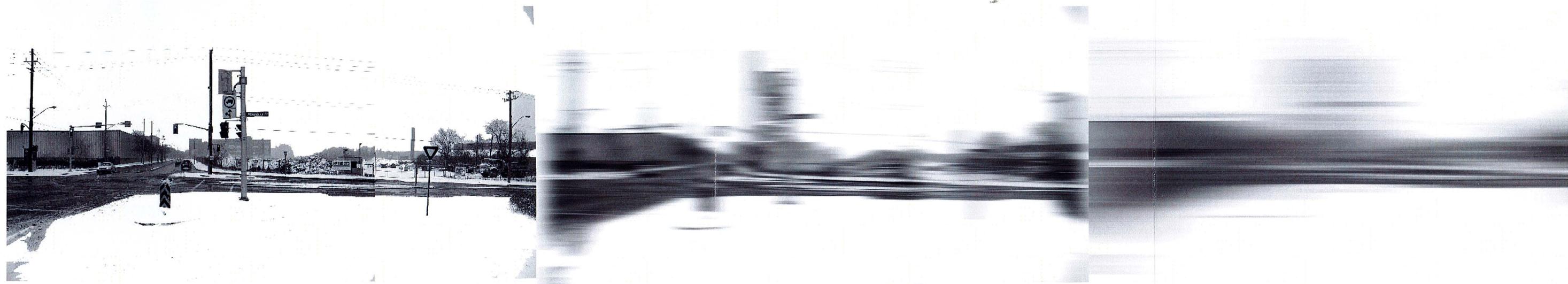
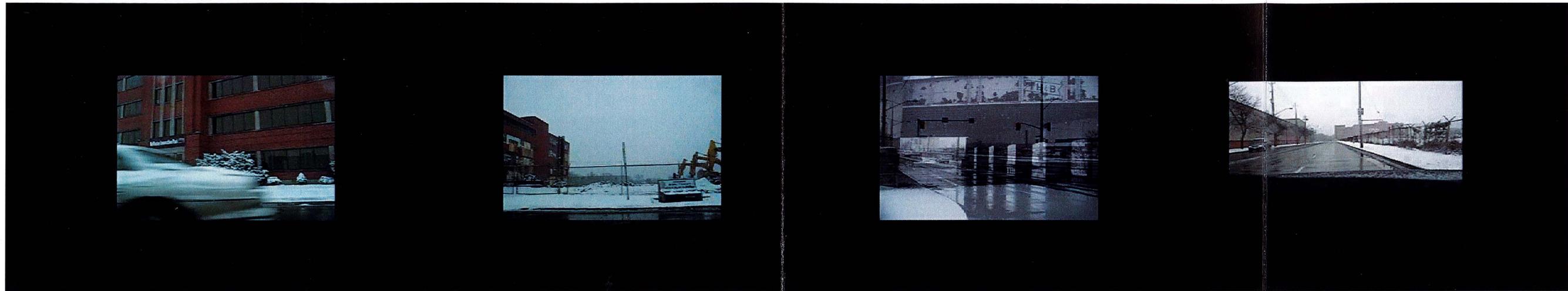


Plate 3. the bicycle path

Recording movement from the bicycle represents this space as a highly relative experience to the environment. The experience of mobility on the bicycle is completely open to elements, sights, sounds as well as odours for example. Though the experience cannot be separated from vision, as a form of mobility it connects the body to its environment not seamlessly but as a threshold. What if we were to think of architecture in terms of the bicycle? Hills for example are only obstacles depending on our orientation and direction of movement. The most interesting footage comes from a segment in which the front tire and ground were filmed. This segment uncovers all the subtle aberrations of the *linescape* in passing over sewers, gravel, cracks and crevices as well as the markings that order our movements.

plate 4. the car ride



Footage of the site from the car. Though largely a visual experience, filming is a means to capture subtle changes in movement such as the sound of passing under the bridge. It was mostly the editing that providing a way to juxtapose paths of movement, which cross, intersect and produce different spaces.

The body's relationship to movement is related to variation in apertures and closures. Consider the body, the object and the opening. In the space of mobility all space appears open, it is vehicles that enclose us: cars, elevators, and planes. We often seek closure in the continuous space of mobility, a private space within the public arena. For example, it is interesting to note that in libraries, cell phone users will retreat to stairwells: stairwell appropriated as phone booth.

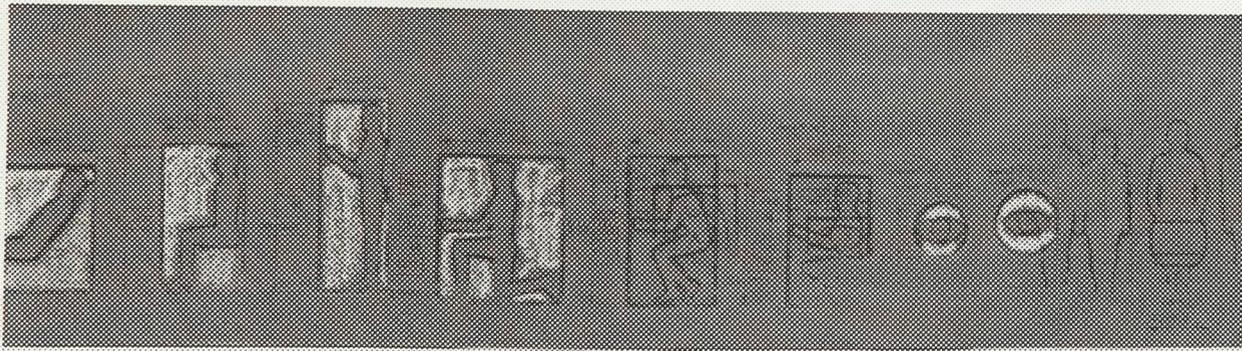
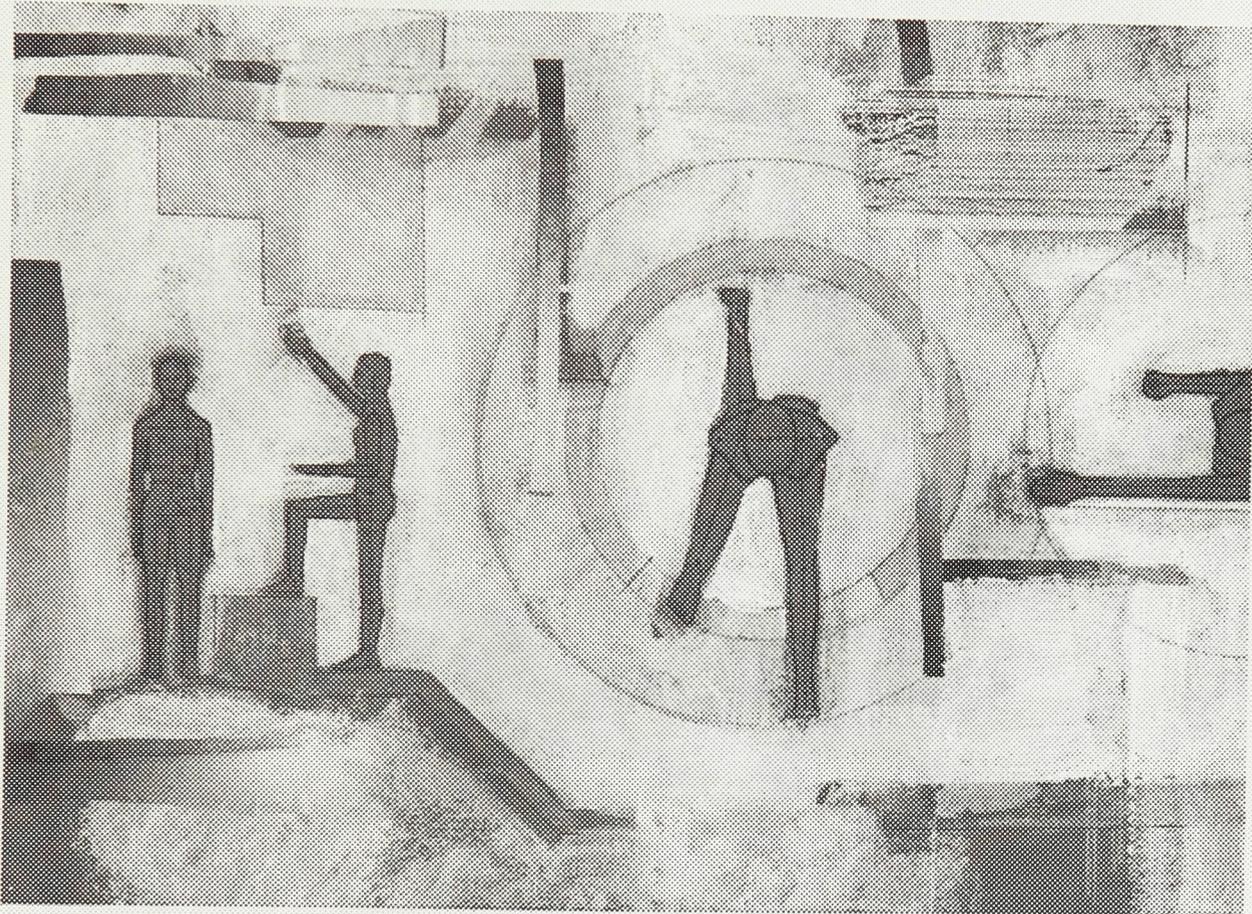


plate 5. openings and closures

Appropriation of photos of industrial buildings through digital collage. Photos from Hamilton site before demolition taken by Ron Paget and photos of industrial buildings of Harlod Finster, Germany.

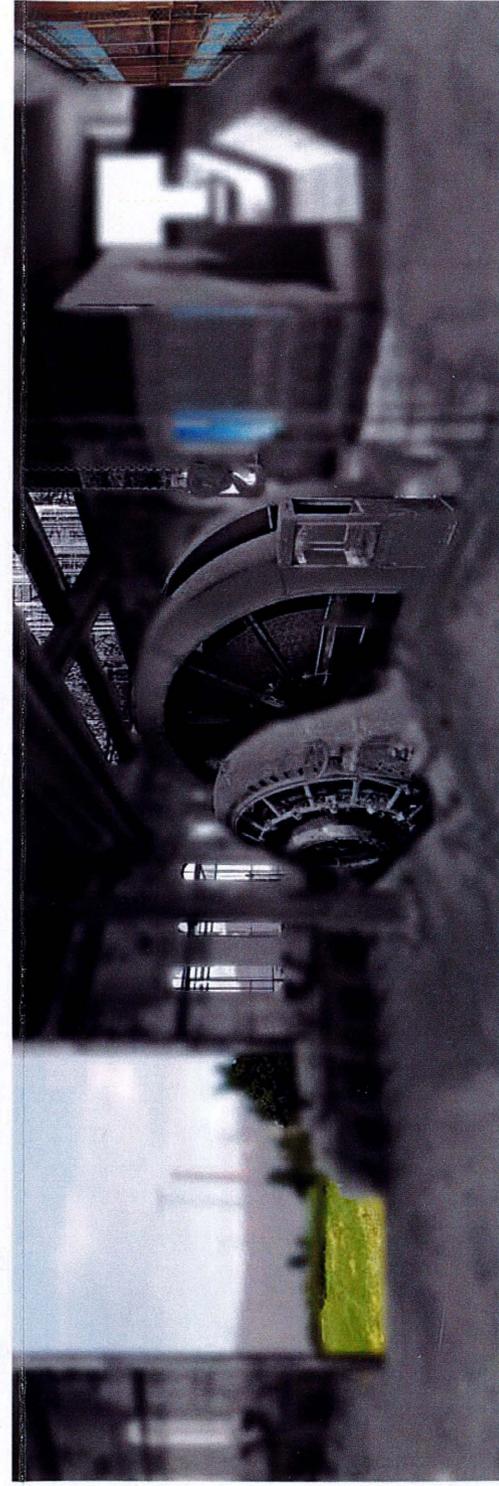
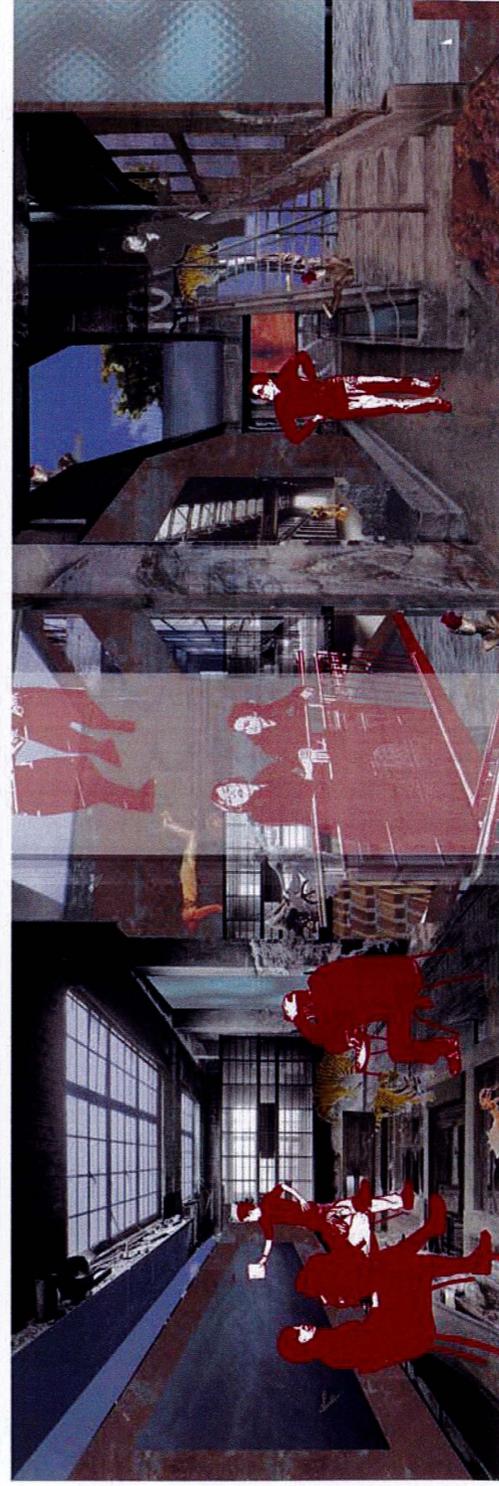
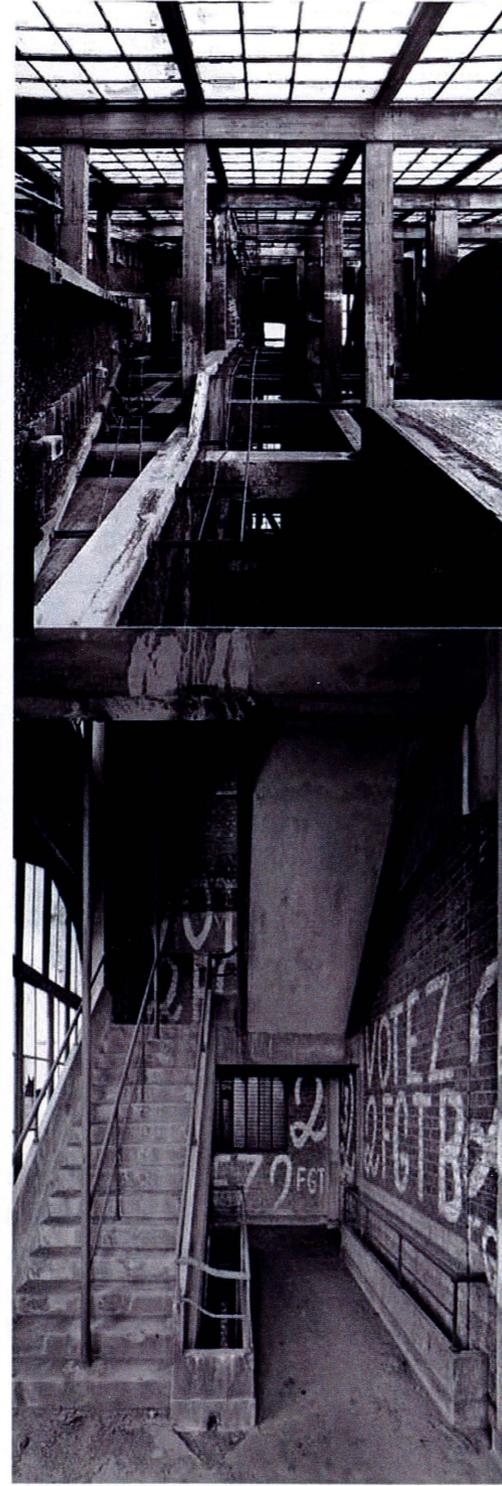
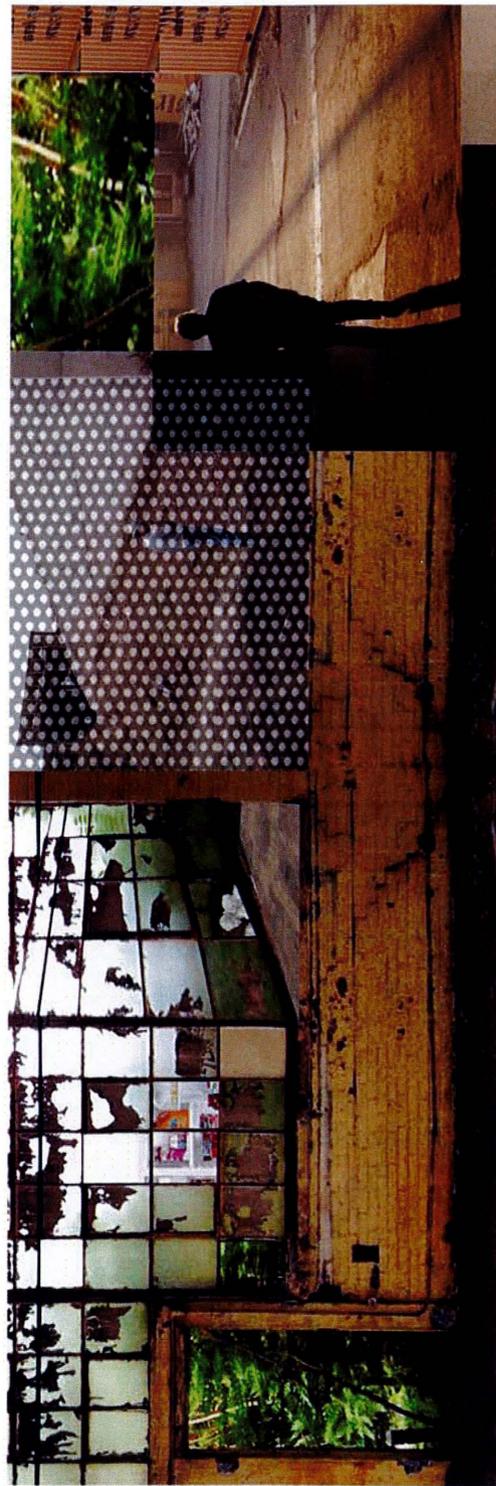
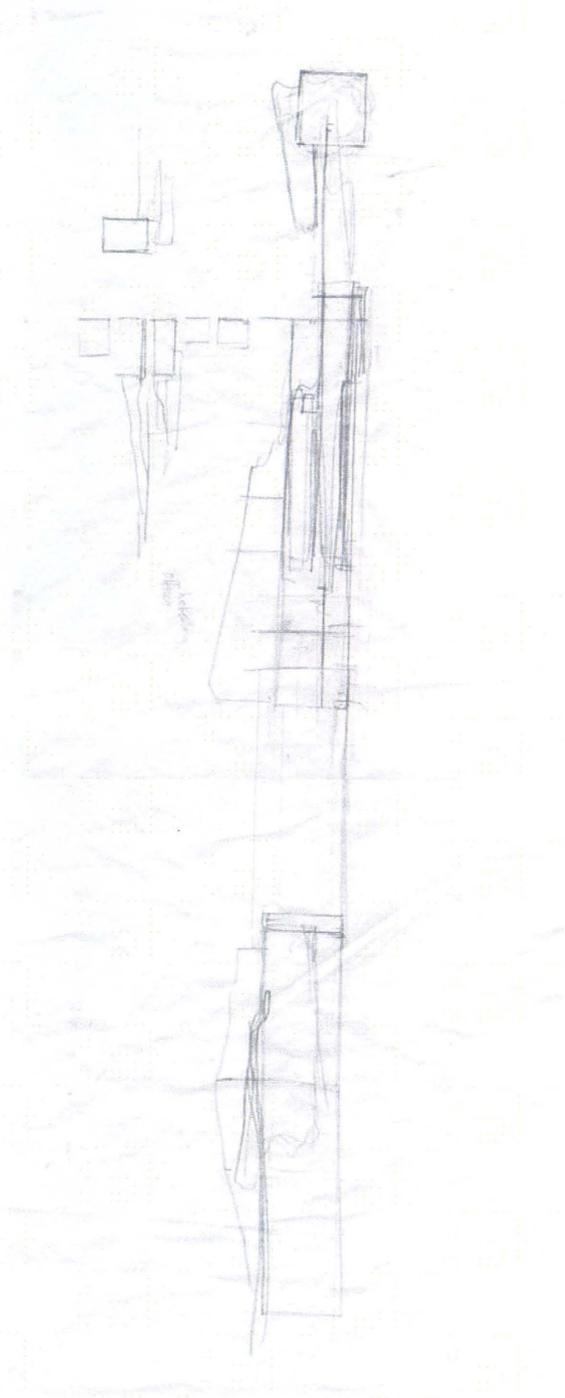
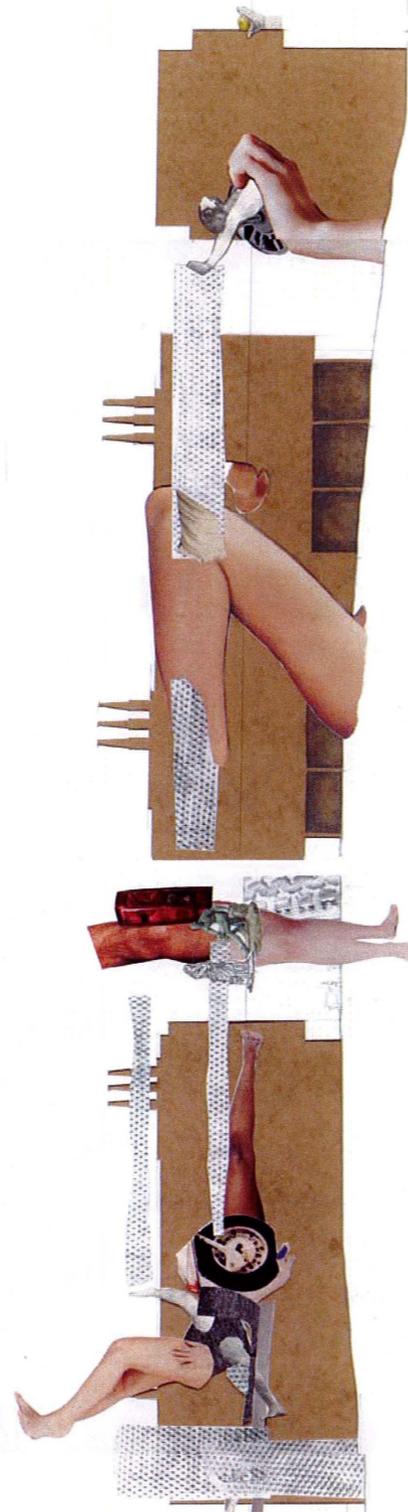


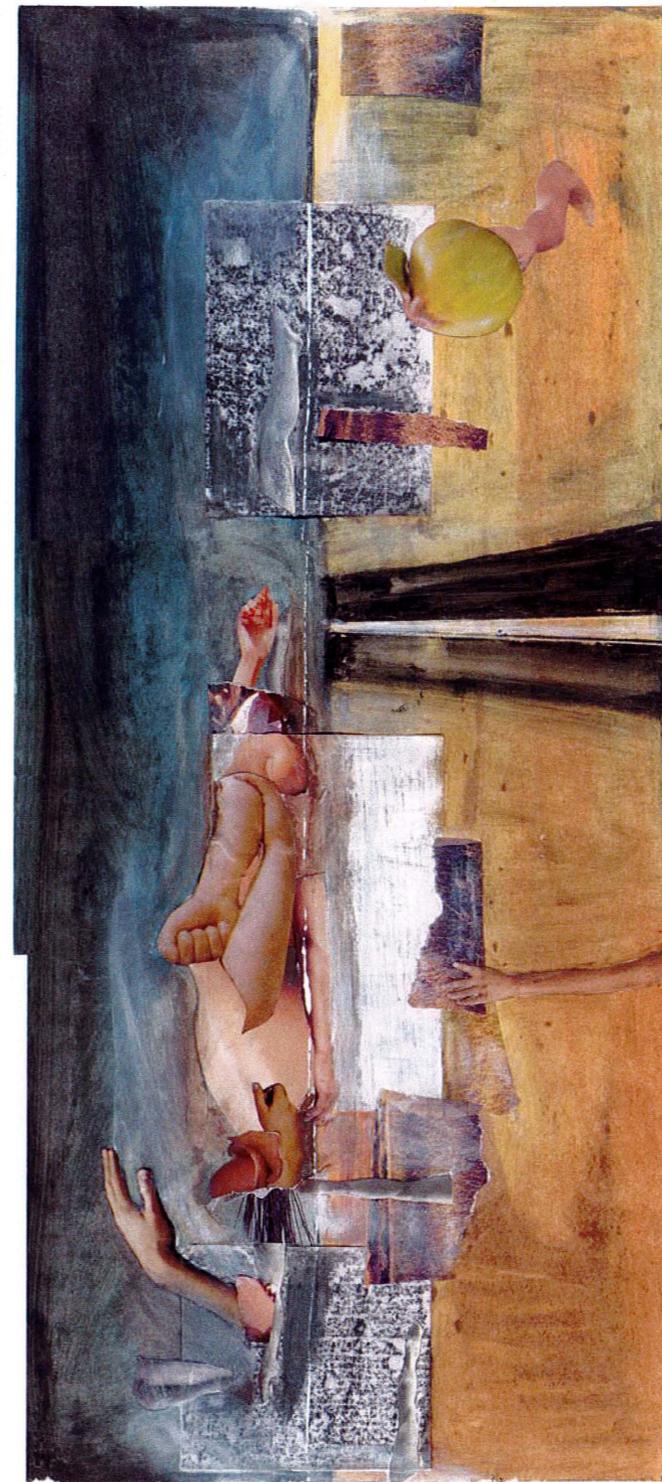
Plate 6. digital collages of industrial buildings



gesture across site



conceptual collage, elevation across site



The Body Park.

Architecture as body mirrors our bodies back to us. The folding, opening and relationship between bodies create distinct liminal qualities where the body forms spatial relationships

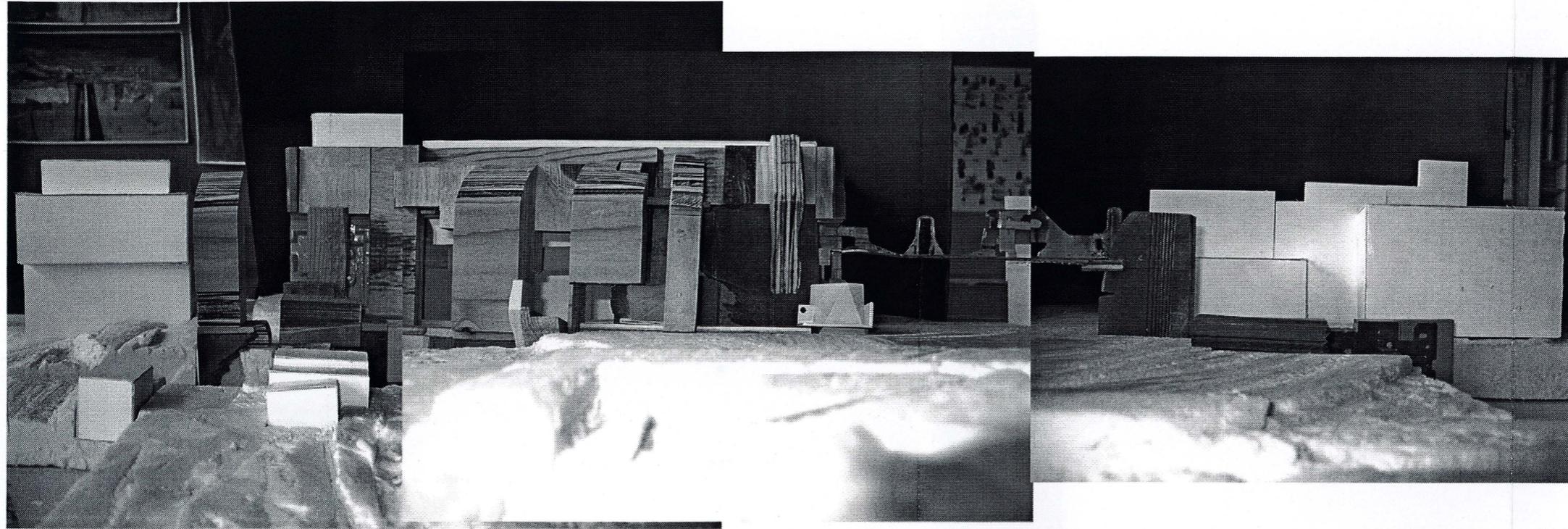
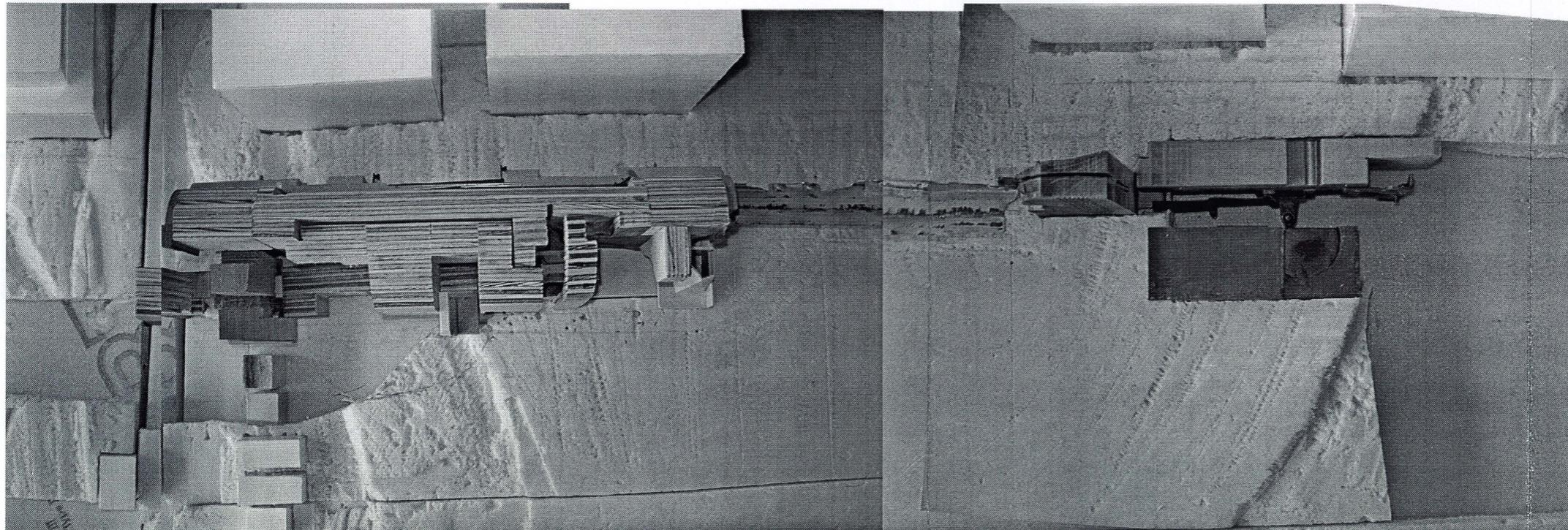


plate 8. preliminary model

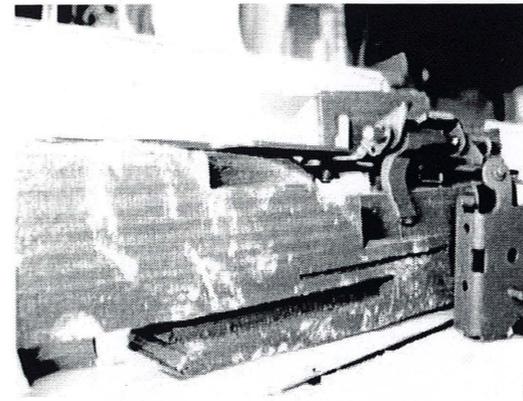


Site model and construction at 1:100.  
Beginning with a linescape across Longwood and combining the ideas of the previous images into model form.

1:100 models in translation



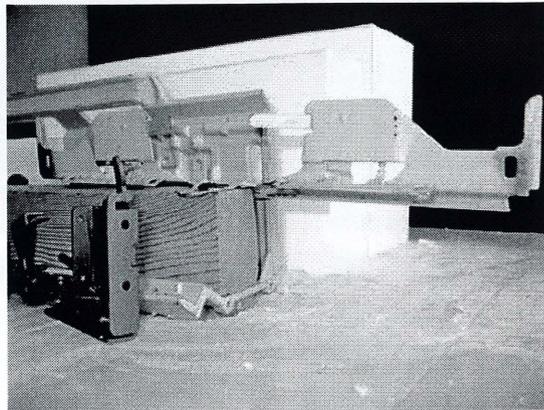
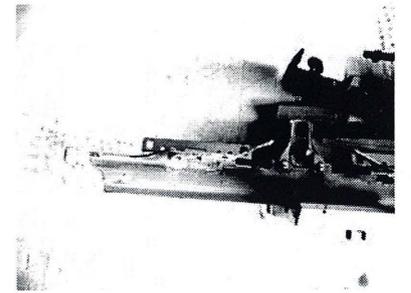
service side



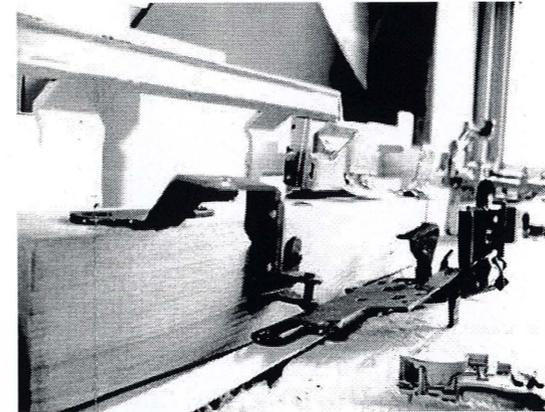
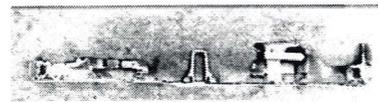
facing interior of park

model 1

plate 9. Interpretations  
of 1:100 model

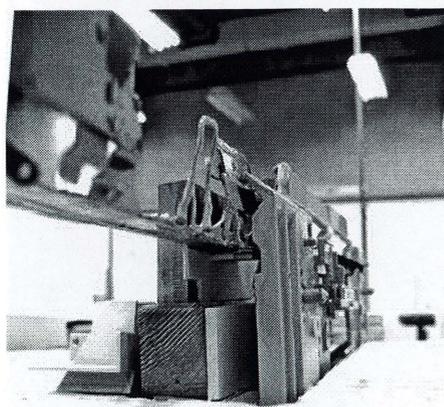


bridge (found object) from preliminary wood model of office area.

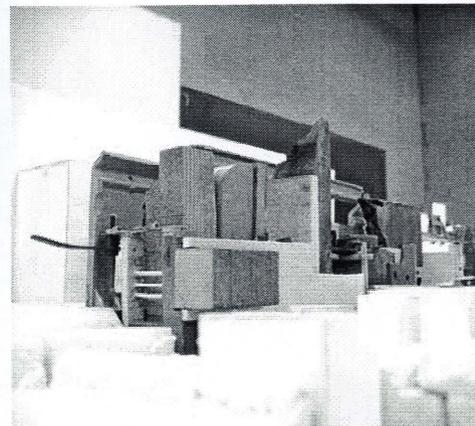


North side, undulating circulation

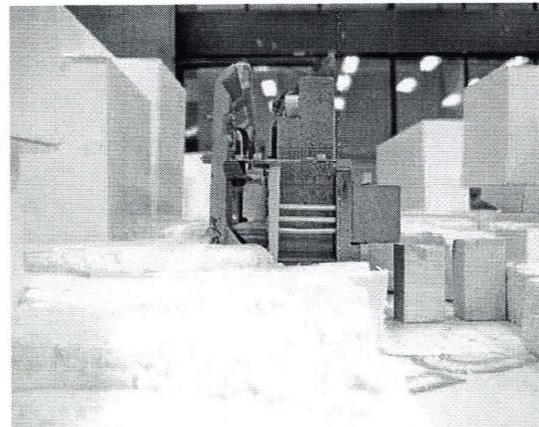
model 2



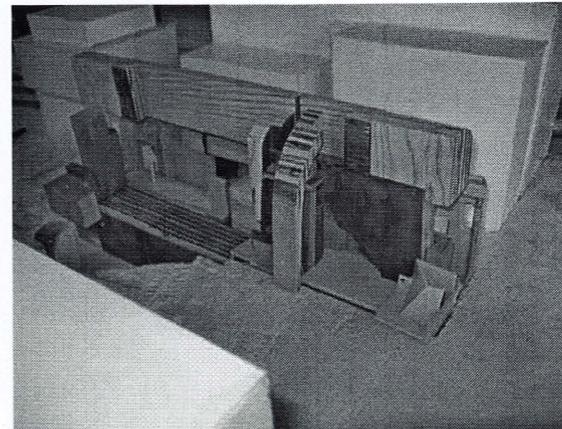
entrance from Longwood.



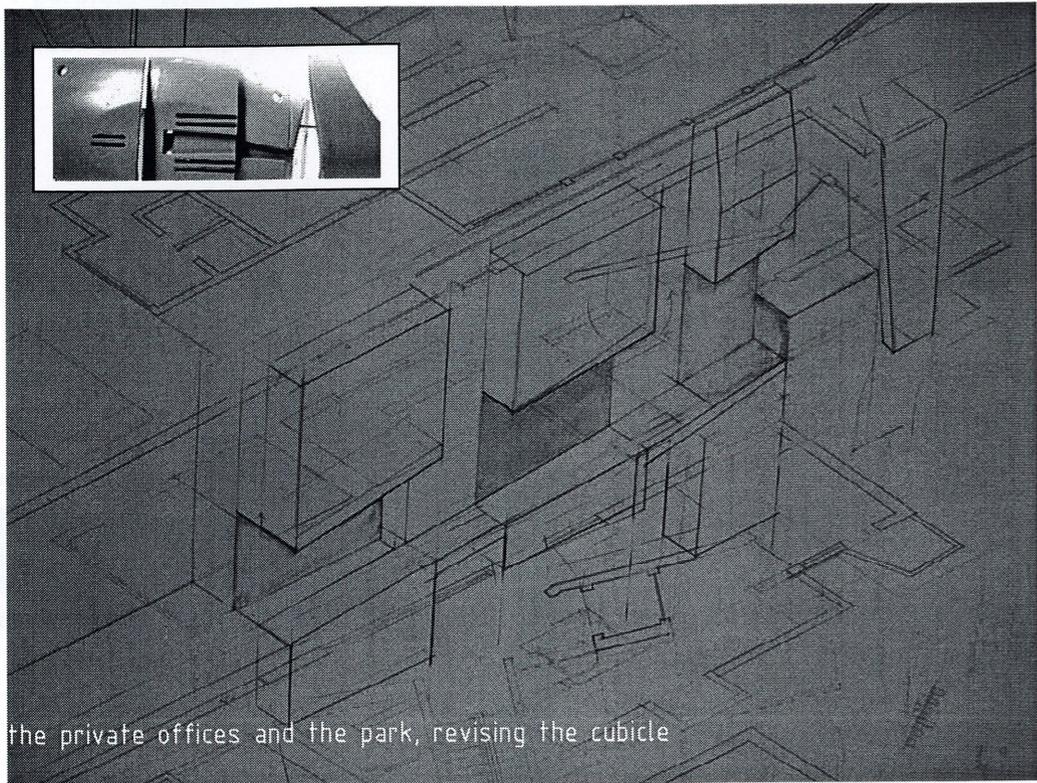
Model of office park from the East



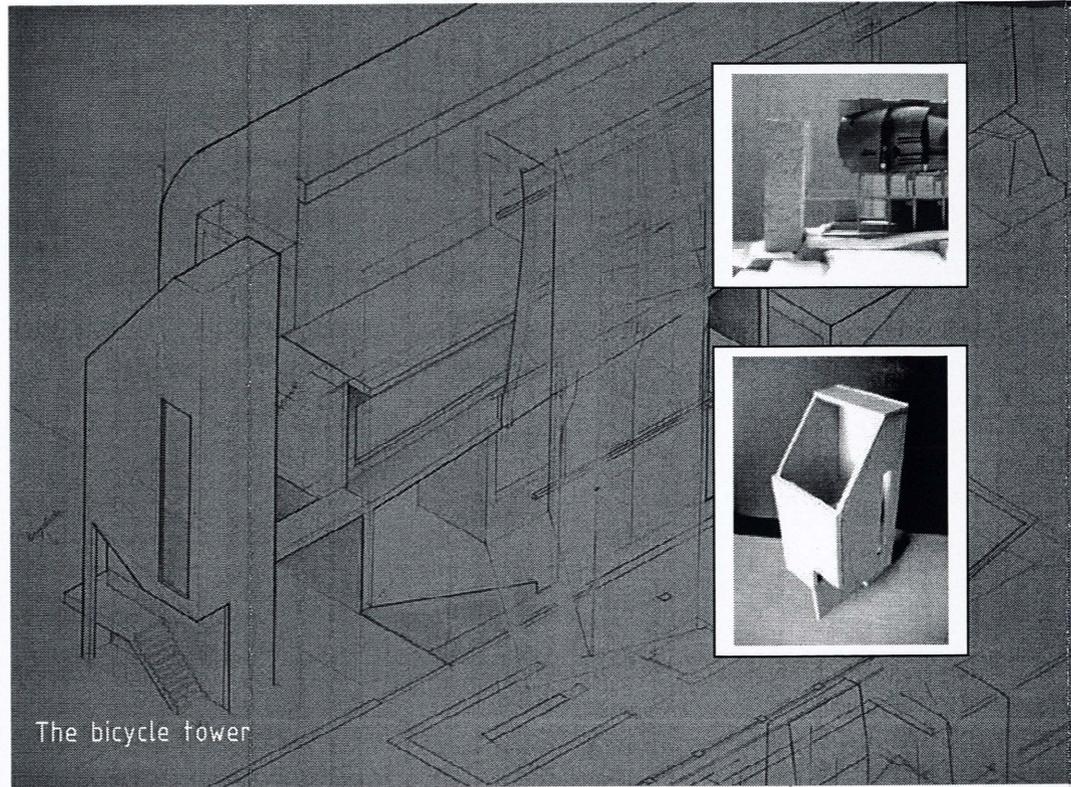
North side



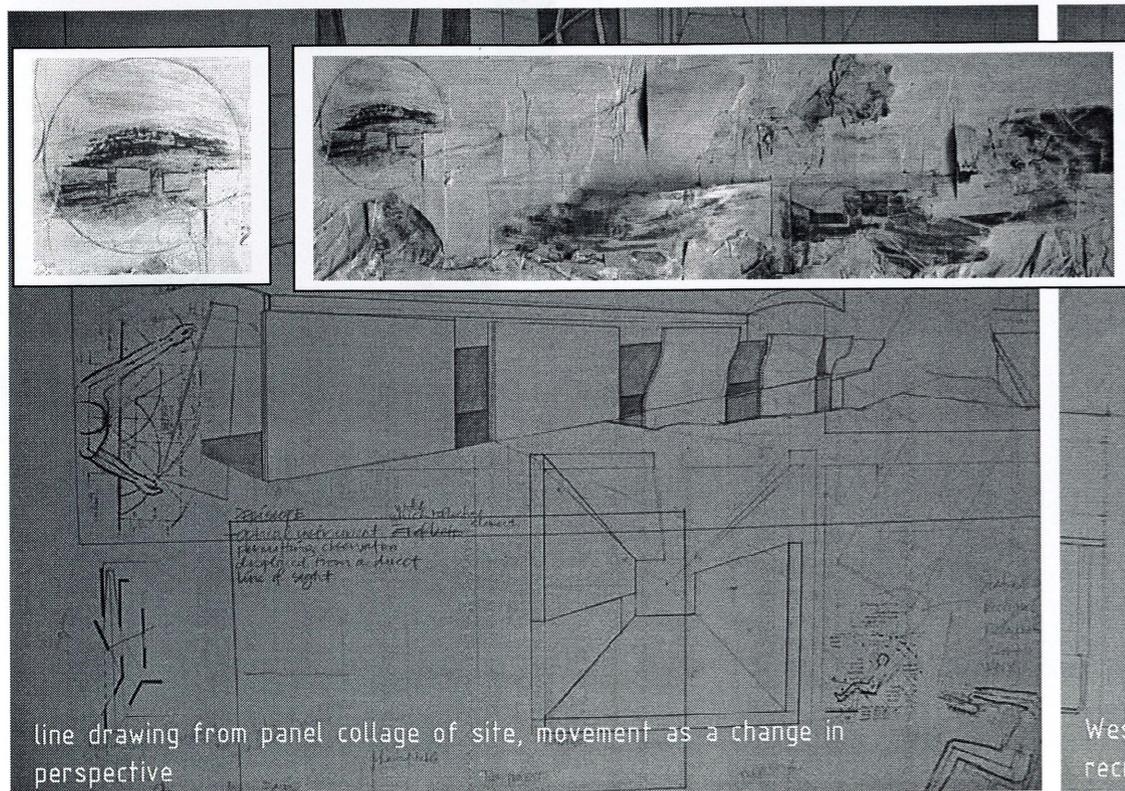
model 3



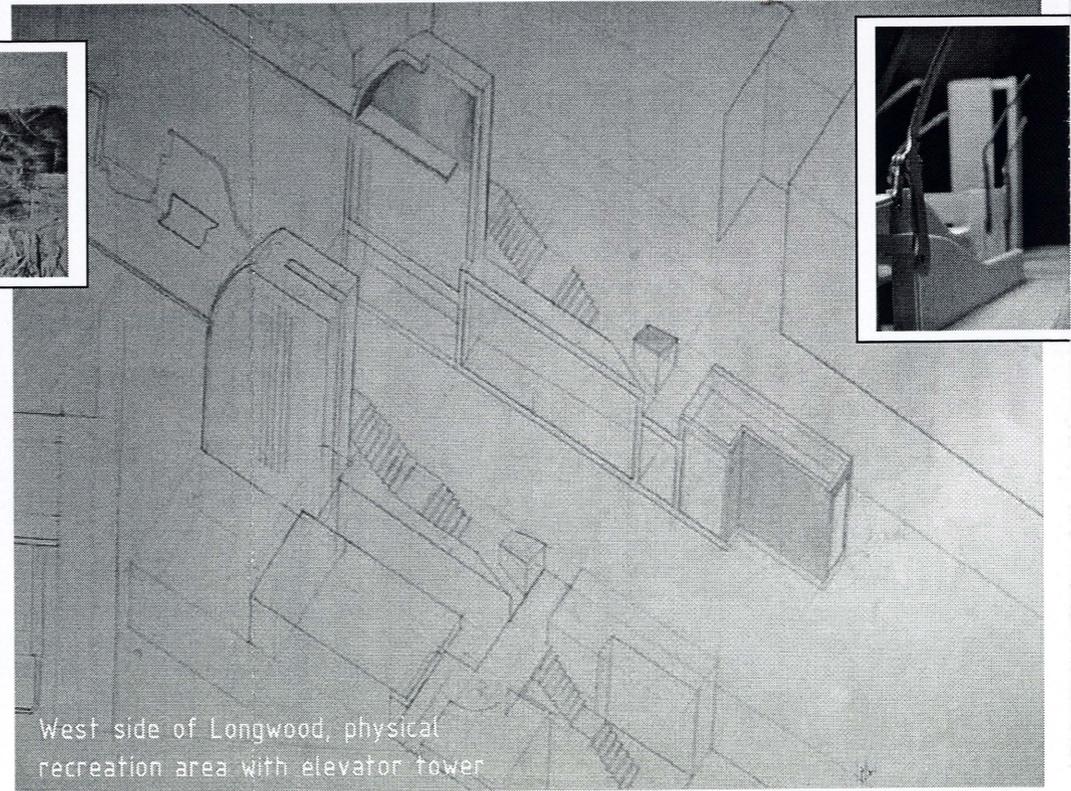
the private offices and the park, revising the cubicle



The bicycle tower



line drawing from panel collage of site, movement as a change in perspective

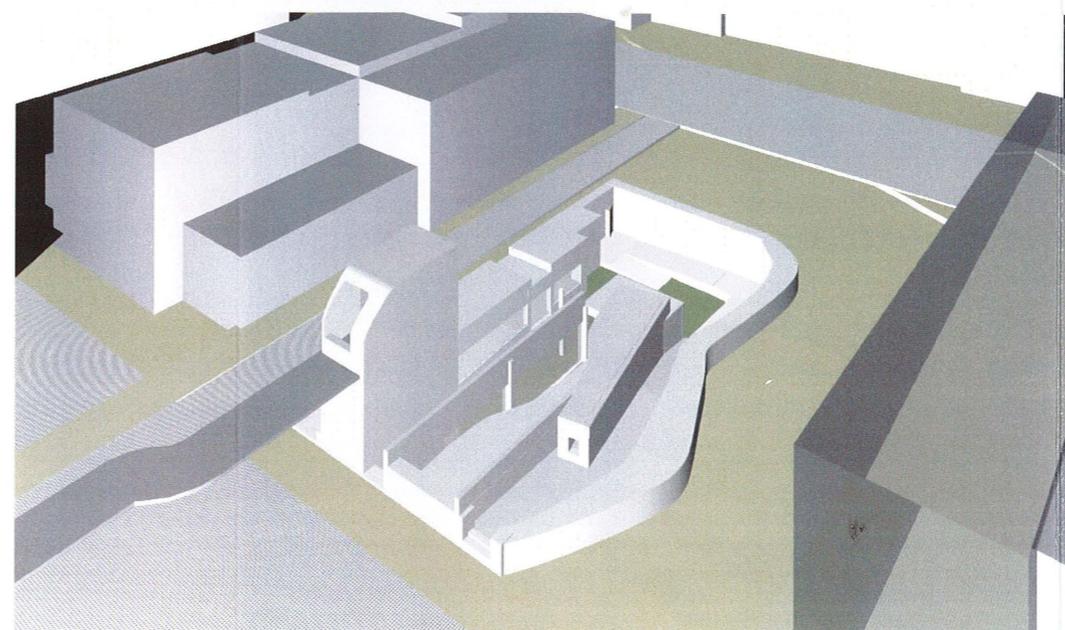
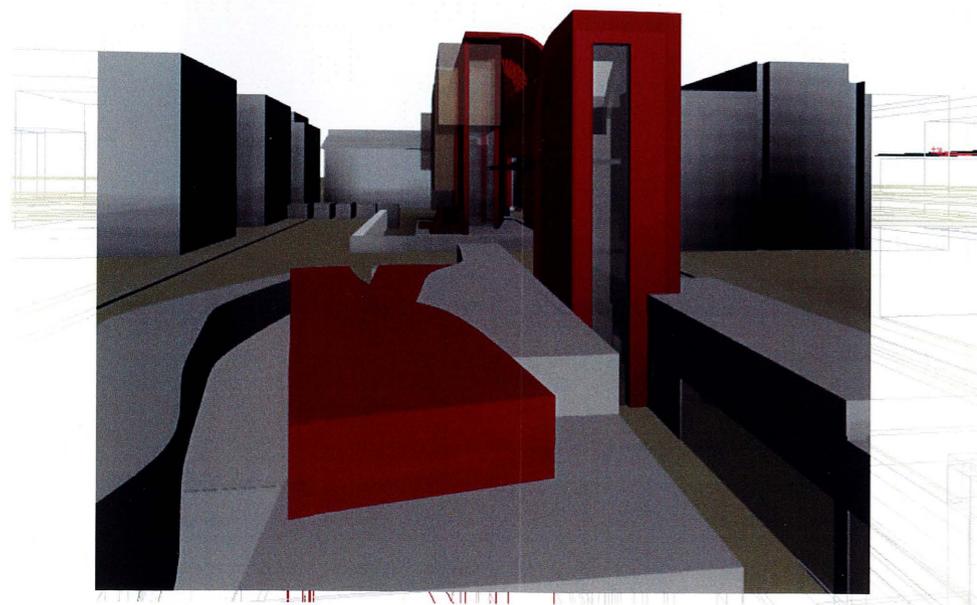
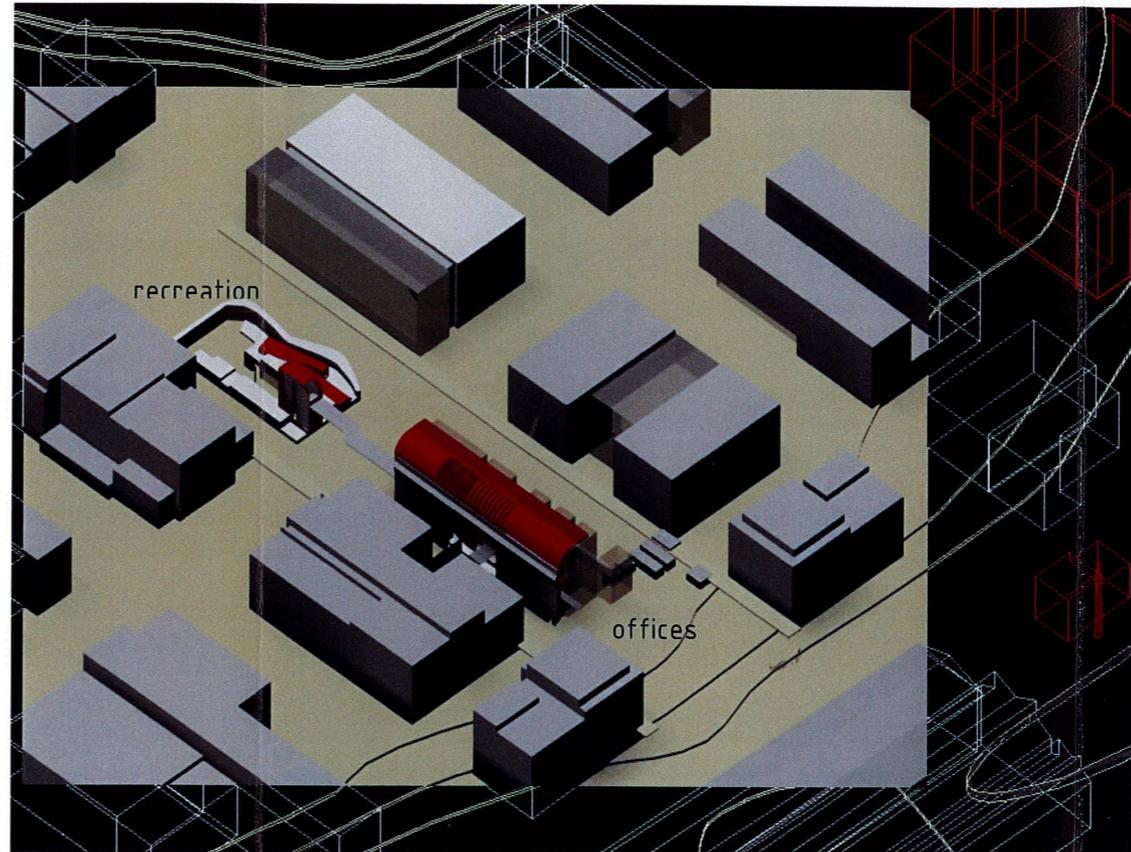
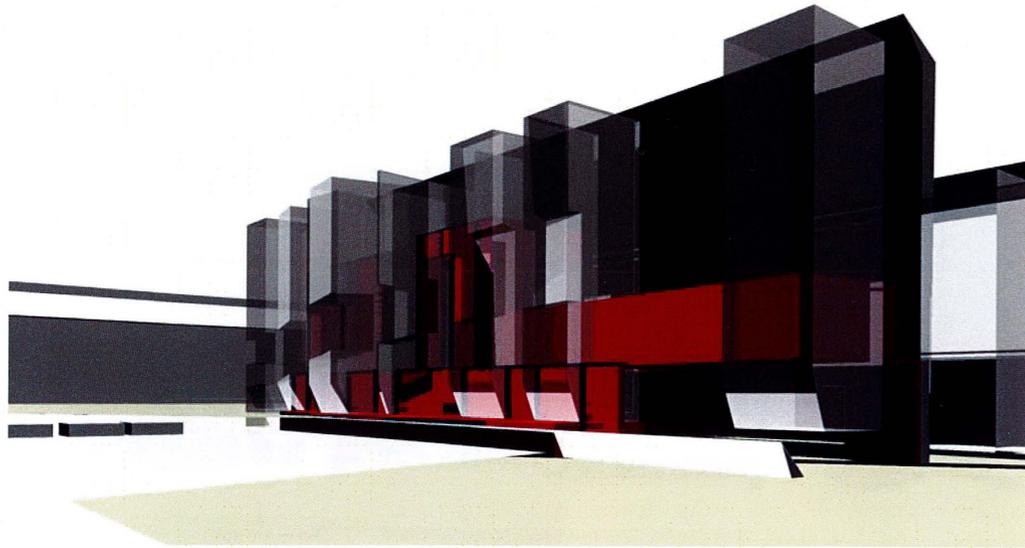


West side of Longwood, physical recreation area with elevator tower

Incorporating mobility

The East end of the park houses the office area, and the West houses the recreation facilities.

plate 11. form-z model



Consider appropriation, as a form of incorporation, a series of subversions and articulations that lead to liminal qualities of space within the continuous space of mobility. The first relationship dealt with for this thesis was that of the park to the site, which began by focusing on the dominant *linescape* of mobility, Longwood Rd, that cuts the park and site into halves. The notion of an elevated bridge as park was established in order to incorporate the intersecting road segment. Whereas the road is the space of mobility the perpendicular and elevated park becomes the *linescape* of movement across the site. The linescape of movement does not remain a straight thruway but itself, becomes in turn incorporated into the program of office through the architecture.

plate 12. longitudinal section through proposal

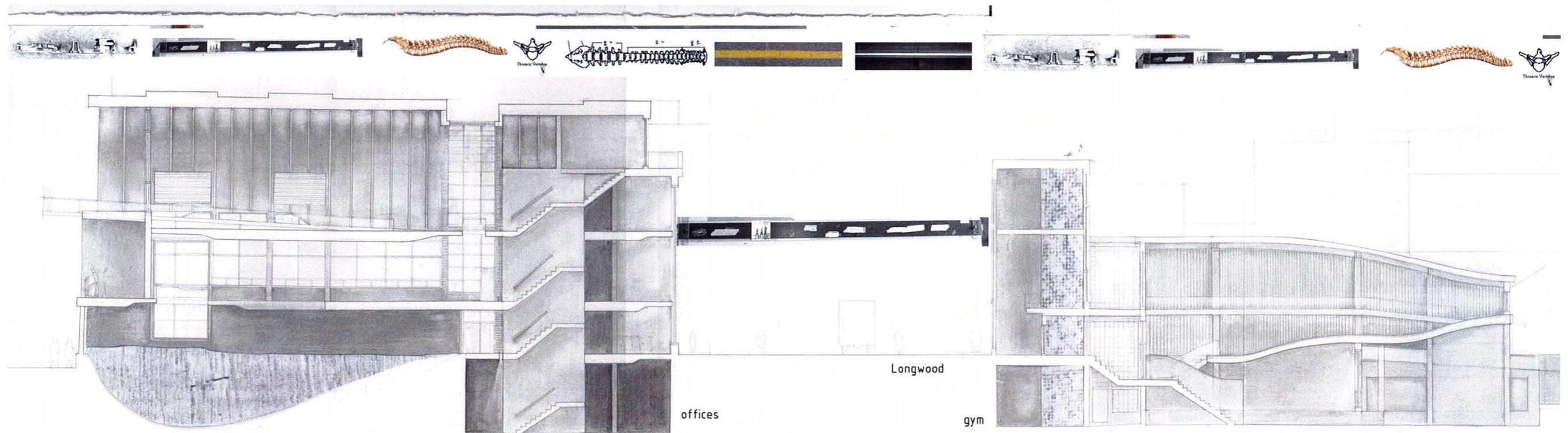
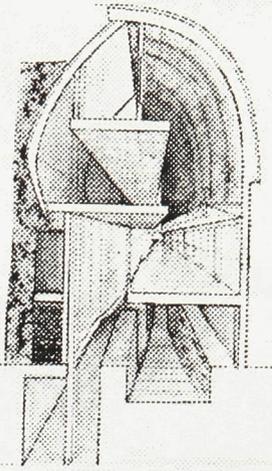
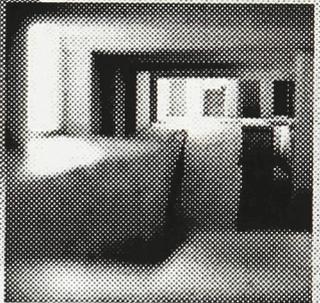
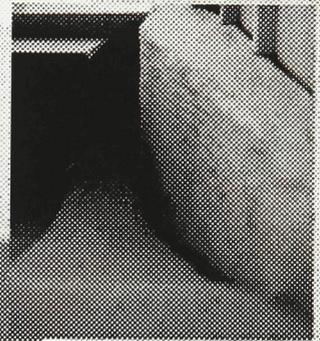


plate 13. office proposal for  
the East side of the park

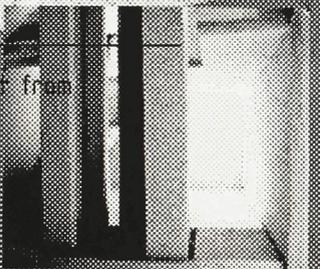
model in plan  
East side of Longwood  
location of offices



ramp to subterranean  
level interior topography  
to be appropriated as a  
place between work and  
play moment where the  
office becomes body park



subterranean level lit from  
skylight



skylight to subterranean level

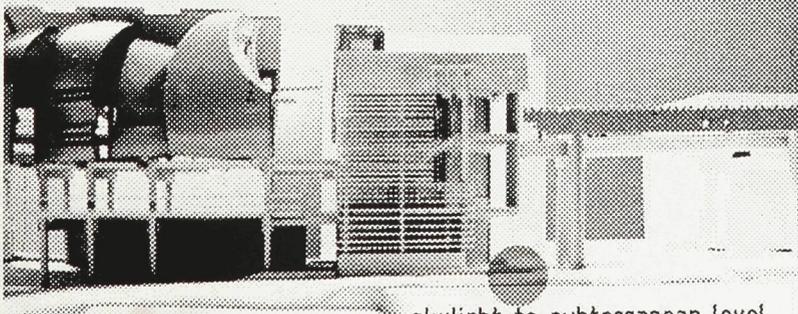
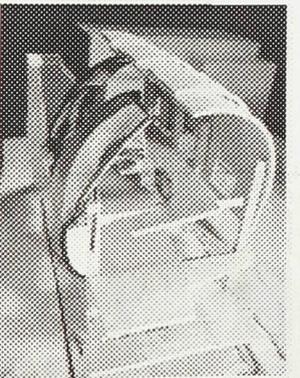
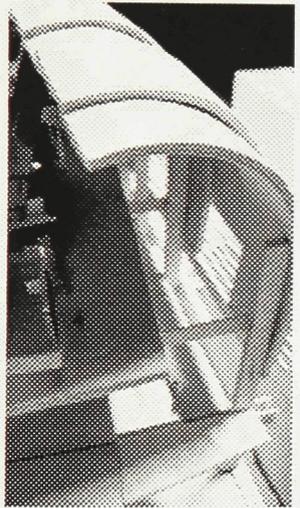
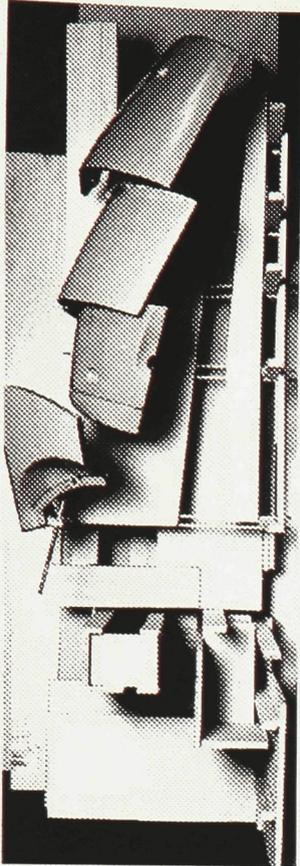
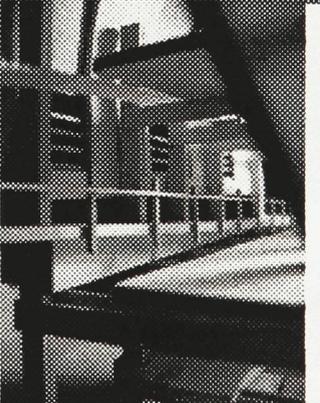
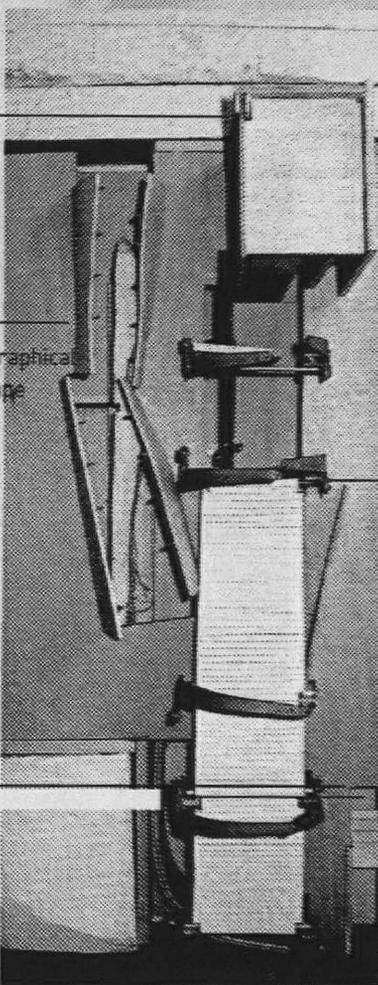
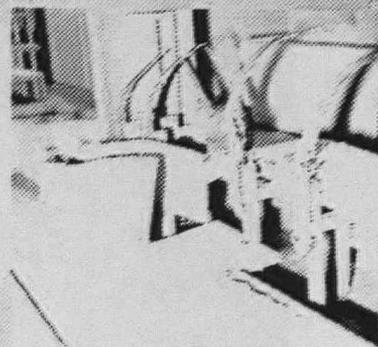
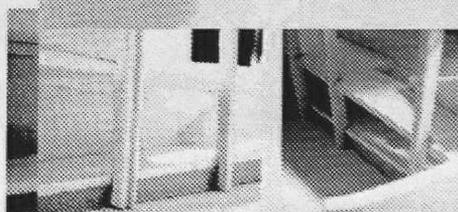
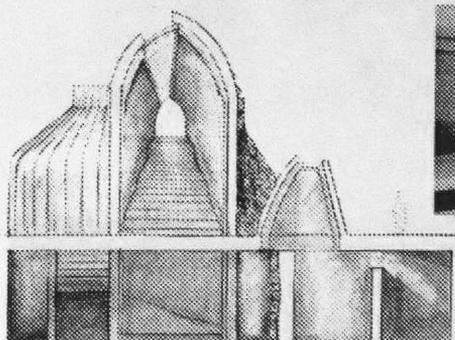


plate 14. recreation proposal  
for the West side of the park



vertical circulation and  
access from bridge

skylight and topographical  
element on landscape

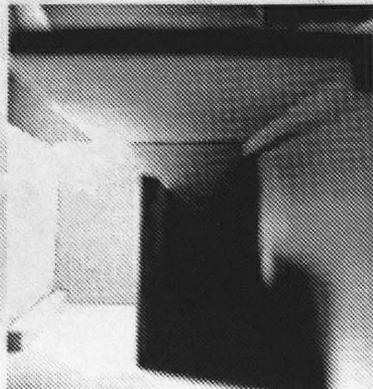
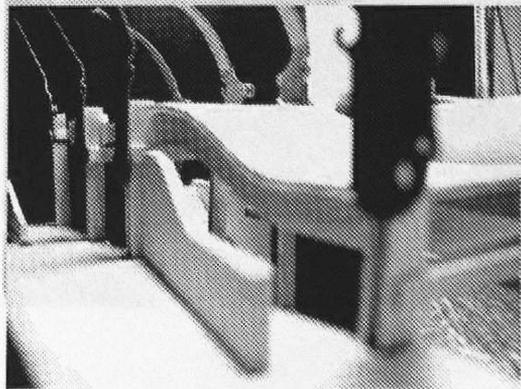


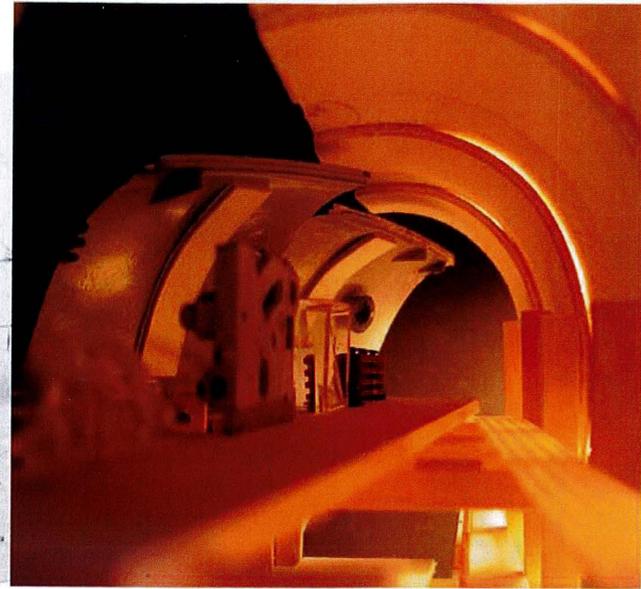
exit from bar area

undulating floor

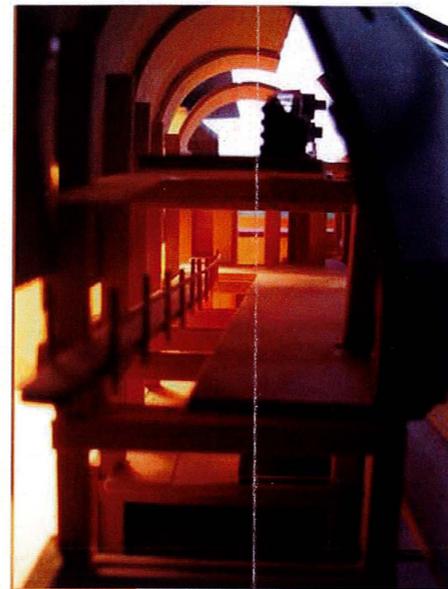
change rooms and shower area lit by skylight

skylight to change rooms

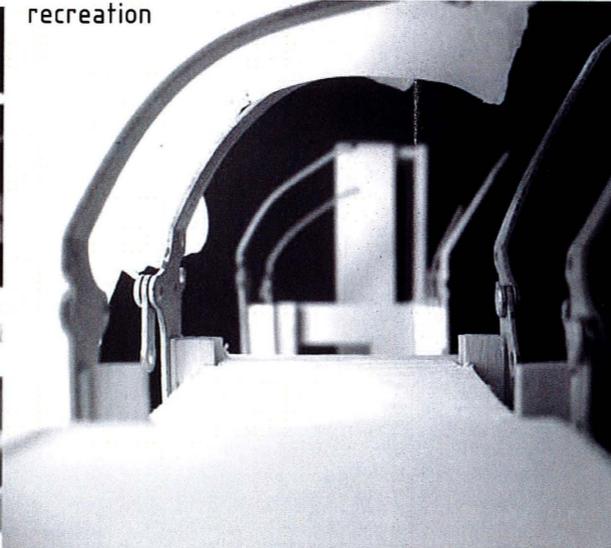
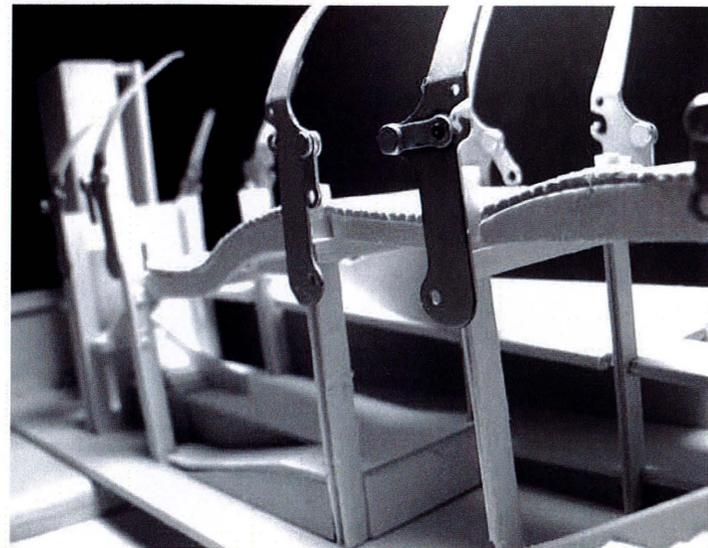




office



recreation

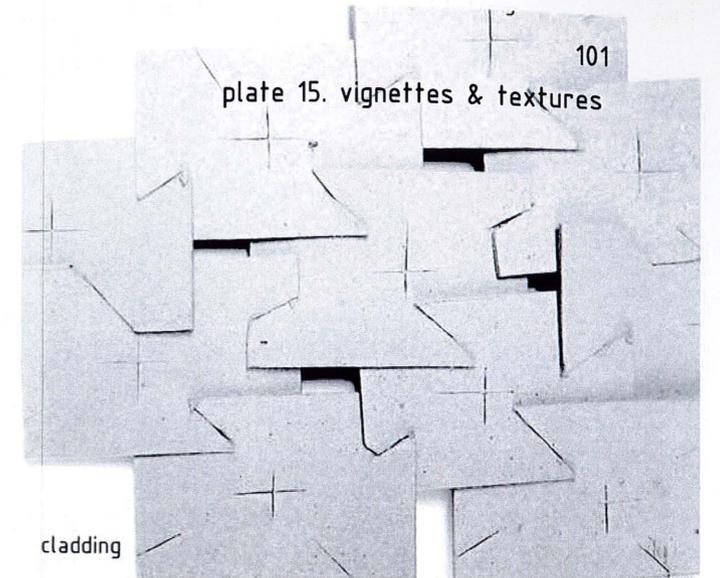


circulation

work

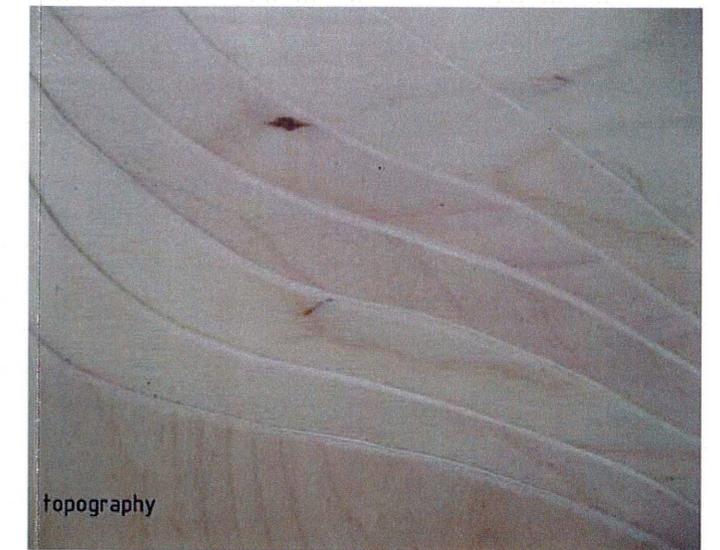
rest

play

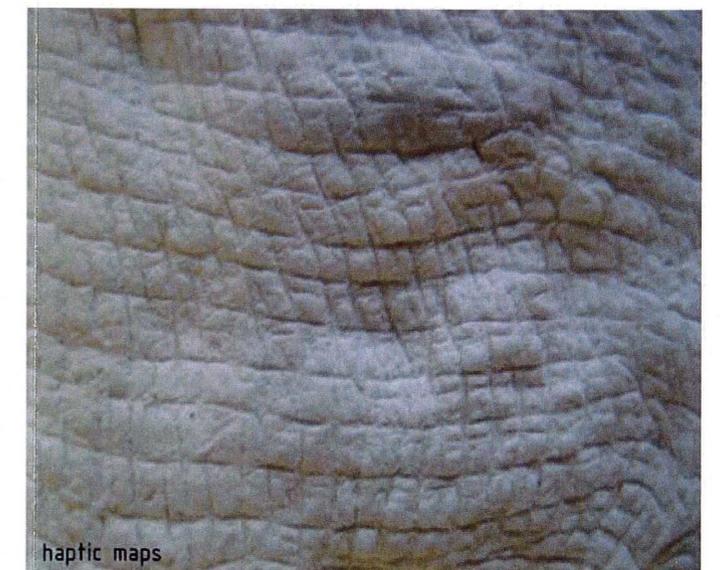
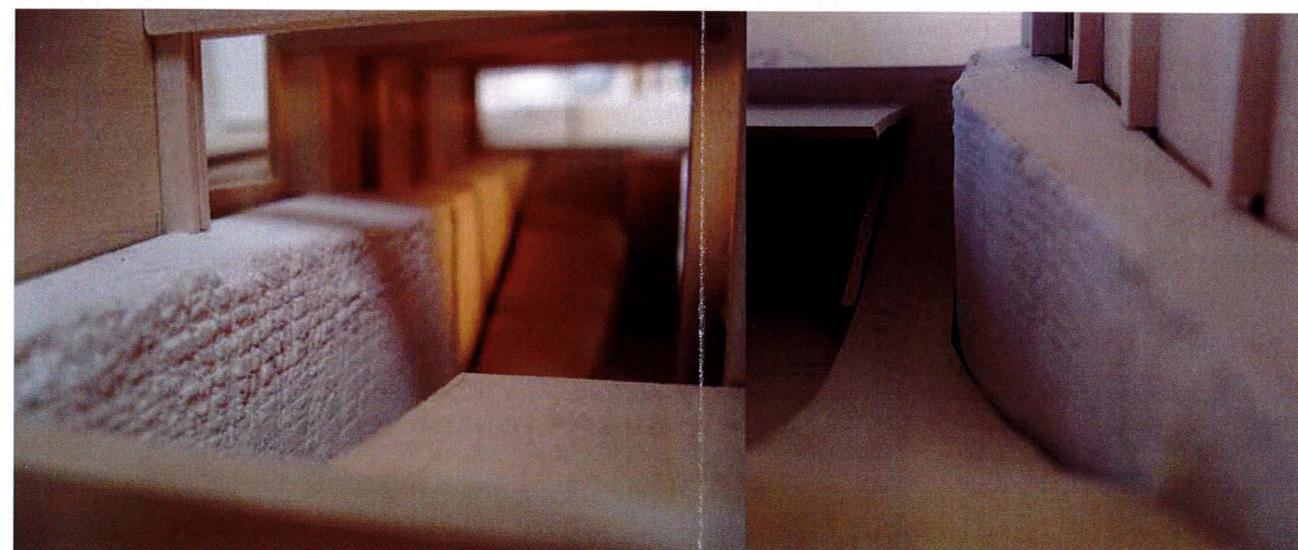
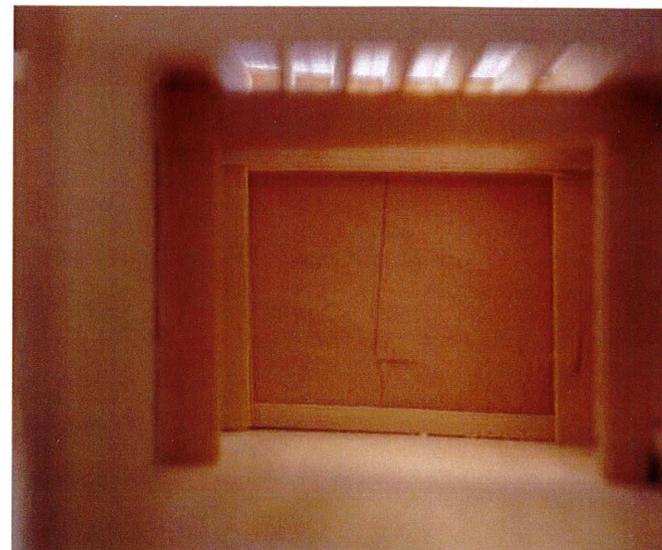


101  
plate 15. vignettes & textures

cladding



topography



haptic maps

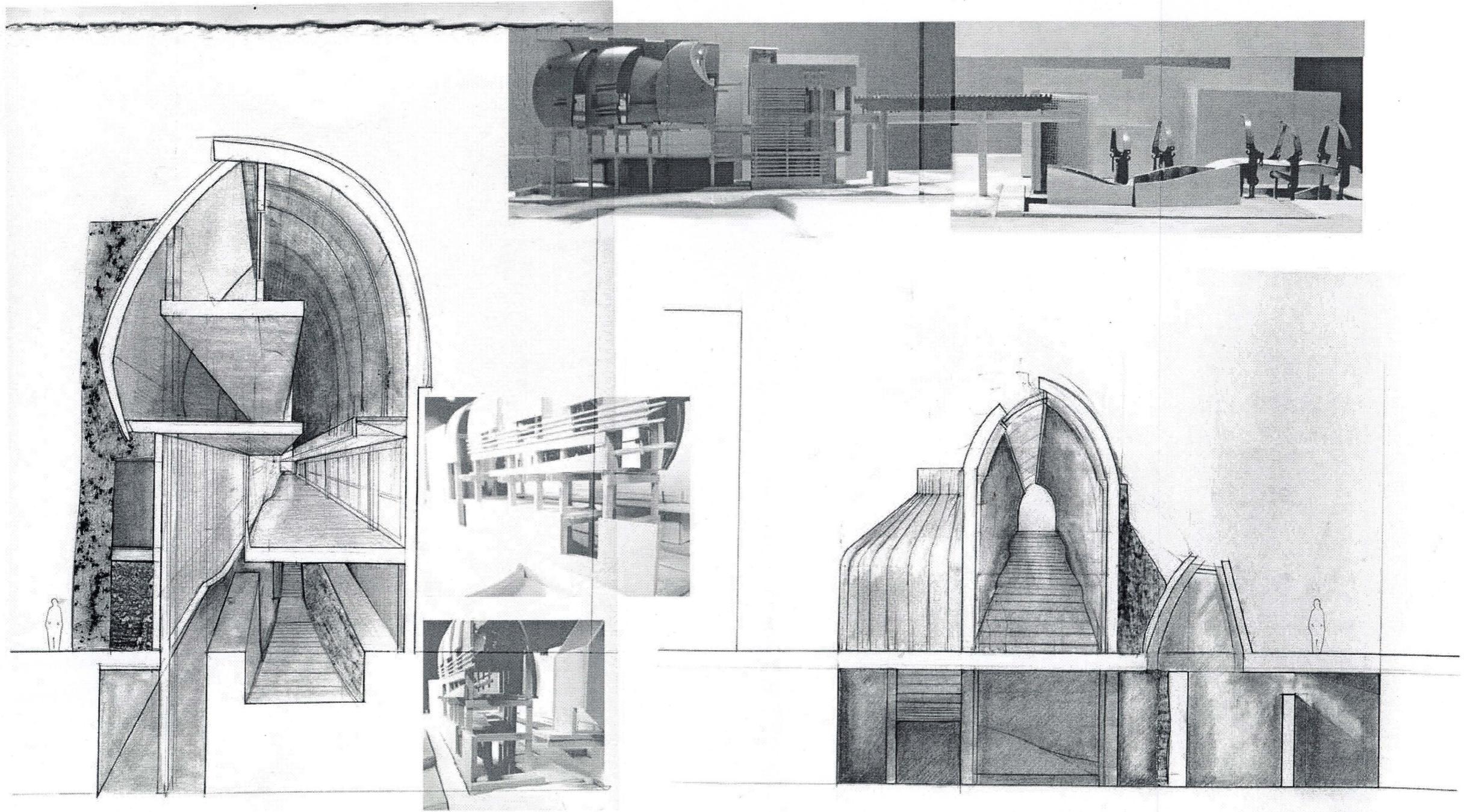
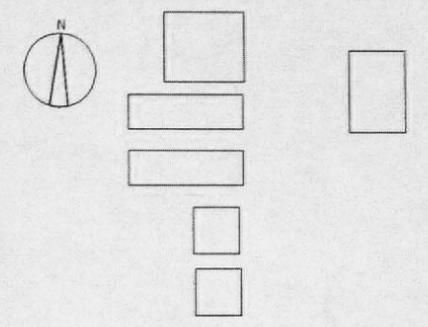
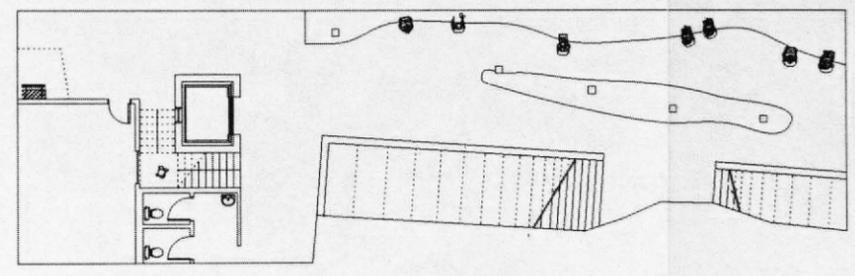
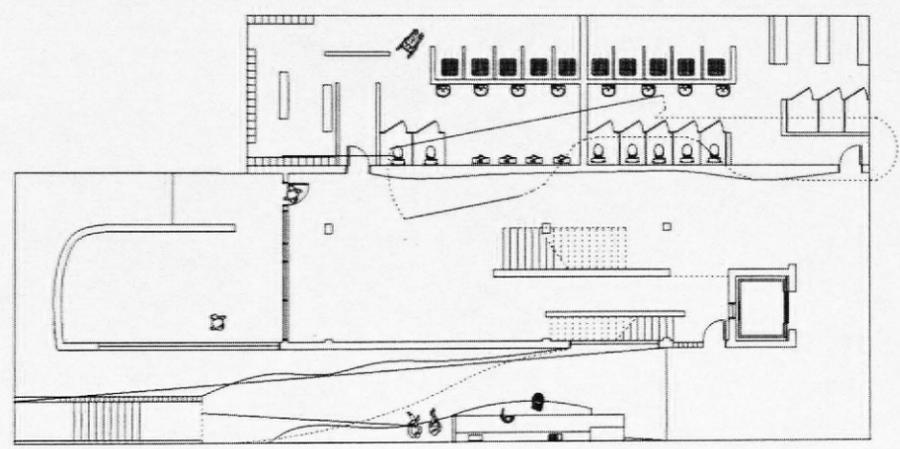


plate 16. lateral sections

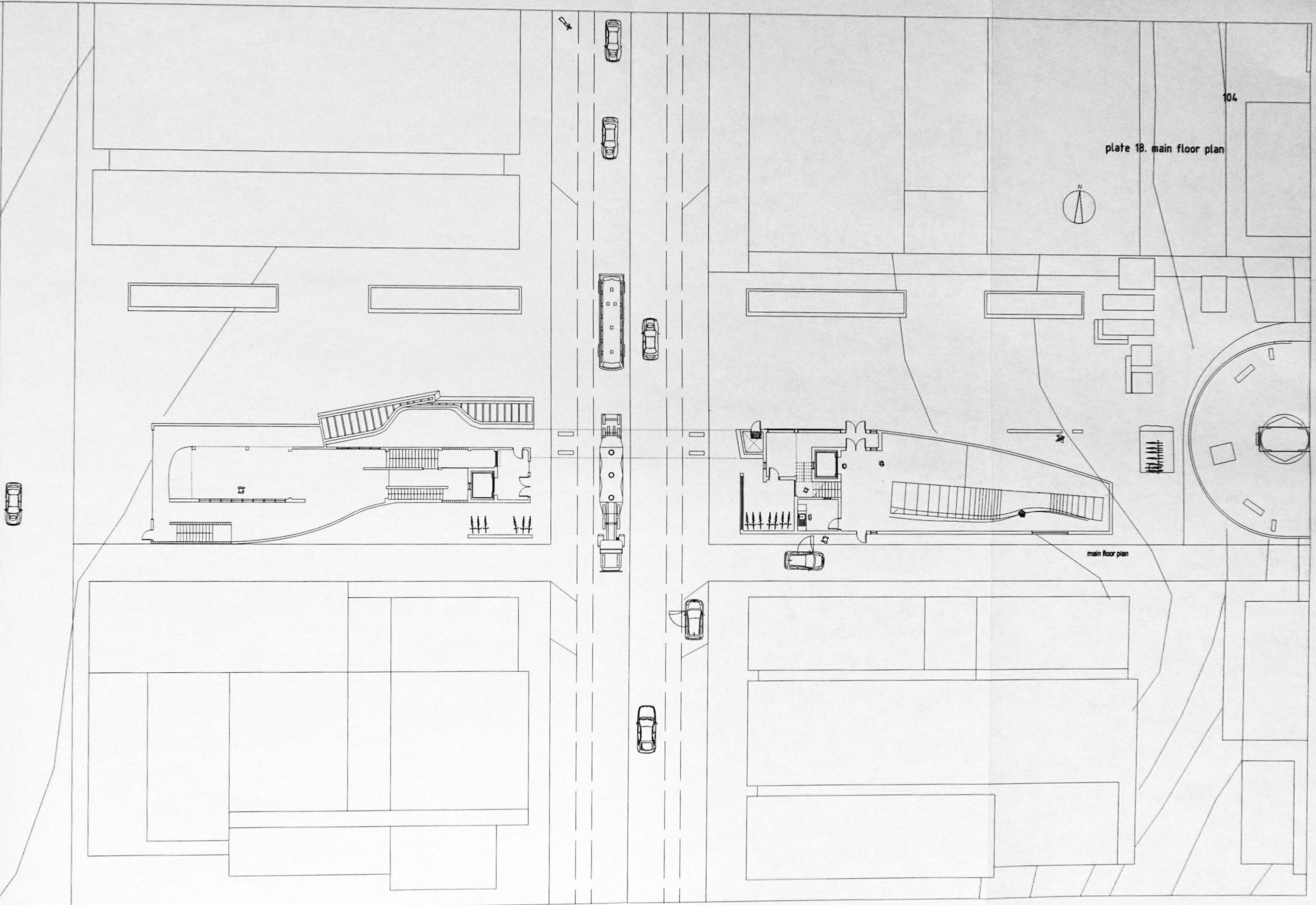


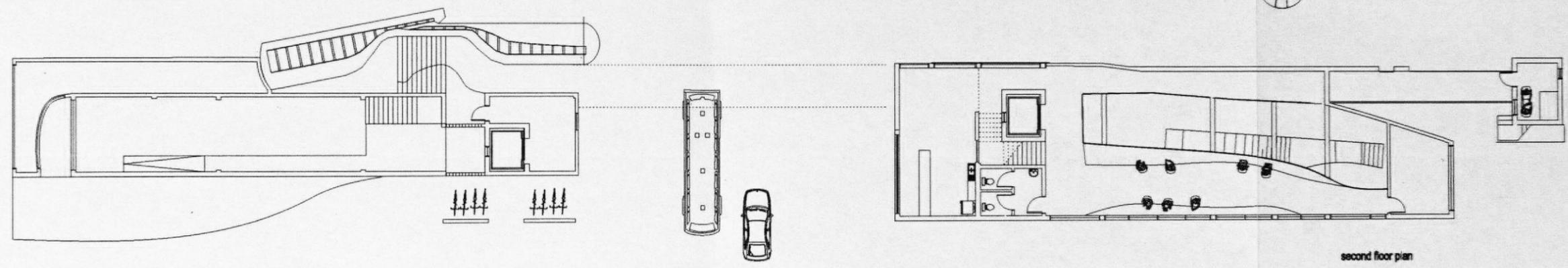
subterranean plan

plate 18. main floor plan



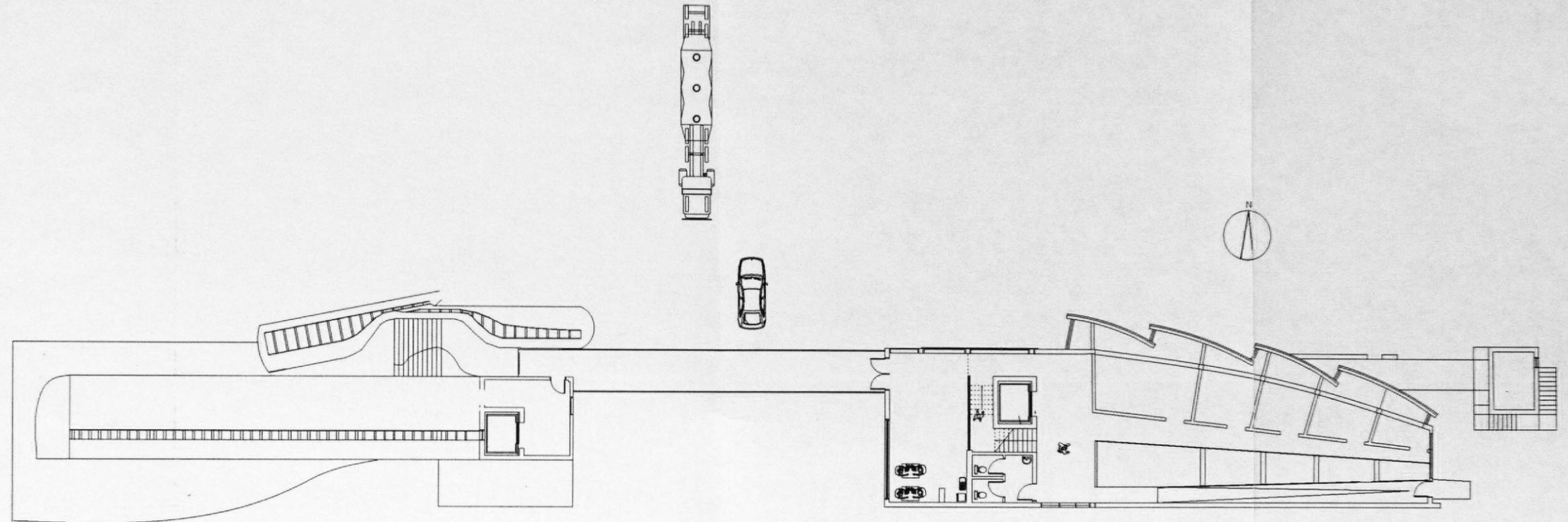
main floor plan





second floor plan

plate 20. second floor plan



third floor plan

Architecture can be an instrument that the architect through process and eventually the user appropriates so that it is never static but instrumental in movement. While space can be formed by social process, social constructs also form space. The process of architecture requires the architect to be within this social space but also to examine the relationships from outside and to participate in formation in the will to architecture as the production of space. Social process is acknowledged in architecture by contributing to a continuous formation where architecture translates to possibilities, "a space that is described and does not aspire to do more than describe by its inhabitants who appropriate by imagination".<sup>181</sup> The goal of this thesis was to define an understanding and a means by which to begin thinking about architecture in the contemporary space of mobility and ultimately to derive a process that

## Conclusion

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<sup>181</sup> Lefebvre, The Production of Space 39.

acknowledges movement. In the end the process is more than a representation or notation of movement. To include movement in architecture is to subvert preconceptions of users as well as the preconceptions of the architect in the process. We should suspend program in the sense that it participates in free movement: suspension as resistance in which we reorient ourselves. As Álvaro Siza once said, the building is never complete even when it is complete it continues being transformed in use. But the role of the architect is instrumental in the ability to produce resistance and challenge representations of space. The question of mobility in architecture does not resist *firmitas* rather it opens new questions to the contemporary role of architecture in the production of space through movement.

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