

## Design Development

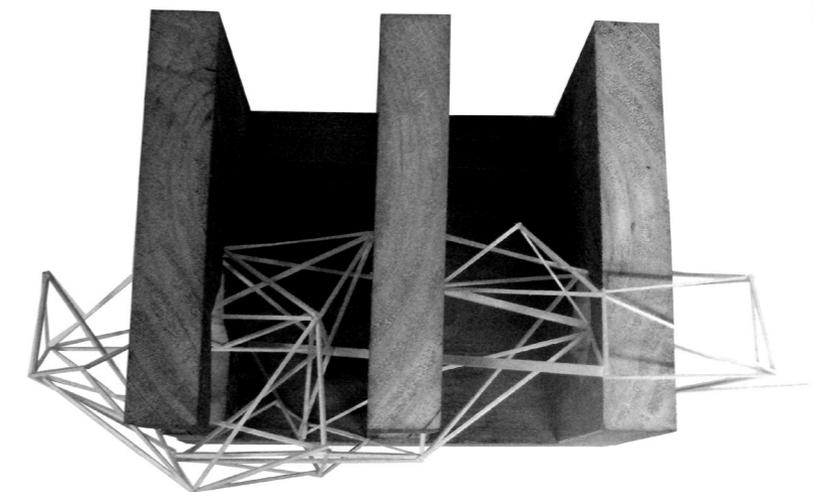
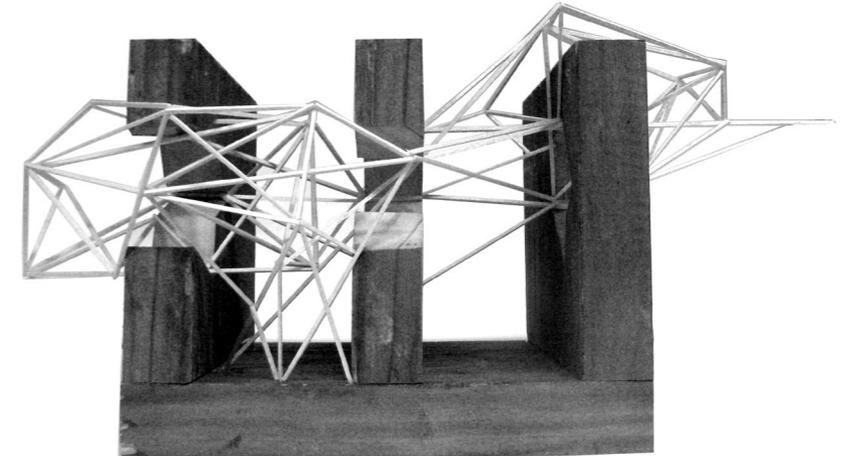


Fig. 99

Photograph of front view of first model. Conceptual form piercing through existing structures

Author, 2006

Fig. 100

Photograph of top view of first model. Conceptual form piercing through existing structures

Author, 2006

Thus far, the text in this dissertation has related to the project on an urban scale. The global development of Functionalism and the emergence of an ‘anti-modern’ have served well to highlight the two polemics within the Sunnyside precinct. For the design resolution and technical components of the dissertation, one site was chosen from a multitude of possibilities. Because of the urban nature of the project, the design and resolution of an individual site becomes problematic. To define the boundaries and limitations for an urban intervention (especially one dealing with surface continuity) seems

paradoxical. However, it is important to remember that design solutions discovered in the Spruitsig Park experiment can be applied in a similar fashion to the whole of the Sunnyside precinct.

This section of the document plots the design development, beginning from abstract explorations until a final design is realized. Theory relating to formalistic design concerns will also be dealt with. This has been divided into three subheadings, namely, Fortification, Densification and Hybridization.

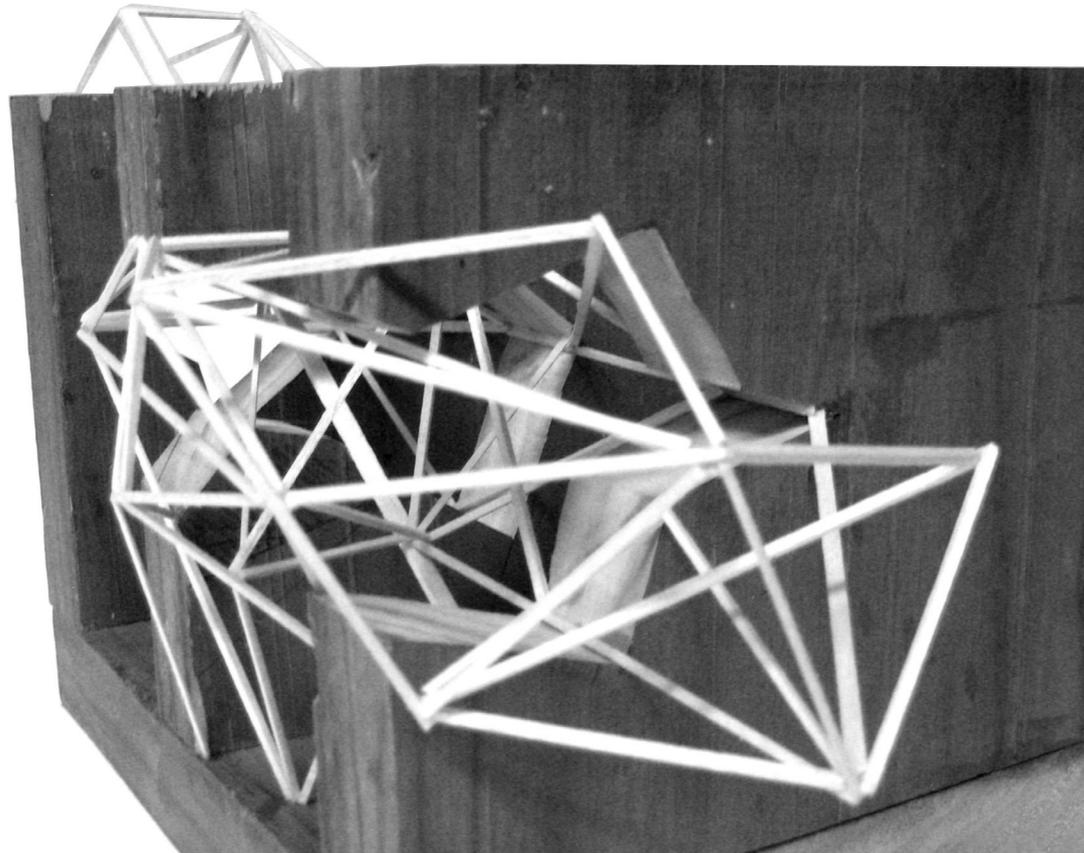


Fig. 101  
Photograph of first  
concept model  
Author, 2006

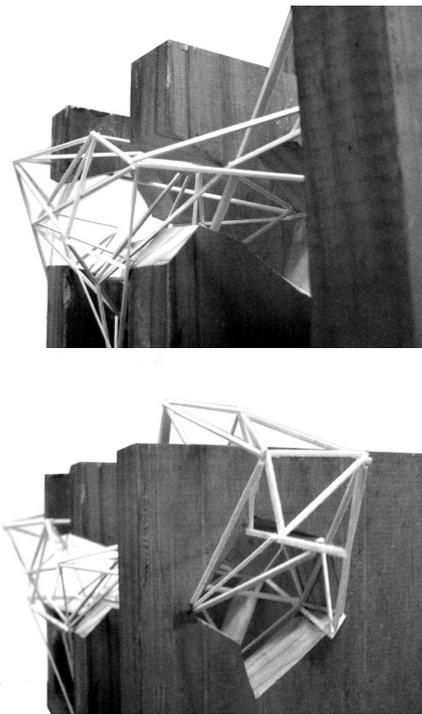
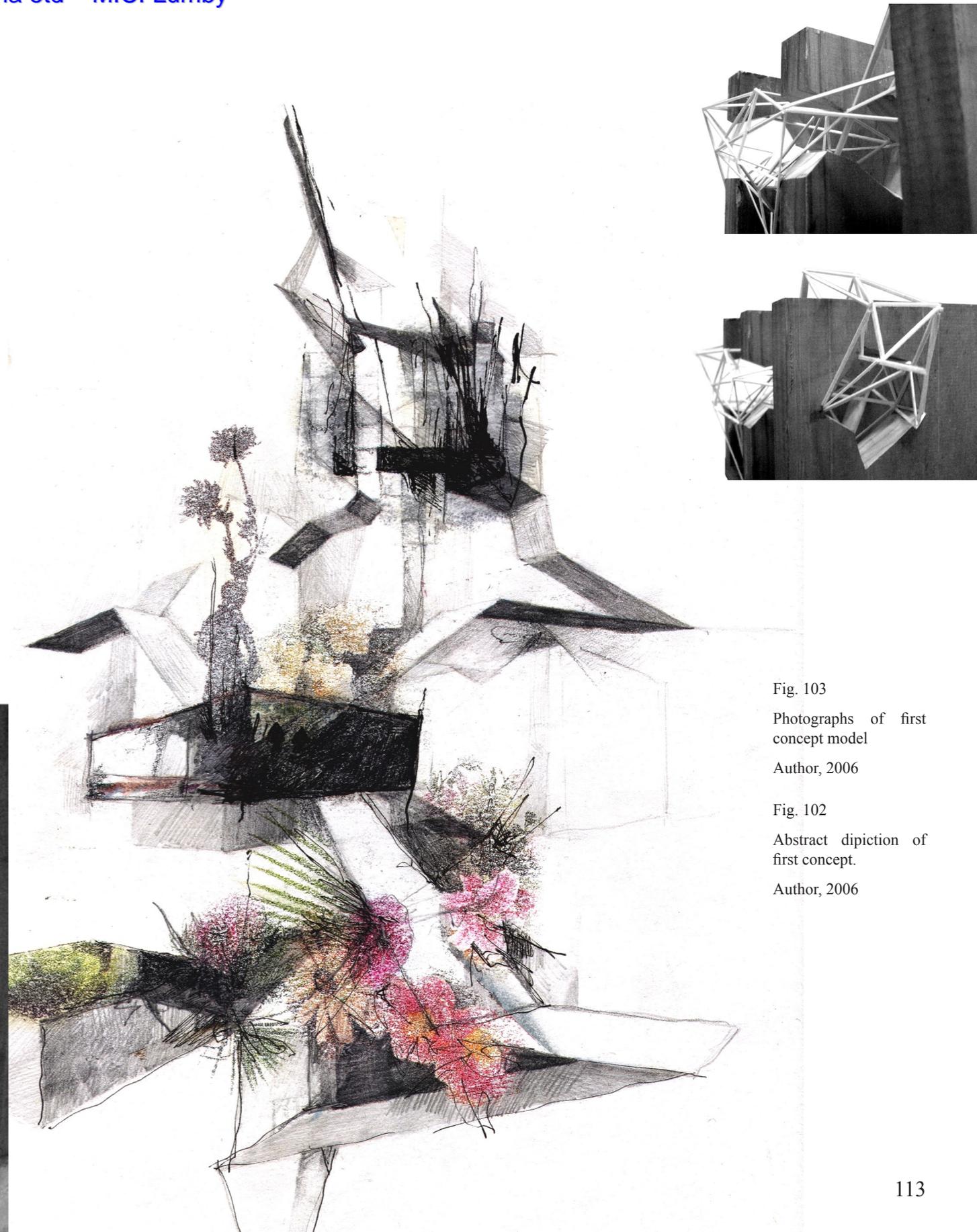


Fig. 103  
Photographs of first  
concept model  
Author, 2006

Fig. 102  
Abstract depiction of  
first concept.  
Author, 2006

## Fortification

“...the sites in which daily life and face-to-face interaction take place are being sacrificed to redundant zones of oversight and propriety control. This threatens the free exchange of ideas engendering a progressive society. It creates an impediment to the cross cultural communication necessary to knit together diverse publics. It is a rejection of the individual’s right to space in which to be.”(Flusty 1997:58)

The root of the problem of unused semi-private spaces within Sunnyside, is the phenomenon of fortification. While in the past most of these spaces were public (in accordance to the modernist ideal of the undulating ground plan) urban spaces have undergone drastic changes in the last decade. The implications on the social order are immense. According to Bremner, “...freedom of movement is restricted, chance contact is eradicated and public interaction limited to that between self defined, homogenous groups. And the result is that separation deepens and a sense of shared space is lost.” (Bremner 1998:11)

Unfortunately the first and easiest response to crime is to insulate oneself from it. This causes a chain effect, where

if one property owner erects a fence, the others in the vicinity feel vulnerable and follow suit. As is the norm, the security obsession came about as a result of drastic social change following South Africa’s democratization. This has led to the fragmentation and segmentation of the socio-spatial realm, (Flusty 1997:57) which “...undermines the very concept of civitas, organized community life.” (Blakely & Snyder 1997:85)

Architecturally this implicates that open space is subjugated to the need for protective space, and in so doing, “the celebration of our hopes through design gives way to the physical manifestation of our fears.”(Sites 1997:120) Although some critics advocate the total removal of borderlines to achieve a free, open society, it would perhaps be wiser to attain a compromise through design. The city’s boundaries can begin to impact positively on the spaces they border. In this way, interactive interfaces can replace “...a landscape filled with violent edges, colliding turfs, unstable boundaries, peculiarly juxtaposed life spaces, and enclaves of outrageous wealth and despair.” (Read, S & Sezer, C. XXXXX)

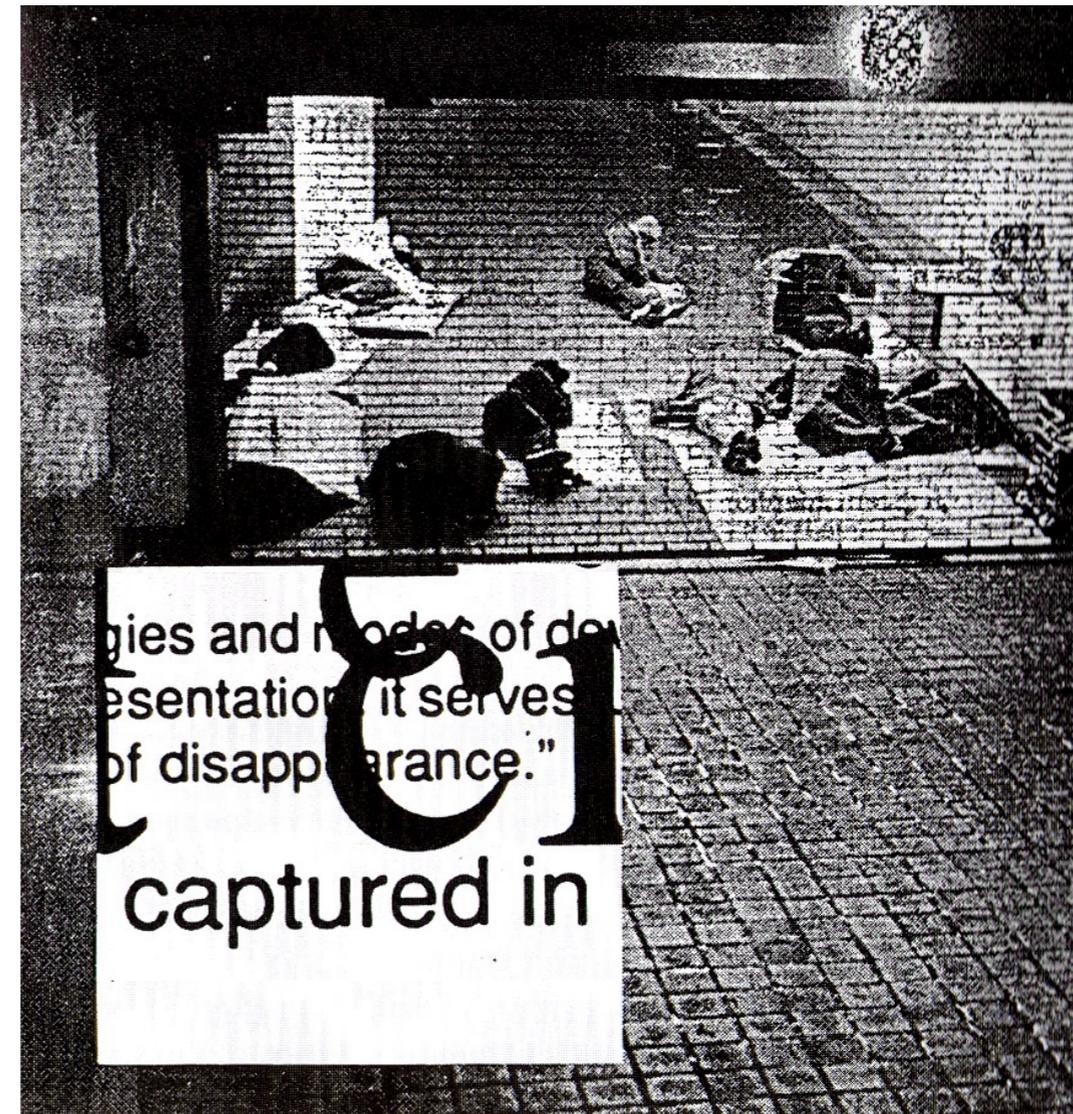


Fig. 104  
Fred Dewey, *Captured In*, 1994.

Fig. 105

Conceptual Illustration:  
Fortification  
Author, 2006

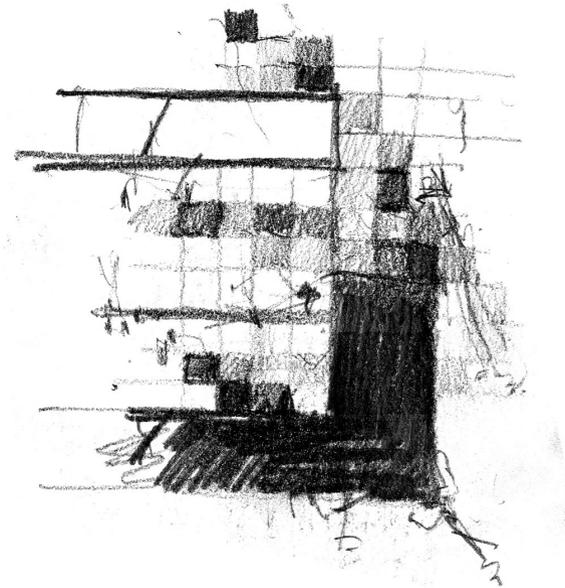


Figure 106

Diagrammatic representation of possibilities of arrangement regarding the hierarchy of public, semi-private and private space.

#1: Status quo site lines showing pedestrian pathways between flat-blocks, above-ground parking and perimeter fence.

#2: Status quo spatial arrangement showing the majority of open space being subjugated by unused semi-private space with public space confined to the street edge.

#3: Spatial arrangement as the designer intended, utilizing the Modern Movement's ideology of city as public park space.

Design arrangement #4: Transform the pavilion typology to a terraced typology, improving the interface between street and site and providing more secluded semi-private space behind the new additions. Unfortunately, the scale of the existing buildings does not allow the viability of this option.

Design arrangement #5: Similar to #4, this arrangement allows public space under the new additions into secluded public and semi-private spaces behind. The safety of this option is questionable and the construction of a boundary between public and semi-private is undesirable.

Design arrangement #6: An attempt at rectifying #4 through reduction of scale. Enclaves of public space form between the new buildings.

Design arrangement #7: An attempt at rectifying #5 through reduction of scale. The issues of safety and boundary are still apparent.

Design arrangement #8: Similar to #4 but with circulation shafts situated within the semi-private realm. In this way, the correct hierarchy of spaces is maintained.

Design arrangement #9: In this case, boundaries are placed as to maximize public space on the site, while ensuring the spatial hierarchy. Semi-private buffer zones are placed around all the private structures, including the circulation shafts.

Design arrangement #10: Similar to #9, but with a rearrangement of circulation shafts. This serves to further maximize public space, but to the detriment of semi-private space.

Design arrangement #11: This layout connects all the semi-private spaces on the site. It coincides with the flat complex's existing amenities.

Design arrangement #12: Similar to #11, but with public through routes connecting larger public areas. It is this diagram from which the design will develop.

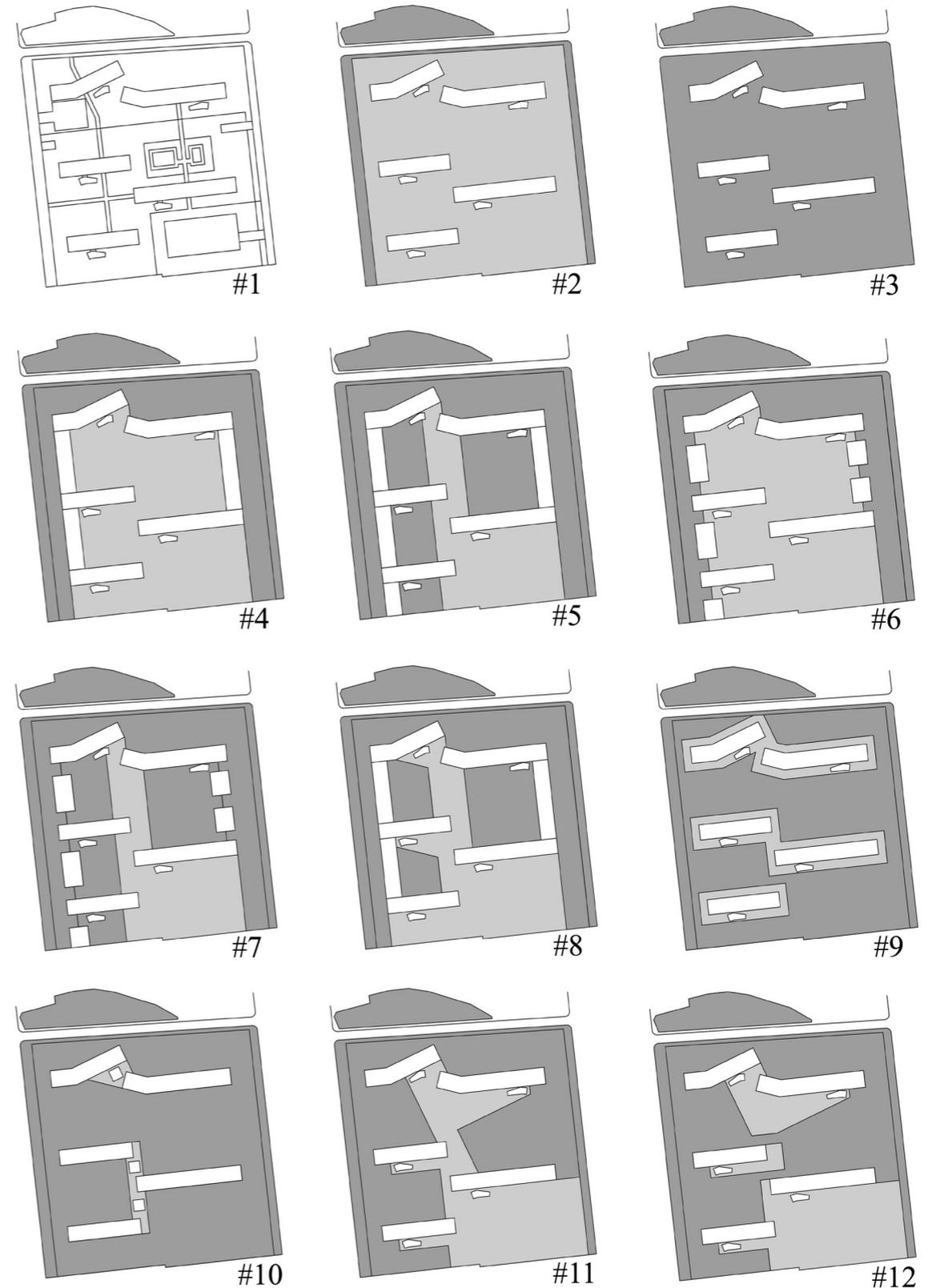


Figure 107 (*adjacent page*)

Parasite in SI units, conceptual illustration

2006, Author

Figure 108 (*top*)

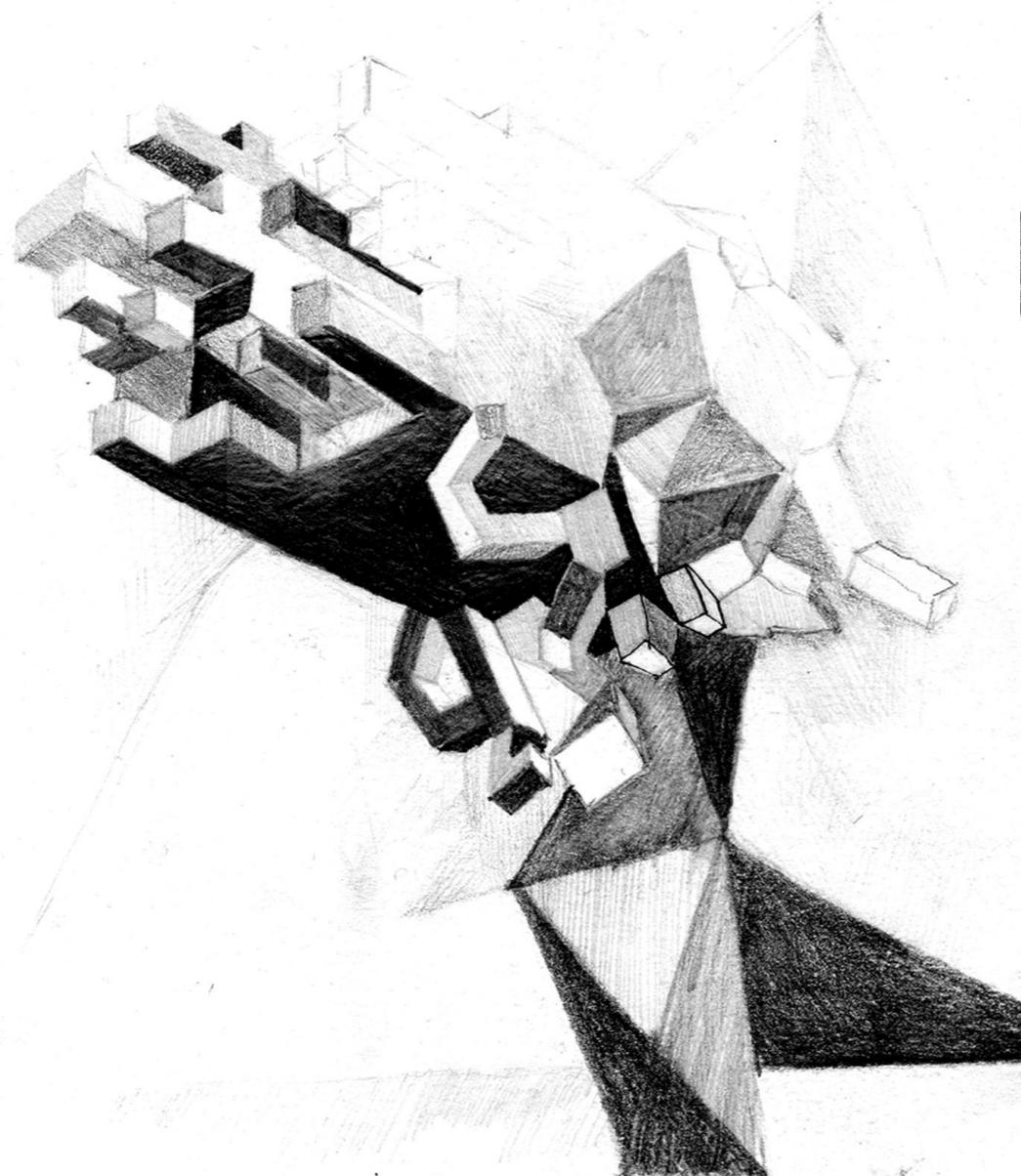
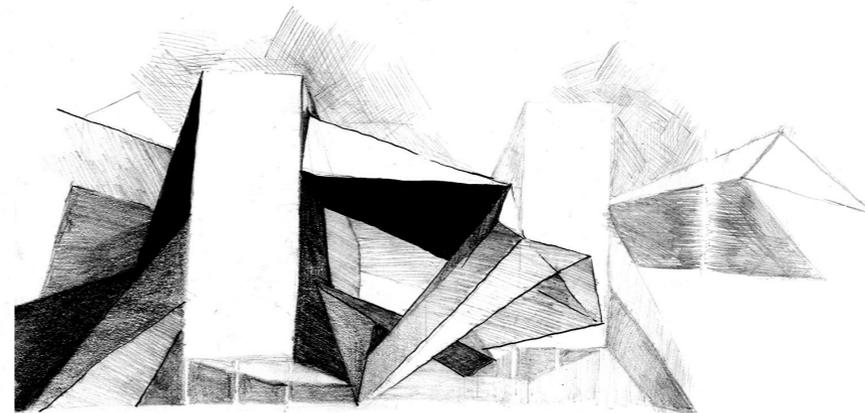
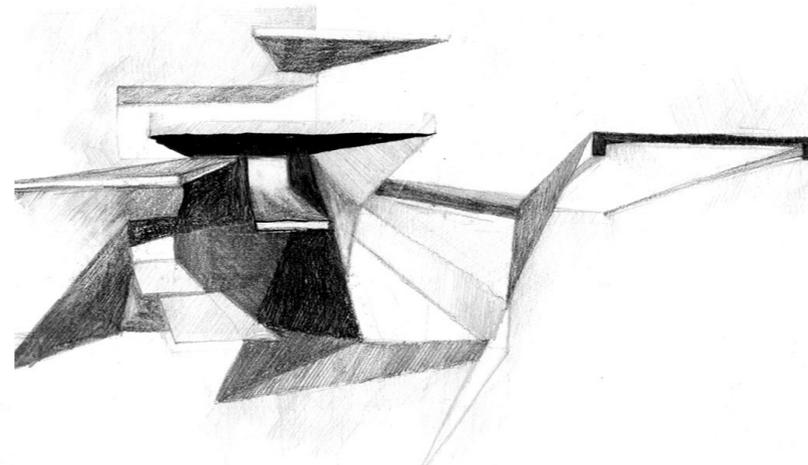
Arms outstretched, conceptual illustration

2006, Author

Figure 109 (*bottom*)

Fire with fire, conceptual illustration

2006, Author



## Densification

### Surface Continuity

“The grafting of new instruments and equipment onto strategically staged surfaces allows for a transformation of the ground plane into a living connective tissue between increasingly disparate fragments and unforeseen programs.”(Wall 1999:235)

In this text the term ‘densification’ is not used in conjunction with population statistics, building footprints, coverage ratios or the amount of stories. Instead it relates to the density of human activity, particularly that which occurs on the public urban surface. Alex Wall

defines the contemporary urban surface as “the ground structure that organizes and supports a broad range of fixed and changing activities in the city.” This ‘field’ consists of the buildings, open spaces, roads and everything else that forms part of the urban fabric. Most importantly though, is that this membrane not only connects these objects and spaces, it also contains the city’s dynamic events as they move through it. The urban surface is “dynamic and responsive; like a catalytic emulsion, the surface literally unfolds events in time.”(*Ibid*:233)

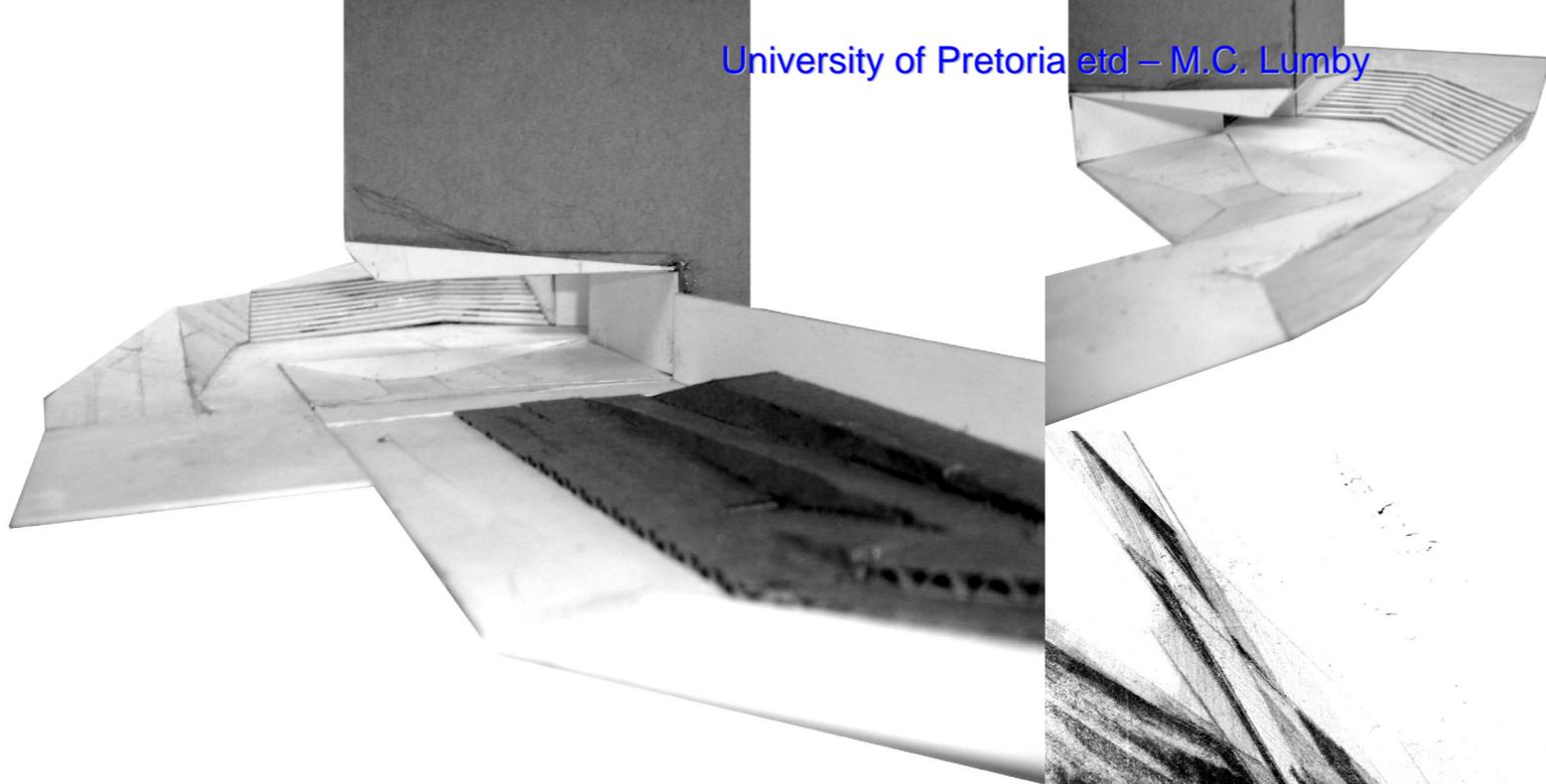


Fig. 110  
 Photograph of concept model: Surface manipulation showing the eroded corner of Maroela and stratified planters leading to Walker Waterway.  
 Author, 2006

The concept of the urban surface and its related design issues originated in post war Europe, when many cities had to be rebuilt. The urban renewal policies of the time stimulated new ideas regarding large scale landscapes and urbanism. Superstudio, one such group of urbanists, developed the concept of the *Supersurface*, which utilized the device of the grid to suggest a “pure, planar landscape, providing both a metaphor and an instrument for the networks of energy and information that could extend to every corner of the earth.”(Ibid:235)

From the text already put forward in this dissertation, it is clear that the urban surface presiding in Sunnyside is defunct. Instead of an active landscape which constructs the situations for new relationships and interactions among the things it supports, Pretoria’s urban surface has become anti-space. It succeeds in isolating each individual site with impenetrable boundaries, allocating the

majority of urban surface to the semi-private realm which, in turn, becomes unused. The buildings of Sunnyside are “no longer interested in belonging, in being part of the web, but a needle, standing simply on its own. It is in downtown, but not of downtown,” (Koolhaas 1995:856) and the city disintegrates into a cluster of autonomies.

This dissertation will attempt to begin to rectify this dilemma by improving the continuity of Sunnyside’s urban surface. For Lebbeus Woods this continuity is paramount, and states that “The flow of energy in space is an architecture of change: one thing affects another in ways that cannot be exactly predicted. (Woods 1992:27) This unpredictability is a vital energy in the making of a city, where architecture is not undertaken as a “passive ameliorant”, but rather as an “active accelerant, staging and setting up new conditions for uncertain futures.”(Wall 1999:233)

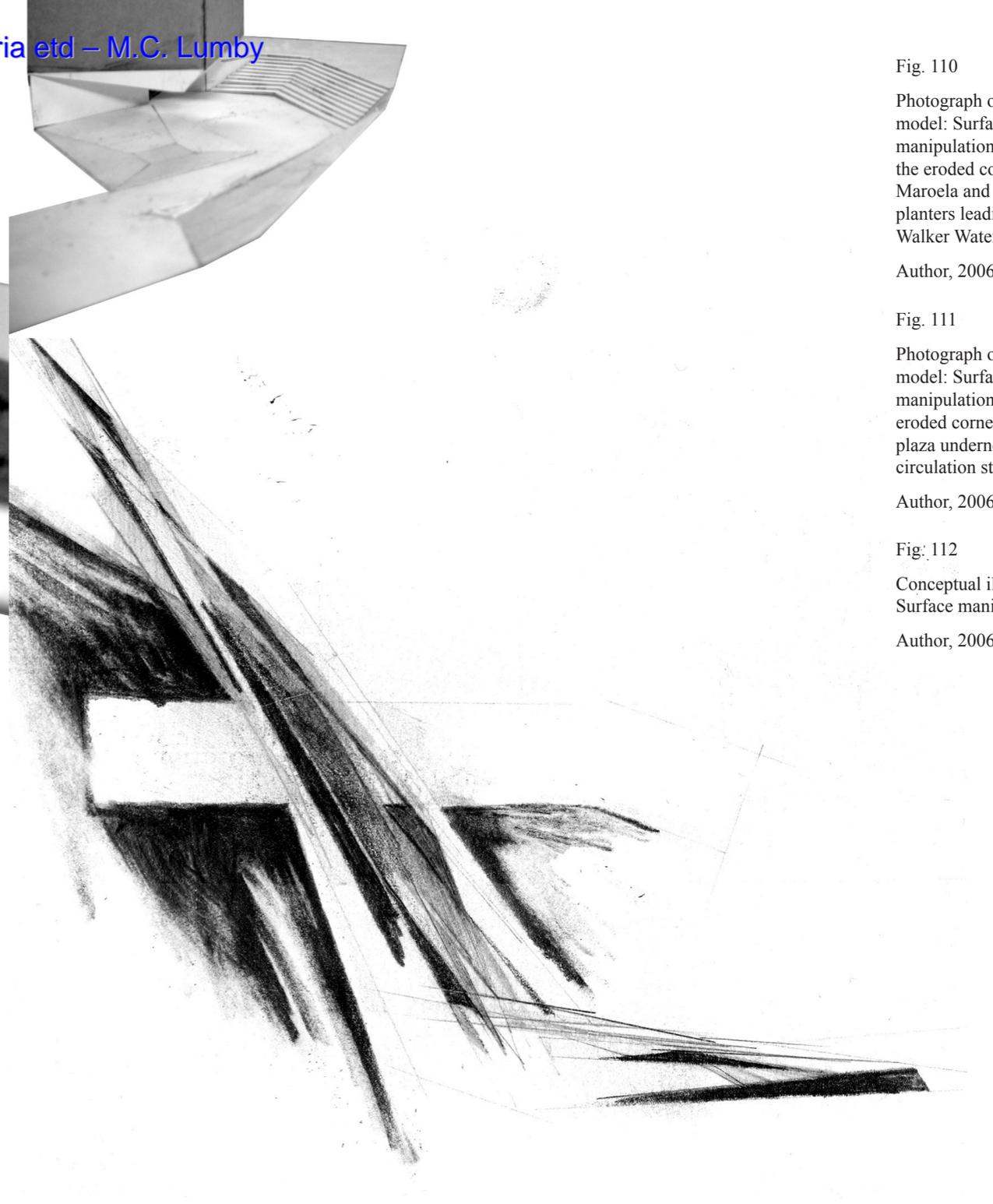
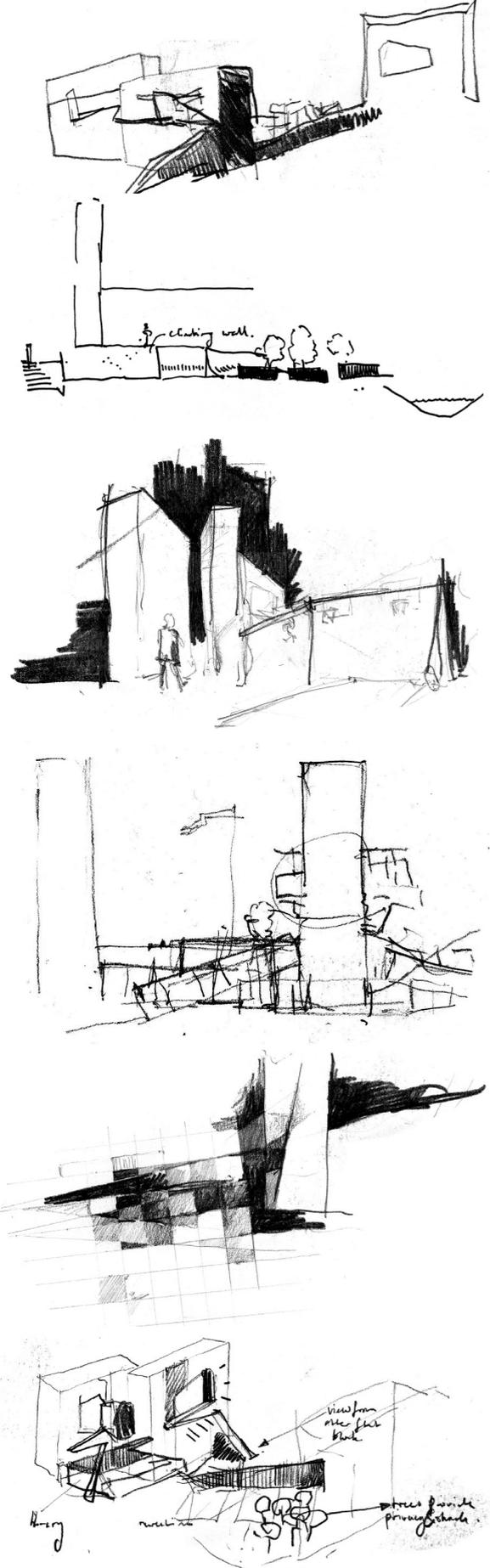


Fig. 111  
 Photograph of concept model: Surface manipulation showing eroded corner with plaza underneath and circulation steps.  
 Author, 2006

Fig. 112  
 Conceptual illustration: Surface manipulation  
 Author, 2006



### Un-Volumetric Architecture

A concept inextricably linked to the ‘staging of conditions for uncertain futures’ is that of un-volumetric architecture. While the urban surface can perhaps be seen as the city’s connective tissue in the two-dimensional ground plane, urban un-volumetric architecture can be defined as that which provides the frameworks for the three-dimensional voids situated within the surface. According to Kim, “urban voids are neither residual nor excremental, but potential fragments of contemplation and obsession.” (Kim 2006:164) Un-volumetric architecture is the enabler for the realization of this potential. In addition, it is within these social containers or platforms that the “occasional discovery and the chance encounter of destinies occur” (Ibid:164), providing a new status for architecture “far removed from the mono-functional blocks indicated by building codes.” (Ibid:163) The concepts of urban surface programming and un-volumetric architecture mark a shift with an architecture of programmatic concerns. Instead of an architecture of functionality, one rooted in activity and play can develop. By providing frameworks or platforms where these activities can take place, architecture can begin to ‘connect the inhabitant with events in the world around him and within himself.’ (Betsky 1990:180) Instead of viewing these voids or ‘absences’ negatively, they can now be seen to contain enormous potential and “indescribable essence.” (Kim 2006:163)

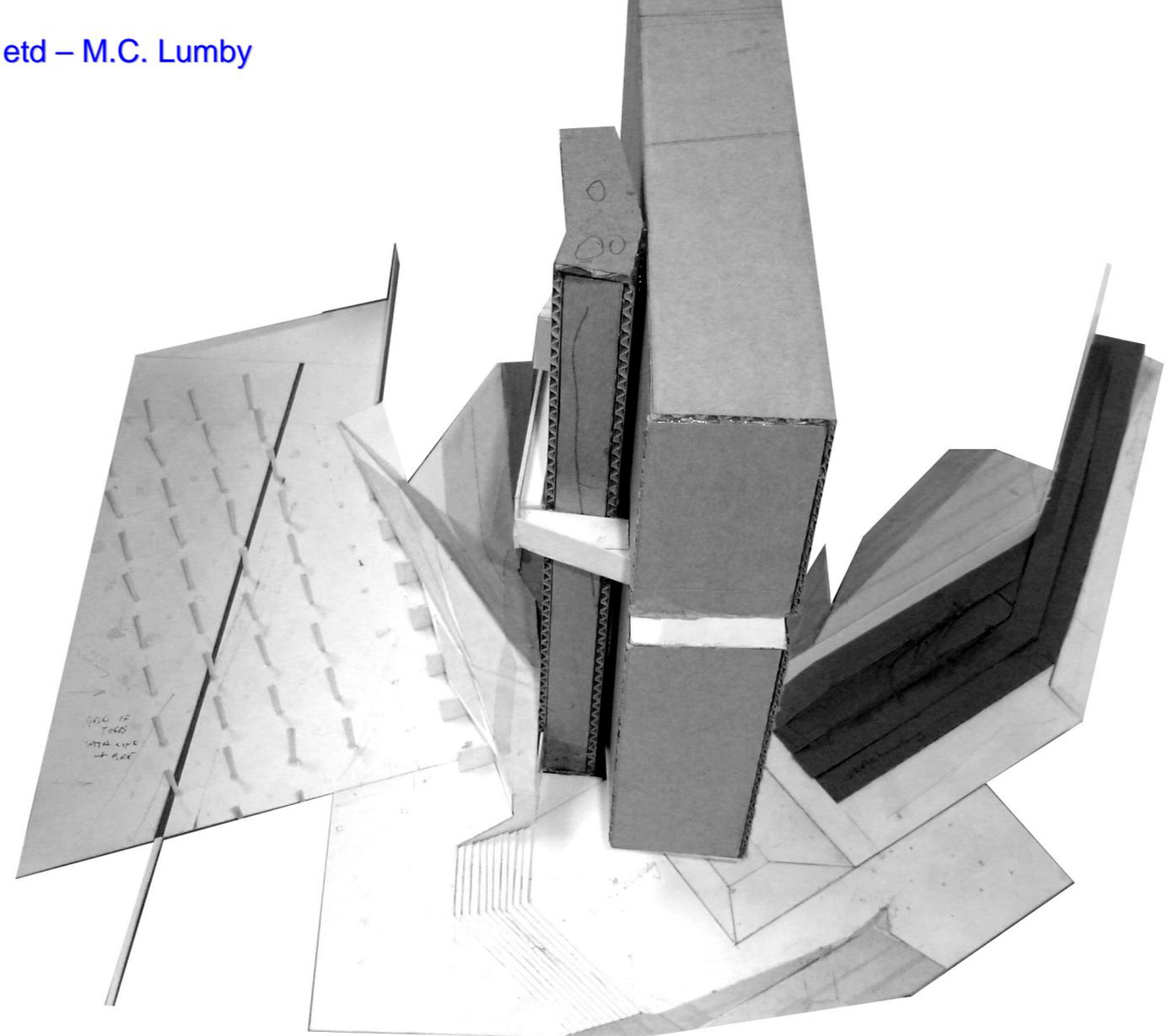


Fig. 113 - Fig.118  
Conceptual illustrations: Surface manipulation  
Author, 2006

Fig. 119  
Photograph of concept model: Surface manipulation with grass berms as interface typology, public circulation ramp and eroded corner.  
Author, 2006

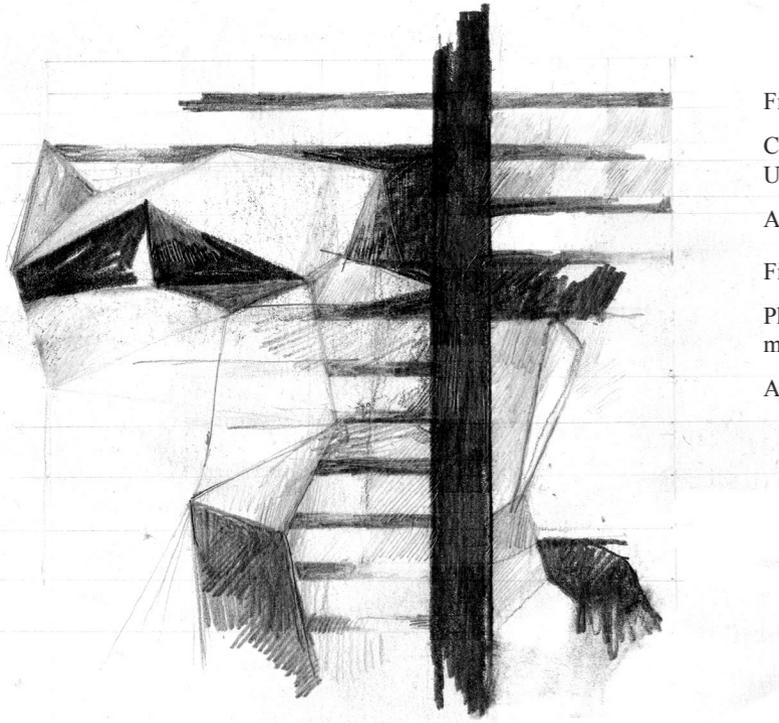
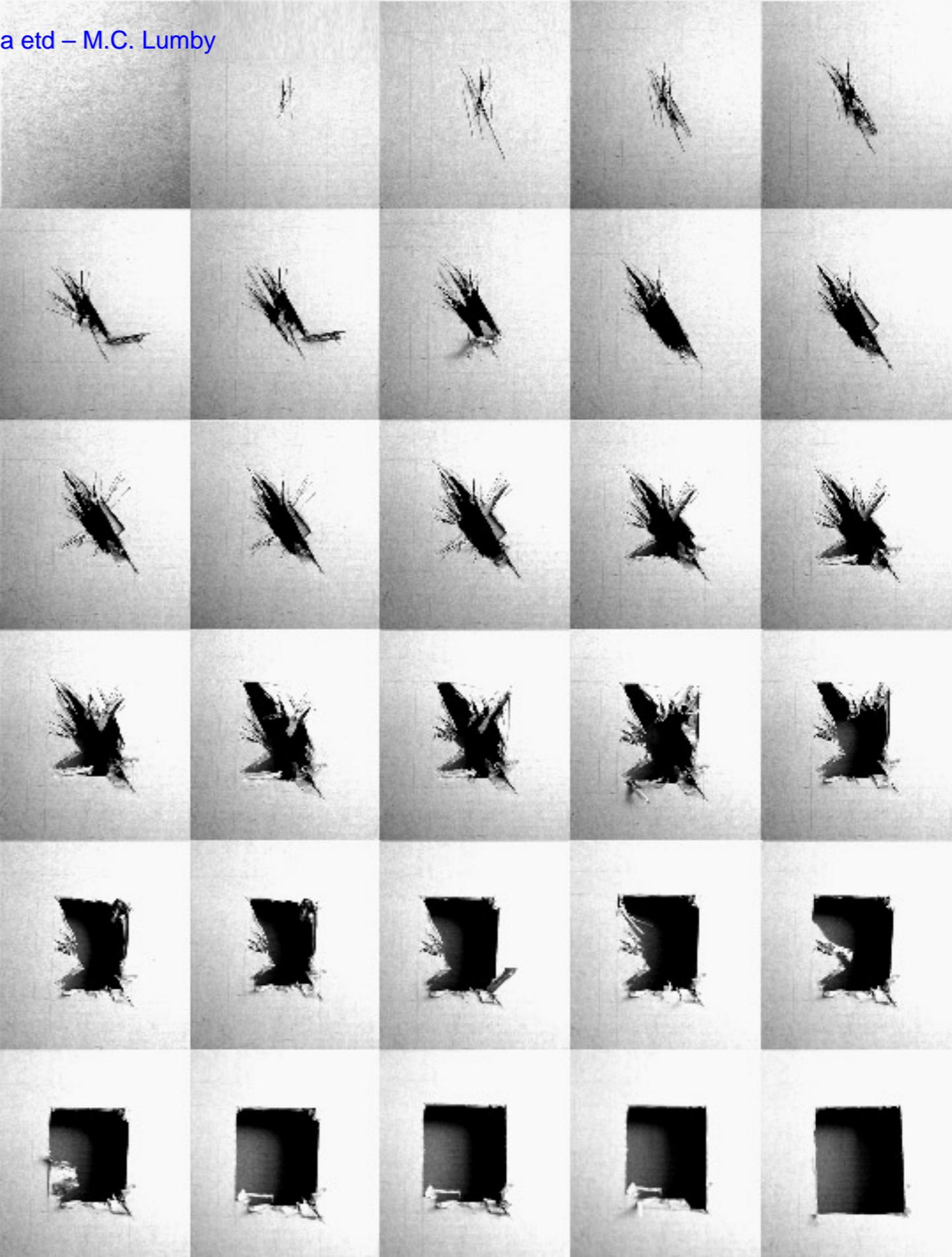


Fig. 120  
 Conceptual illustration:  
 Unnamable Hybrid  
 Author, 2006  
 Fig. 121 (right)  
 Photographs of concept  
 model: Void #3  
 Author, 2006



## Hybridisation

As previously mentioned in the introduction, the overarching concept of this dissertation relates to the establishment of free flowing energy throughout the urban environment. Up to now, it has manifested in the manipulation of the two dimensional urban surface. For the completion of the concept, the design will now proceed into the third dimension: that of the vertical. The theory relating to surface continuity and un-volumetric architecture which informed the ‘freeing-up’ of the urban surface can be applied to the emancipation of vertical structure. In this way, public space can begin to extend from the floor plane up into previously inaccessible locales.

“An extreme blurring of architectural properties into cohesive oneness implies an extension of the single surface organization from a primarily horizontal structure to a three dimensional organization encompassing the vertical and the diagonal as well... ..Enriched by light, sound & movement, a situation

emerges in which the unified organization is permeated with changeable substances.” (Berkel & Bos 1999:83)

The insertion of elevated public space within the large north-eastern block (Maroela flat block) provides continuity of concept into the architectural realm, transforming an ordinary block of flats into a hybrid of flat units and un-programmed spaces. UN Studio defines the architecture of hybridization as “the fluent merging of constituent parts into an endlessly variable whole, [which] amounts to the organization of continuous difference, resulting in structures that are scale-less, subject to evolution, expansion, inversion and other contortions and manipulations.”(Ibid 84)

**It is important to note that this is not ‘multifunctional’ design where various functions are placed adjacent to each other in a logical arrangement.** An un-programmed void becomes an edifice that is free to assume different identities, inviting appropriation, diversification and reinvention.

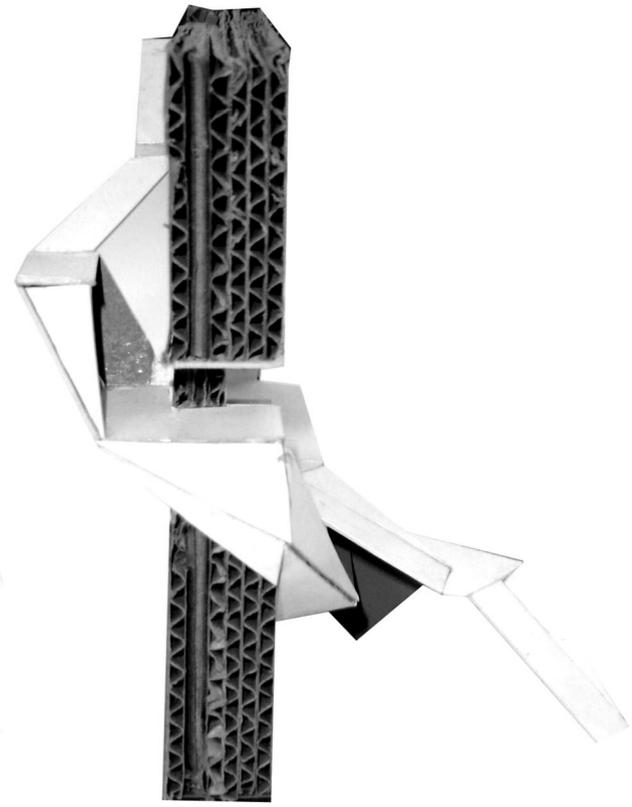
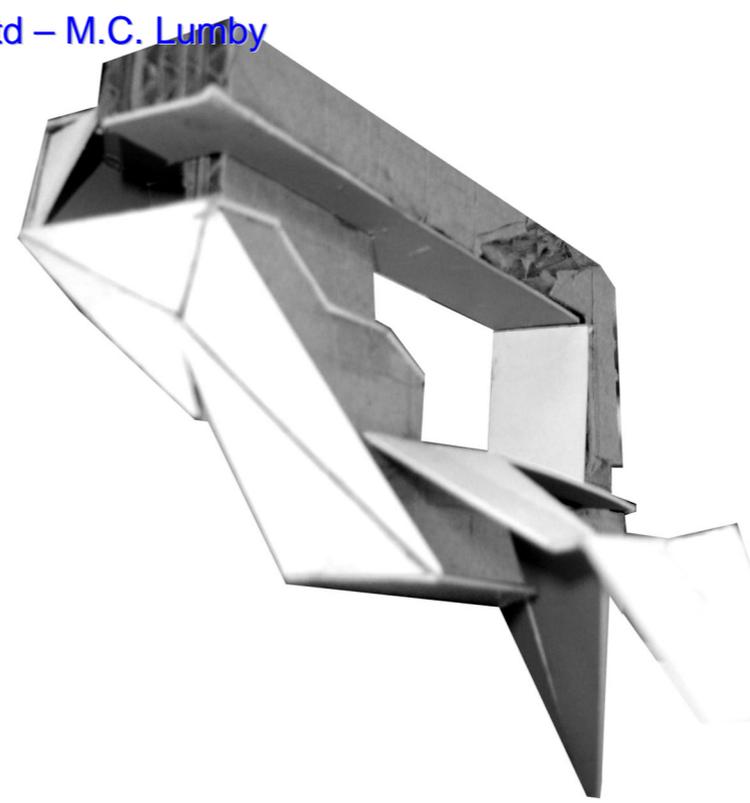
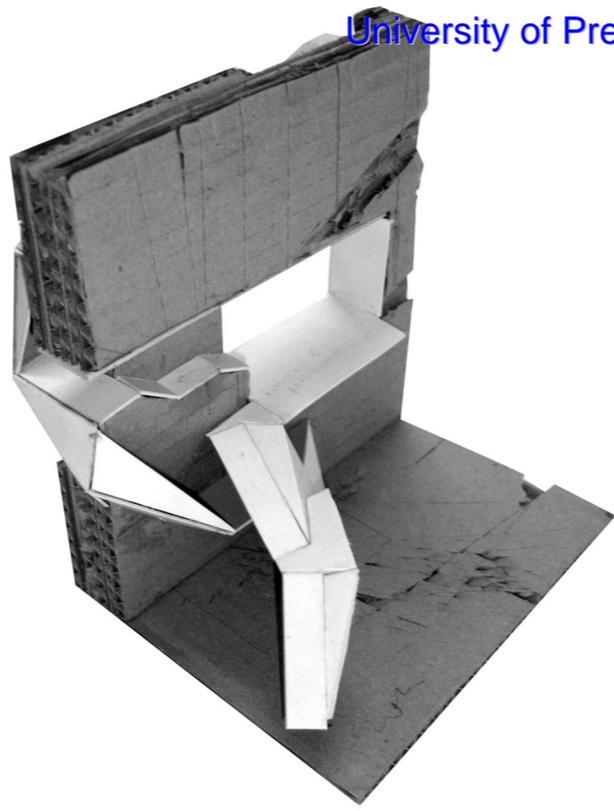
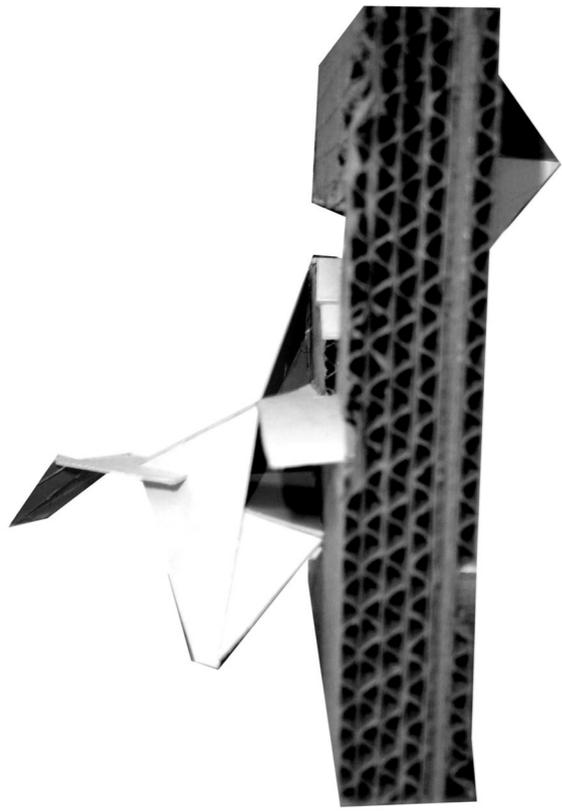


Fig. 122

Photographs of concept models: Ladder #3 & Ladder #4. Public circulation and void.

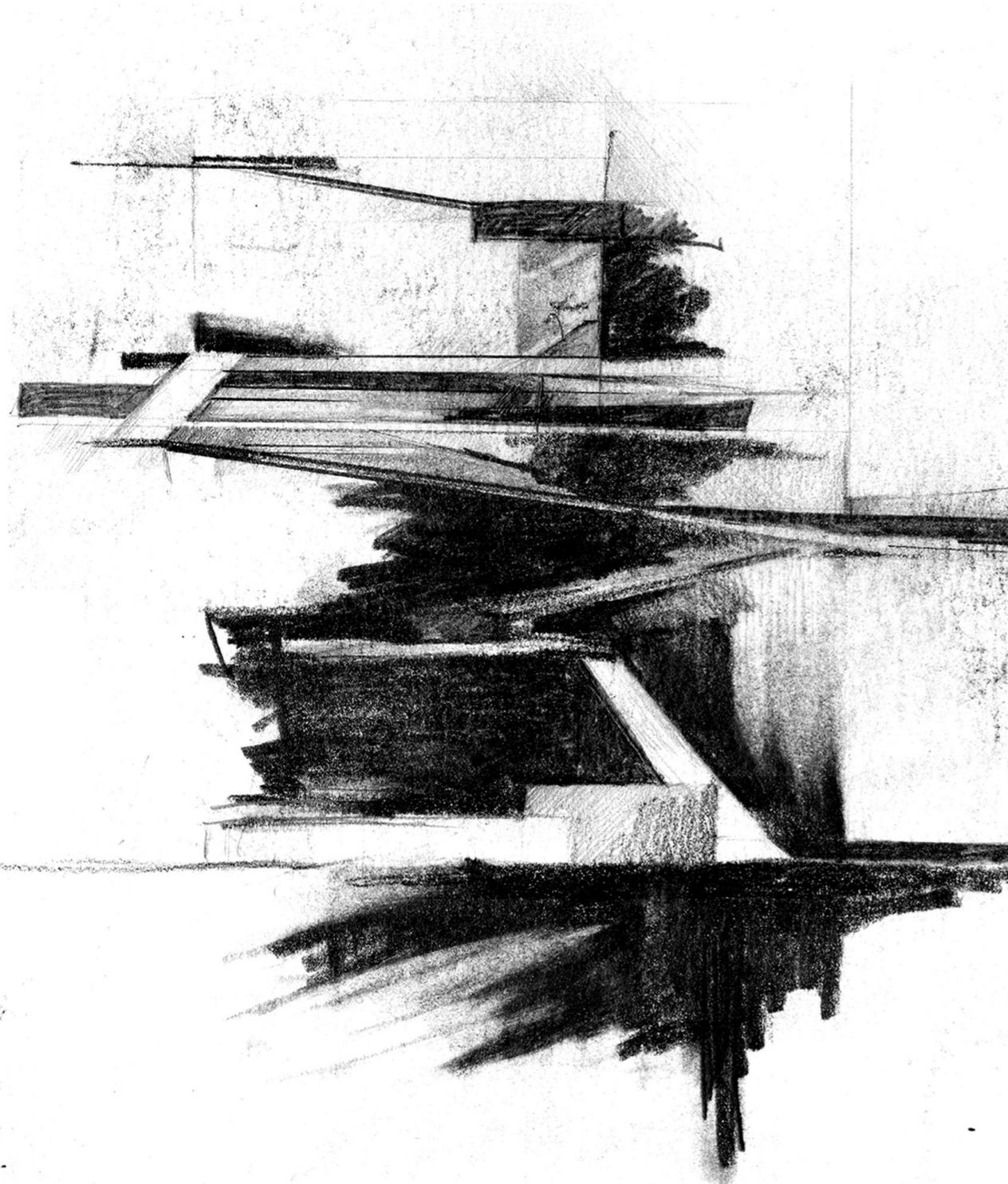
Author, 2006

Fig. 123 - Fig. 126 (above)

Photographs of concept model: Ladder #2. Public circulation from Leyds street into void in Karee flat block.

Author, 2006





“The social is hybrid; it is a gathering into form, a morphogenesis, that consists of discursive and non-discursive, human and non-human elements, which form coherent assemblages. Society is held together through this gathering which happens in an urban ‘space of gathering’ or ‘situation’. This is a matter of ‘concrete universals’; categorical universals, assemblies of similars, is not the issue here; what we are talking about are gatherings of *heterogeneous* elements into situation or place. We do not attempt to fill in the whole surface either with order or with contingency. There is nothing but networks and we do not attempt to fill in what is in between local pockets of order. They propose also however another kind of space, a *fluid*, where neither boundaries nor relations mark the difference between one place and another. In these spaces boundaries may come and go, allow leakage or disappear altogether, while relations transform themselves without fracture. Latour proposes that by following circulations we can get more than by defining entities, essences and provinces. I would go further here to say that this involution is a progressive generative folding or pleating or ‘space-filling’ at ever finer scales as we zoom in from the ultimate scale of the city which is given by the (ultimately global) limits of its connective and communicative networks and infrastructures.” (Read, S & Sezer, C. 2005)

Fig. 127

Conceptual illustration:  
Ladder #1

Author, 2006

Fig. 128 (left)

Conceptual illustration:  
Ladder #5. Public  
circulation into  
Maroela flat block

Author, 2006



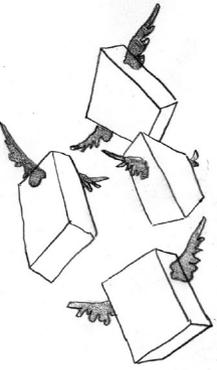


Fig. 129

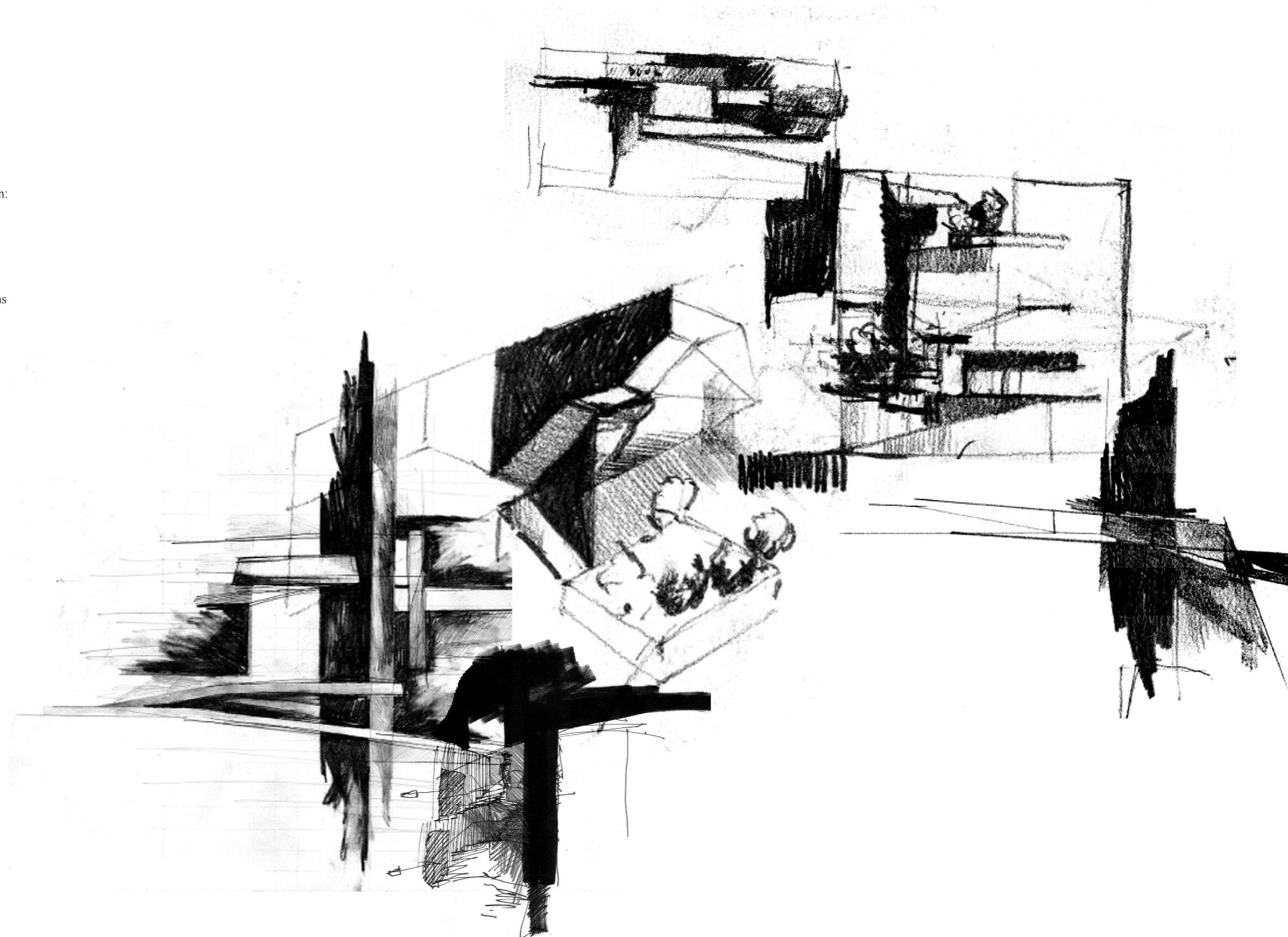
Conceptual illustration:  
Flock of Block

Author, 2006

Fig. 130

Digital Collage of  
conceptual illustrations  
for Marouela void.

Author, 2006



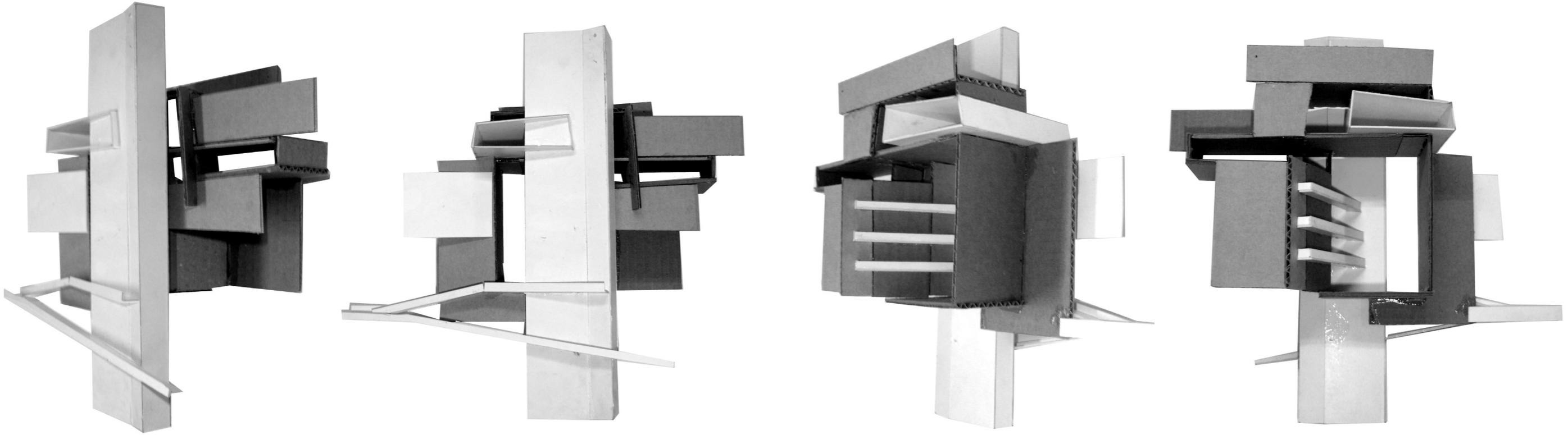


Fig. 131

Conceptual Illustration:  
Void #1. Inversion of  
form

Author, 2006

Fig. 132 - Fig. 135

Photographs of concept model:  
Void #2 showing public  
circulation and urban rooms.

Author, 2006



“[the] structures betray no familiar routines of use or habitation. Yet clearly there are activities accommodated here.”

(Sorkin in Woods 1991:80)

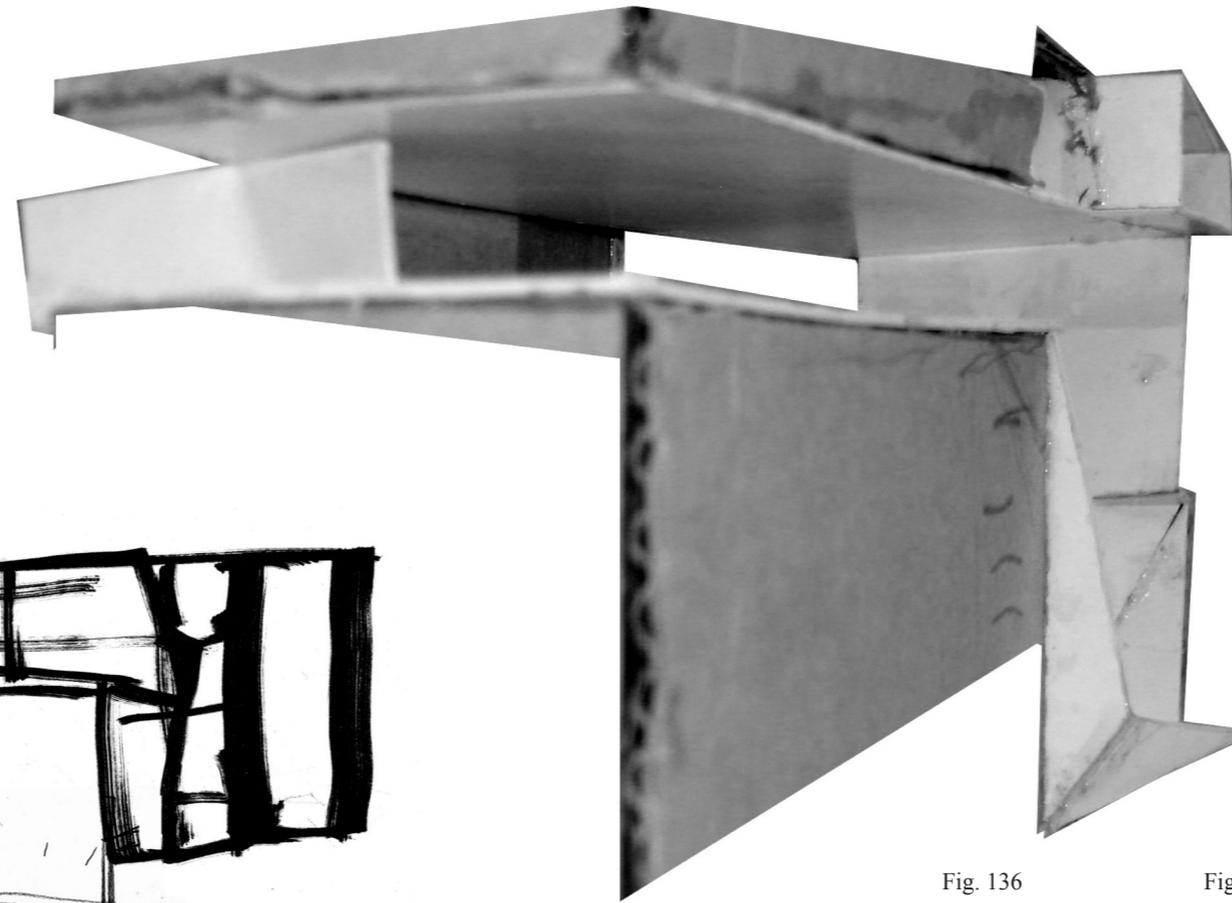
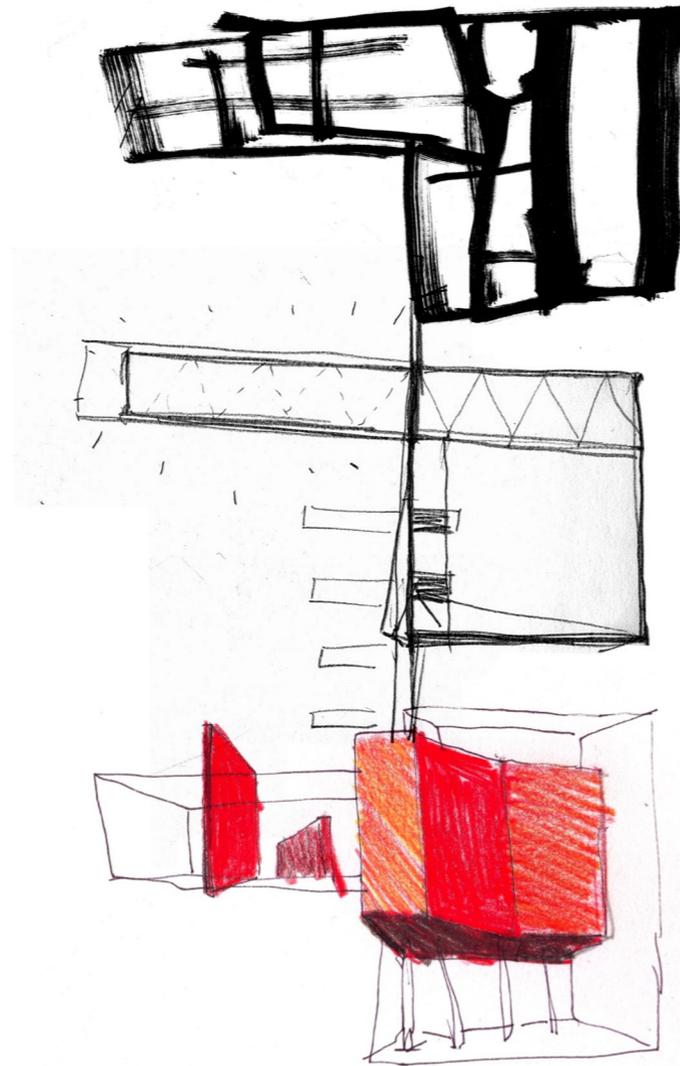
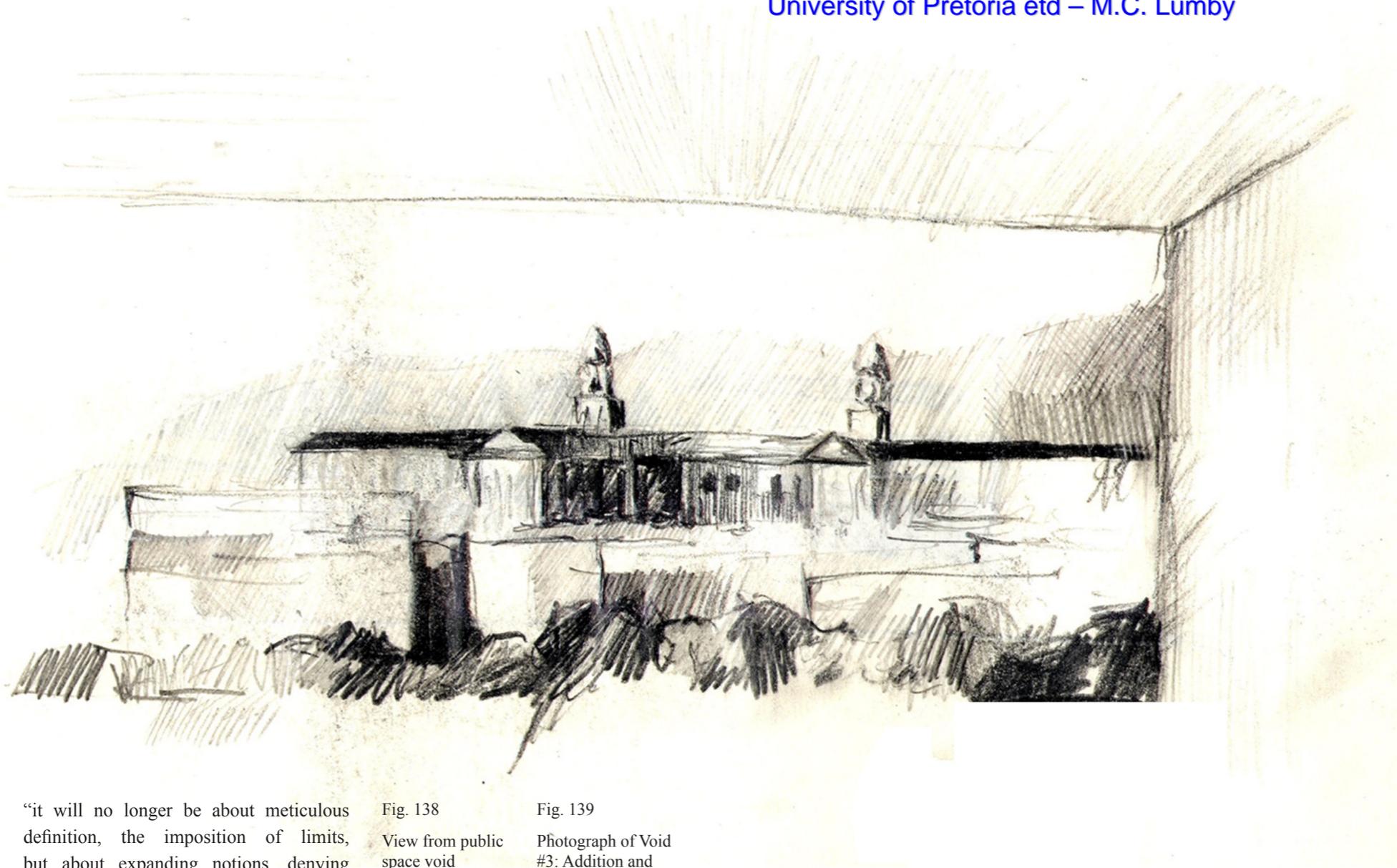


Fig. 136  
Conceptual  
Progression:  
Development of Public  
Space composition  
Author, 2006

Fig. 137  
Photograph of concept  
model: Void #3  
showing public seating  
area  
Author, 2006



“it will no longer be about meticulous definition, the imposition of limits, but about expanding notions, denying boundaries, not about separating and identifying entities, but about discovering unnamable hybrids; it will no longer be obsessed with the city but with the manipulation of infrastructure for endless intensifications and diversifications, shortcuts and redistributions – the reinvention of psychological space.” (Koolhaas 1995:959)

Fig. 138  
View from public  
space void  
Author. 2006

Fig. 139  
Photograph of Void  
#3: Addition and  
Subtraction  
Author, 2006

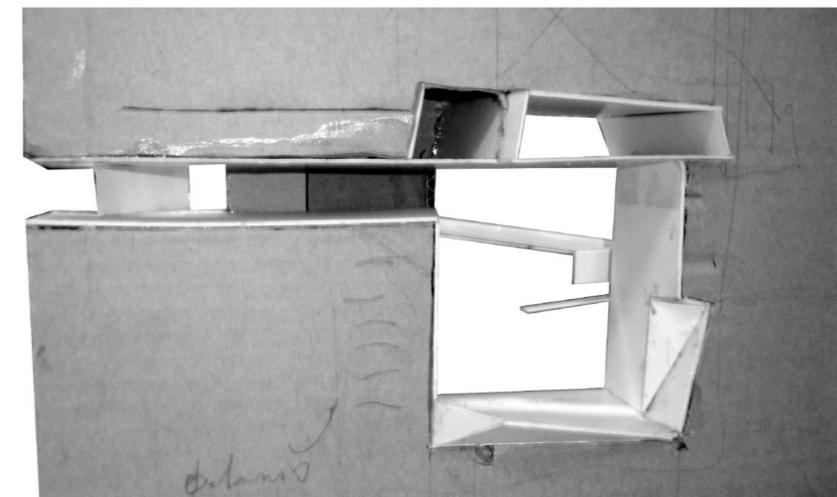


Figure 140

Digital Collage of conceptual illustrations relating to the design development of a free standing tower to the east of Maroela flat block. Its purpose is to visually link the elements of the design (elevated public space and public surface) into a unified whole.

Author, 2006

