

Urban Memory and the Evolution of the Urban Environment

Design Research Project APG5058S

Submitted in partial fulfilment of the requirements for the degree
Master of Architecture (Professional)

by

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REVIEW



Fig. 1

Stained glass
windows of St
Martini, German
Lutheran Church
in Long Street.

You have to begin to lose your memory,
if only in bits and pieces, to realize
that memory is what makes our lives.
Life without memory is no life at all...
Our memory is our coherence, our rea-
son, our feeling, even our action.
Without it we are nothing...

- Luis Bunuel (Moody, 1992 p. 86)



Fig. 2

Partly demolished building in Strand Street showing historic layering.

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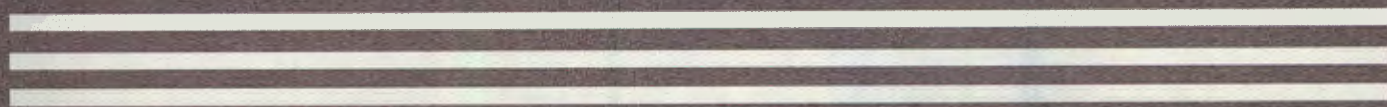
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A

Revival

Introduction

An individual's connection to the world is facilitated by memory as it envelops every feature of human experience. In the absence of memory, meaning collapses. In architectural terms, if memory exists as the foundation upon which meaning is built, if a person is to find and experience meaning in their built environment, architecture must necessarily engage its temporality.

The focus of this project is architecture's peculiar mnemonic capacity as it relates to memory and place. Associated themes are explored through theoretical, technological and design components.

Included here are brief descriptions of the three components. The purpose of the technology and theory components was to test and develop my understanding of the dynamics of memory in the built environment and the implications of these dynamics for design and thought about architecture. Conclusions and discoveries then materialise in a design proposition.

Theory

The theory component of this project contextualises the current status of memory in architecture and its treatment by theorists, by looking at the history of functionalism and its role in severing the connection between the past and the present in the built environment. I trace the trajectory of the two popular axioms of 'Form Follows Function' and 'Ornament is Crime' because of their immense influence in the 20th century, on the place of memory in the contemporary city.

I am concerned with continuity in the urban environment and the necessity of this continuity for people to be able to find meaning in their surroundings.

As a means of analysis, I use Aldo Rossi's critique of "naïve functionalism", and his theories on permanence, type and locus, to understand the dynamics of the evolution of the city. Following on from Rossi's theories concerning memory and the city, I will consider symbolic and sensorial mechanisms in artifacts that enable us to engage with and connect to history and culture.

Technology

The technology component of this project was concerned with the temporality of the architectural project with respect to technology. It investigates the potential of building technology to either undermine or enforce autobiographical and collective memory. It considers weathering and ornament as mnemonic mechanisms that have the potential to remedy the alienating impact that the short-sighted use of contemporary technology has on buildings and their users.

The following pages are included as reference, and are taken from my initial submissions.

Design

My design proposal re-appropriates the site of a permanent urban artifact in the heart of Cape Town's City Bowl and attempts to reverse its pathological tendencies through a reinterpretation of existing programmes in deference to my primary commitment to the continuity of memory in the built environment.

Fig. 3

St Martini, German Lutheran Church and Manse in Long Street, early 1900s. Photo from Church's private archives.



RENEWAL

URBAN MEMORY AND THE EVOLUTION OF THE URBAN ENVIRONMENT.

An investigation into those Primary Artifacts that give meaning to and constitute our memory of the city.

Cesar Daly: "To neglect History, to neglect Memory, that which is owed to our ancestors, is then to deny oneself; it is to begin suicide."

A city remembers through its buildings and preservation of old buildings is analogous to the preservation of memories in the human mind.



ALDO ROSSI'S THEORY OF PERMANENCES

Propelling (Vital) elements / Pathological (Aberrant) elements.

The persistence of these elements is a result of their capacity to constitute the city, its history and art, its being and memory. These elements have the power to retard or accelerate the urban process. The value of these artifacts often resides only in their form, which is integral to the general form of the city.



Investigating

- the ability of permanent urban artifacts (Rossi) to adapt to constantly evolving programmes, while accelerating the urban process and keeping pace with the changing social and technological environments;
- their ability to transcend their initial programmatic intentions, as the value of these artifacts often resides only in their form.
- the phenomenon of "persistences", revealed through monuments, the physical signs of the past, as well as through the persistence of a city's basic layout and plans.
- the ability of architectural form to communicate and thereby act as a mnemonic device in the urban environment. (Symbolism).
- analogies that architecture shares with language: words, phrases, syntax, semantics, metaphors etc.

Project

Reviving a historically and structurally significant primary urban element, that has:

- degenerated into a pathological state;
- receded from active and public urban life;
 - retarded the urban process;
- severed continuity between the past and the present, resulting in a type of collective urban amnesia.

in order to:

- heighten public urban consciousness through memory, to enable the public to understand the city in its totality;
- create a stimulating spatial experience that links the past and the present in a cohesive way.

A permanent artefact in the city that suffers from typical pathological problems will be considered as a site. The site will not have evolved with the rest of the technological and social environment but will show the potential to become a vital and propelling instrument in urban transformation.

The programme will consequently be entirely site specific. The programme will seek to encourage engagement from the public with the built environment and the collective memory contained therein.

Texts

The City of Collective Memory, its Historical Imagery and Architectural Entertainments - *M Christine Boyer*
 The Lamp of Memory - *John Ruskin*
 Urban Memory - History and Amnesia in the Modern City
 Architecture Language and Meaning
 Learning from Las Vegas - *Robert Venturi*
 The Language of Post Modern Architecture - *Charles Jencks*
 Architecture and the Text
 Symbolic Space
 Architecture and the City - *Aldo Rossi*
 A Scientific Autobiography - *Aldo Rossi*
 Sense of the City - An Alternative Approach to Urbanism

Authors

Walter Benjamin
 Sigmund Freud
 Marcel Proust
 Henri Bergson
 John Ruskin
 Aldo Rossi
 Charles Jencks
 Maurice Halbwachs
 Charles Baudelaire
 Christine Boyer





SITING

240 LONG STREET

ST MARTINI
GERMAN LUTHERAN CHURCH



THE SITE, A LUTHERAN CHURCH, PATRONIZED BY THE GERMAN COMMUNITY IN CAPE TOWN, IS LOCATED AT THE TOP OF LONG STREET AT THE BUSY 4 WAY INTERSECTION OF ORANGE, BUTENFANGEL, KILDOOP AND LONG STREETS. BUILT AROUND 1840, IT IS ON THE EDGE OF WHAT HAS HISTORICALLY BEEN THE CBD.

Because of its form, longevity and location in the city grid, it functions as what Aldo Rossi calls a permanent urban artifact, integral to the general form of the city. Thus, it has greatly contributed to what constitutes the city of Cape Town in terms of history, art, living and memory. Because of its power as a permanent artifact, it has the ability to retard or accelerate the urban process and has great potential as a mnemonic device in the city.

The space around the church itself has undergone many changes throughout its 150 years. Its open, but sadly, few have contributed to the surrounding urban fabric, and as a result, it has gradually receded from active and public urban life. The artifact has some peculiar pathological problems. The site has not evolved with the rest of the technological and social environment, but it shows the potential to become a vital and propelling instrument in urban transformation.

By increasing the artifact's potential, this project will seek to revive and heighten public urban consciousness through memory, to enable the public to understand and experience the city in its totality.

THE AIM IS TO CREATE A MEANINGFUL AND STIMULATING SPATIAL EXPERIENCE THAT LINKS THE PAST AND THE PRESENT IN A COHESIVE WAY.



PROGRAM

THE PROGRAM WILL SEEK TO ENCOURAGE PUBLIC ENGAGEMENT WITH THE ARTIFACT AND THE COLLECTIVE MEMORY CONTAINED THEREIN.

THE EXISTING ACTIVITIES ON THE SITE WILL BE REINTERPRETED.

EXISTING FACILITIES INCLUDE:

THE OLD CHURCH

PRIVATE AND PUBLIC PARKING

PRIVATE LIVING QUARTERS - 5

A SANDBERGARTEN INCLUDING:

- NURSERY
- PLAYGROUND
- COVERED PLAY AREAS
- KITCHEN
- STORAGE
- OFFICE
- TOWER

HALL WITH:

- STAIRS
- WORKSHOP
- PROPRIETOR
- CLOSET
- CHANGING ROOMS

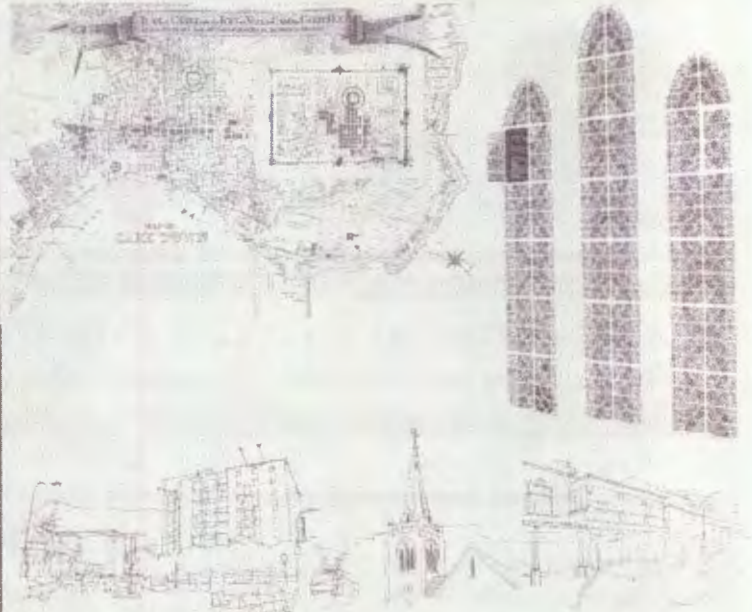
OFFICES

LECTURE ROOMS

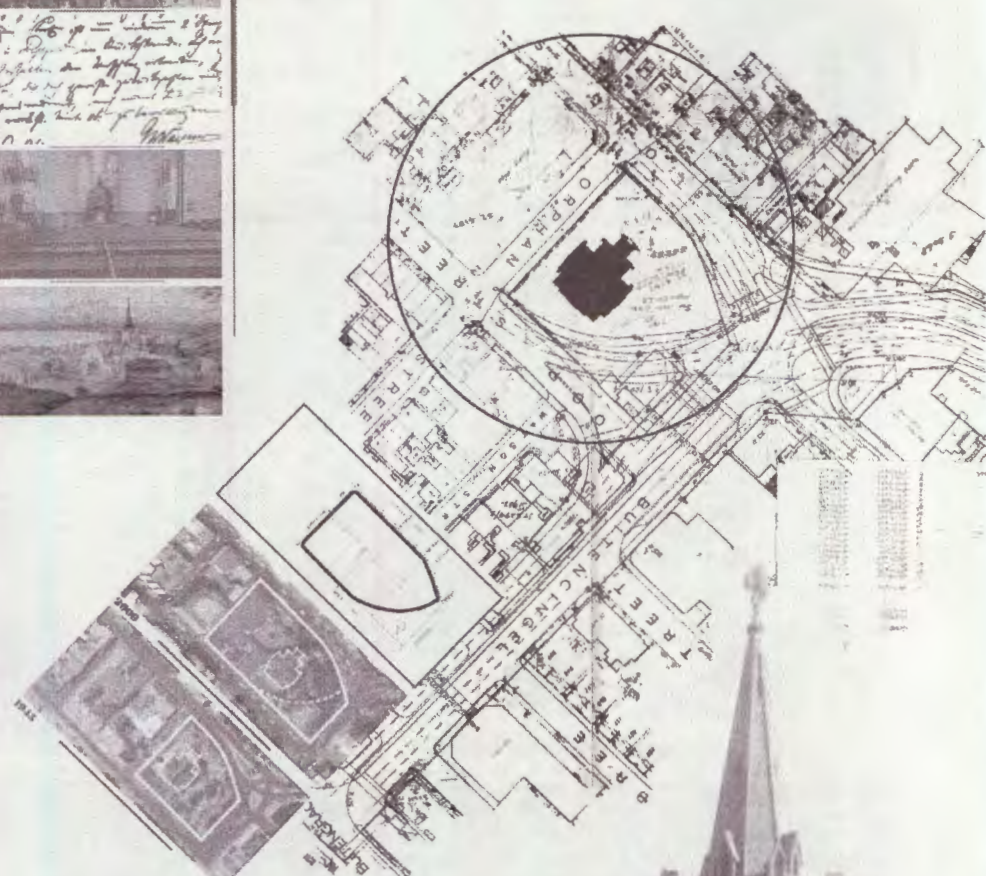
TOILETS

ARCHIVES

YOUTH CLUB



Handwritten notes in German:
 Die Kirche ist ein wichtiges
 Denkmal der Stadt. Sie
 sollte in ihrer ursprünglichen
 Gestalt erhalten werden.
 Die umliegenden Gebäude
 sollten in ihrer Höhe und
 ihrem Stil mit der Kirche
 harmonisieren.
 Dr. A. B.





REVIVAL

INSTRUMENTS OF MEMORY

MEMORY

URBAN MEMORY AND THE EVOLUTION OF THE URBAN ENVIRONMENT

THEORY

TECH

SENSORIAL

SENSATION AND MEMORY
PHYSICAL / EMOTIONAL



"OCULOCENTRISM"
- THE PRIMACY OF VISION

SENSORY BALANCE
AN EFFECT OF THE SENSES

MATERIALITY AND TIME

SYMBOLIC

SYMBOLISM AND MEMORY
INTELLECTUAL



ARCHITECTURE AS COMMUNICATION

CAUSATIVE EFFECTS OF ARCHITECTURE

ANALOGIES THAT ARCHITECTURE SHARES WITH LANGUAGE, METAPHOR, SEMIOTICS ETC.

DUCK vs DECORATED SHED

MNEMONICS

ALDO ROSSI

"THEORY OF PERMANENCES"

CRITIQUE OF

FUNCTIONALISM

THE CITY AS HISTORY

THE COLLECTIVE MEMORY

MEMORY vs HISTORY



PERMANENT ARTIFACTS
(OBJECTS OF RECOLLECTION)

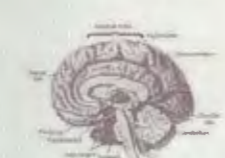
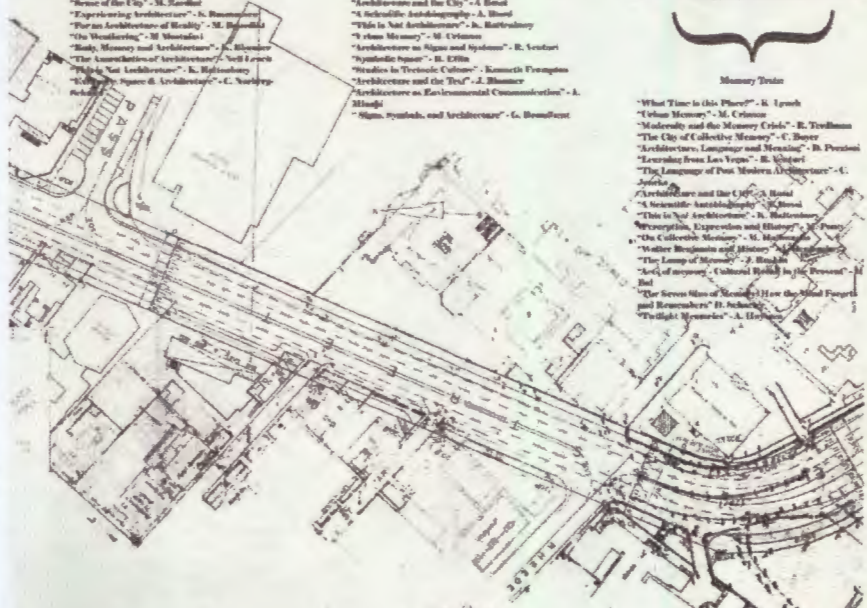
PROPELLING
(VITAL)

OR
PATHOLOGICAL
(ABBERANT)

Memory Train

"What Time is this Place?" - R. Lynch
 "Urban Memory" - M. Crivani
 "Modernity and the Memory Crisis" - R. Treviño
 "The City of Collective Memory" - C. Bayar
 "Architecture, Language and Meaning" - B. Ponzoni
 "Learning from Las Vegas" - R. Venturi
 "The Language of Post-Modern Architecture" - A. Jentoft
 "Architecture and the City" - A. Bond
 "A Scientific Anthropology" - A. Bond
 "This is Not Architecture" - A. Bond
 "Perception, Expression and History" - A. Bond
 "The Collective Memory" - M. Crivani
 "Water, Memory and History" - M. Crivani
 "The Loss of Memory" - J. Bunkin
 "A City of Memory: Cultural Policy in the Present" - J. Bunkin
 "The Seven Masses of Memory: How the World Forgot and Remembers" - R. Schickel
 "Twilight Memories" - A. Bond

"Structural and Memory"
 "Memory Design" - J. Manier
 "Memory and Memory" - Henry Bergson
 "The Eye of the Mind" - Roland Barthes
 "Sense of the City" - M. Crivani
 "Experiencing Architecture" - R. Treviño
 "For an Architecture of Reality" - M. Crivani
 "The Wondering" - M. Crivani
 "Body, Memory and Architecture" - R. Treviño
 "The Architectural Architecture" - J. Bunkin
 "Why Not Architecture" - R. Schickel
 "The Space of Architecture" - C. Bayar



An investigation into the nature of those Preliminary Elements that Give Meaning to and Constitute Our Memory of the City

The book tells the reader: Architecture is revealed by the printing press on the same perspective of change as architecture must use "fixed form" as sociological and industrialized society.

Architecture graphics with the technological changes economic & social demands of the 20th Century. The human attitude towards the post changes factor of topology.

History and tradition is seen as impediment to the new architect's formalistic, rationalistic, reductionist trajectory.

Popularization of international style and a global appropriation of the modernist "style" ("Ornament is crime" and "Form follows Function") (Consequently, other aesthetic purposes of architecture like memory and tradition are rejected).

What are the implications of this Functionalism for memory?

The resultant loss of historic continuity, recognizable symbolism, and continuity between the past and the present.

Also based on Permanent artifacts in the city as subjects of recollection (elements that persist). A book often criticized of "false Functionalism".

Considering the city as history, the nature and demands of urban memory and more important concepts like history vs. memory.

Participating in the nature of permanent artifacts and their material as objects of recollection. (Propelling (Vital) vs. Pathological (Abberant)).

Comparison of with the architect's through Symbolism (Intellectual)

Considering the non-material aspects of architecture and the analogy that it shares with language (Vitality, Symbolism etc). (Ducks vs. decorated sheds). Maximum ability/potential of architectural form.

Sensorial experience (Physical and emotional)

Deconstruction - The privileging of vision.

Sensory Balance - An architecture of the senses.

Materiality and time - the material consequences of the temporal dimension with respect to the making of and experience of architecture.

"MACHINE AGE"

THE BOOK KILLS THE ARCHITECT: PRINTING PRESS REVEALS ARCHITECTURE IN PERPETUATION OF HIS MATERIAL AGE

1901

TURN OF THE 20TH CENTURY: TECHNOLOGICAL, ECONOMIC AND IDEOLOGICAL FORCES CHANGE OUR STATE OF MIND AND THE CITY

PAST = BURDEN

RETRIEVALISM OF FORMS

STAYING IN A HISTORICAL FORM MADE BY ARCHITECTURE IN A TECHNOLOGICAL AGE

BREAK WITH PAST

A NEW ARCHITECTURE

FUNCTIONALISM

EVERY PHYSICAL ELEMENT, EVERY WORD, EVERY SYMBOL

RECOGNIZABLE SYMBOLISM, HISTORICAL CONSCIOUSNESS, PAST PRESENT CONTINUIT

VACUUM

CLEANING PERIOD

OF HISTORY - TRADITION



POPULARIZATION OF INTERNATIONAL STYLE AND APPROPRIATION OF PROGRAMATIC, POST-LAB CREDS

FORM NEVER FOLLOWS FUNCTION? ORNAMENT IS CRIME?

AMNESIA

Memory Train

"Modernity and the Memory Crisis" - R. Treviño

"The City of Collective Memory" - C. Bayar

"This is Not Architecture" - A. Bond

"Urban Memory" - M. Crivani

"The Materialized notion of Function as a Core Element" - J. Bunkin

"The Art and Craft of the Worker" - F. Wright

"Space, Time and Architecture" - A. Bond

"Towards a New Architecture" - Le Corbusier

"The Location of 20th Century Architecture" - R. Ponzoni

An investigation into the divergent possibilities for technology in terms of memory: technology's potential to undermine or reinforce memory.

At the turn of the 20th Century, architects grapple with technological change, economic & social demands.

The new architecture embraces a functionalistic, rationalistic/reductionist trajectory.

Consequently, other metaphysical purposes of architecture are rejected (memory, tradition etc)

Modern technology's aim to transcend nature (Wind, weather etc) to promote human independence, remote artificial ecosystems. Memory alienated from nature.

Alienating effects of technology inherent in its speed and obsession with progress, success and control. (The experience of time in accelerated, sensorial alienation occurs.)

Can modern technology meet the demands of modern society without ultimately alienating humans from an awareness of and engagement with the passage of time, nature and memory?

Materiality: "The life of buildings in time"

Temporality of the architectural project.

An investigation into the material consequences of the temporal dimension with respect to the making of and experience of architecture.

Philosophical and ethical considerations with respect to modernism and decay.

Weathering of building surfaces and other changes over time. Can weathering aid to and enhance the human experience?



"MACHINE AGE"

THE NEW ARCHITECTURE EMBRACES ON A FUNCTIONALISTIC / RATIONALISTIC / REDUCTIONIST TRAJECTORY



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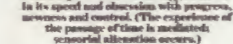
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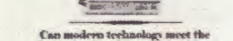
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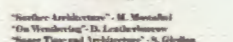
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L.H. Gerards



LOCUS

ORPILANJE BUILDER

HERMAN SCHUTTE

Born in Bremen Germany in 1878. Came to Cape on a Soldier in 1901. Inspector of Town Buildings. Built Many Lighthouses.

Other work includes:

Grave Mark, Hospital, Police Light House, Parts of the Castle and Forts Hoop Lamps.

ORPILANJE ARCHITECT

LOUIS MICHEL THIBAUT

The First Plumber Architect in the Cape.

Born in 1756, near Anden, France. Trained in Paris. Arrived in Cape Town in 1783 with a reputation of being Versatile. Chief of Military Engineers for both Dutch and English Authorities.

Other work includes:

Fountains and Partials of the Castle, Garden Hoop Lamps in Stellenbosch, Populovian House in Swakopmund, Old Supreme Court, Mission Church in Long Street.

CHURCH ARCHITECT AND BUILDER

PETER PENKETH

The Only Architect Working in Cape Town in the 1840s.

An architect of many churches.

Other work includes:

Congregational Church 1837, Free Church of Scotland 1847, House, Fynboek, Kloof Lodge 1845, St. Martin's Church 1848, St. Peter's Church 1842.

NO. 240 ST. MARTINI CHURCH

The site in question, 100 year old permanent artifact.



NO. 240 GERMAN KINDERGARTEN

Part of the 1941 development. Covers the children from 5 years old up to kindergarten II.

The school of St. Martini church is one of two teachers, the other one being in Wynberg.



NO. 240 ORPHAN STREET

Closed in 1987 as compensation for the loss of land resulting from the road widening scheme.

The initial plan was to pedestrianise the street but instead it was closed off completely.



NO. 240 COMMUNITY HALL

Built in 1961 after the demolition of the buildings on the original orphanage site.

Encourages with surrounding buildings and urban fabric.



NO. ORPHAN LANE

Lane between the Community Hall orphanage and 231 Long Street.

Created at both Long and Loop Houses a fire office. Public potential especially.



KLOOF ST HEINEKEN FLATS

Apartment block at the top of Long Street that has become an important landmark due to its street level and use as a street billboard.

The building currently displays a several storey high billboard for Heineken beer which can be seen from a distance.



NO. 240 ST. MARTINI MANSE

Built at the same time as the church and also as a replacement for the kindergartens until 1961 when the new buildings were done and they were moved into their own space, attached to the church and the community hall.

The buildings have been badly neglected and since they are due for demolition due to the road widening scheme, they have not been maintained.

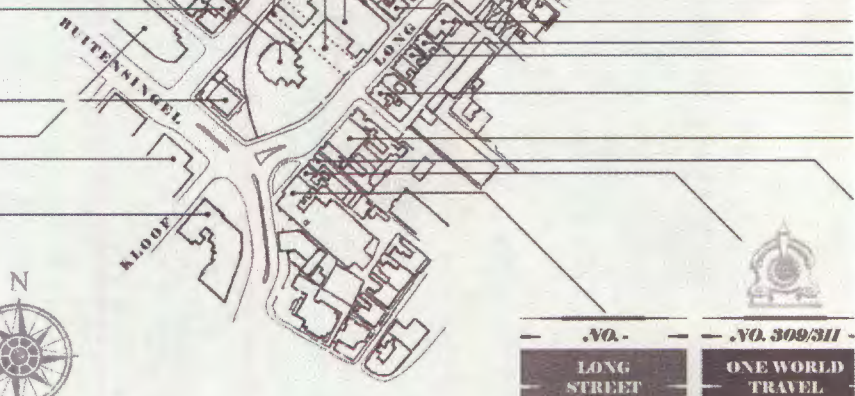
They are currently being used by a small business.



LOOP ST MOSQUE

Quantitative Islamic Mosque, built in 1982 to accommodate the influx of Indian Muslims who followed the Bantustan tradition.

The site of the former of the Lutheran church and the Mosque almost entirely.



220 LOOP APARTMENTS AND OFFICES

Built since the approval of the road widening scheme of the 1970s as it evidenced in the way the building follows the curve of the new building line.



NO. MIXED-USE

Mixed use building recently revamped with retail on the ground floor and offices and a retail space.



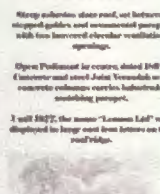
NO. LONG STREET BATHS

General 1988
Architect: Margilivoy and Grant
Architectural Features:
Pile Mass single storey front facade with a flat roof.
Rectangular volume, fronting the street, with projecting window block, linking all the windows and doors in a series of shallow recesses.



NO. 309/311 ONE WORLD TRAVEL CENTRE

Built 1987 in a design by Architects de Wit.
Formerly Gardner's Pharmacy and Lenses Ltd.
Edification, elaborately decorated to meet building with dwelling on 1st floor.
Architectural Features:
Many shallow, stone roof, set before stepped gables and ornamental parapet with low horizontal decorative window openings.
Open Platform in centre, dated 1987 (concrete and steel) Julia Verweide as concrete volume carries horizontal window parapet.
It will host the main 'Lioness Ltd' is displayed in large set from letters on a roof sign.



LONG STREET 1900

UPPER LONG STREET WITH ST. MARTINI IN THE BACK



LOWER LONG STREET



History lost as building is demolished

...of the building...
 ...of the building...
 ...of the building...

ASYLUM ORPHAN HOUSE SOUTH AFRICAN COLLEGE ORPHAN FRONT REAR DV

1815 1815 1829
 minor alterations by Herman Schutte

The site, granted as a gift in 1809 by Governor George Vango, was intended for an asylum for widows and old women. Foundations were laid for this purpose.

EST. BY MRS MOLLER ARCHITECT: L.M. THIBAUT



The strange plan form of the completed Orphan House can probably be attributed to the fact that it was built directly on top of the foundations already cast for the proposed asylum.

Ronald Lewcock, in his work on Early Nineteenth Century Architecture in South Africa observes

The elevation of the Orphan House showed some points of similarity with the rest of Thibault's work of this period. There was the same horizontal grooving of the plasterwork of the wings, and, more significant, their horizontal form was contrasted with a tendency to vertical movement in the central bay. The latter was terminated at the top by a semi-circular pediment, a pleasing composition on a smaller scale to that of the main facade of the Old Supreme Court, which was finished at about the same time. A delightful touch was added to the facade by the coupling of the pilasters between the windows, and a slightly more pervasive one by the addition of gutter to add a stronger modulation to the cornice over the columns. In this, as in the whole treatment of the Classical Order, the building was more subtly and successfully handled than the Supreme Court facade. The design of the entrance is however, a disappointment; its pediment was over-simplified and given inadequate visual support. Instead of a decorative finial, a rather featureless circular cicerone light with a cartwheel pattern was inserted high in the wall above the entrance" (Lewcock, 1963:70).



NO. 226-225 LOLA'S CAFE AND FICTION BAR

Corner of Long, and Station Streets. Three-story building, four small arched windows above those of the Backstairs (No. 190). Remained empty, abandoned, and even after various jobs done. Corner demolished by earthquake, small gabled tower + 18 1842 arch. Little remains on in the present, shaded by the deep verandah, contributing to the relaxed atmosphere of upper Long Street.



NO. 230 OVC AND MAHARAJAH

Three Storey Building with a Colonial Facade. 19 Colonial Columns. 11 Top Ground. Another 9 columns support the roof of the verandah with present balustrade. The top floor and tiled roof were added in the 1890s. The ground floor used to be a public bar "The Hoop".



NO. 232-236 SELECT BOOKS

Single Storey Victorian Shop painted light tan and cream. High parapet and corrugated iron roof over the pavement. The old columns have been replaced with plain steel poles. Originally advertising and entrance into shops in 1899 by Architect John Parker.



NO. 251 THE DUBLINER AT KENNEDY

Formerly the Minerva Van House. Built in 1860s. The original two-story building had a gabled cornice and a corner verandah on 11 bays columns. Dark columns supported the tiled verandah roof. The original verandah is now enclosed with timber windows. A balustraded parapet defines the top of the building.



NO. 255-261 CARNIVAL COURT

Carnival Backstairs, Long Street 141 (Formerly 1 corner's Backstairs). Redesign in 1898 by George Rosemer in heavy architecture. The later changed into a building and more recently converted into Long Street Club. Located in the center of the street restaurant and bar strip of Long Street. 11 bays two-story verandah with cast iron columns and bow-tie and lattice-work iron columns. A suspended balcony of intricate cast-iron and concrete that terminates in two towers and 2 pillars. On the ground floor the period shopfronts have largely been retained.



NO. 263-271 CAFE MOJITA, KHAYA NYAMA, DADDY LONG LEGS.

Designed by John Parker in 1900. Double storey Victorian building. Cast iron verandah was removed in the 1930s due to deterioration. Reconstructed parapet and cornice with iron pediment. Doors that originally had in the verandah are now cut-off with wrought iron screens.



NO. 273-277 ROYALE EATERY

Erskine building built during 1890s but underwent many changes. In 1902, two floors were added to the existing 1 story building. In the 1940s, the facade was rebuilt. In 1977, a verandah was removed. Since 1977, there have been many attempts to emphasize cast-iron art deco elements. At this time, the circular verandah on the parapet was added. Latest additions include a balcony, and a deck on the roof.



NO. 279/283 KEY BOUTIQUE, NYLON CLOTHING

Designed by Fred Cherry in 1906 with balustraded parapet, small pedimented gable, and Victorian verandah. In 1920s, a double story cast iron verandah was replaced by a corrugated iron canopy, resting on circular cast-iron columns.



NO. 293/297 LONG STREET LIQUORS

Formerly Eastman Bottle Store. Only building in Long Street with three Cape Revival Parapet. Curved verandah below each of the three stories. Three bays between the 4 square columns supporting the balcony.



NO. 305 CAT AND MOOSE BACKPACKERS

Cornerstone Place. Rebuilt in 1890s with tall steep front and verandah. Single 2 story building with round bays and verandah verandah, ending on 4 bays columns. Currently holds a wine store.



NO. 301/303 VICTORIA COURT

Built in the 1890s, on the site of the old Verandah Warehouse, and incorporated the two warehouses. U-shaped plan with ornamental compound facing Long Street. Supported by massive cast-iron and granite with ironwork. Two balustraded balconies on 2nd floor supported by small, cast-iron columns and an 1st floor by three cast-iron arches. Currently occupied by a fashion store on the ground floor, standing on Long Street.



RE-OCCUPIES
OF BUILDING,
LET OUT AS
CELLING.

ST. MARTINI
LUTHERAN
CHURCH

ORPHANAGE SOLD TO
BECHUANALAND
DAIRIES

FRONT FACADE
DEMOLISHED AND
REPLACED BY GLAZED
BROWN BRICK FACADE

USED AS DAIRY MILL
UNTIL 1979, WHEN THE
BUILDING WAS LET TO
A GARAGE

DEMOLITION — PATHOLOGY —

841 — 1851 — 1923 — 1939 — 1978 — 1981 — 2009

RE-OCCUPIES
OF BUILDING,
LET OUT AS
CELLING.

CONSOLIDATION OF 4 BENS FOR
CONSTRUCTION OF CHURCH AND
MANSE

ARCHITECT:

PETER PENKETH

A split in the Cape Lutheran congregation in Strand street in the 1850s, after which one of the congregations acquired property for a church in Long Street. In 1858 the St. Martini Church was dedicated, but, after a short while, the congregation was dissolved. The church remained unused.

After a few years, the former pastor of the Strand Street congregation experienced difficulties and decided to return to Germany. He was, however, persuaded to stay by members whose requests for more services in German had been in vain. Together they founded the German Lutheran Congregation of St. Martini.



GRADUAL BUT SIGNIFICANT
ALTERATIONS AND DEMOLITION,
BUILDING UNRECOGNIZABLE BY
END OF 2ND WORLD WAR.

SHOPS CONSTRUCTED BETWEEN
FACADE AND LONG STREET.



DAIRIES MOVED OUT AND LET THE
PREMISES TO A GARAGE



EXPROPRIATION OF SITE AND
BUILDINGS AS COMPENSATION FOR
LOSS OF LAND AND BUILDINGS DUE
TO ROAD WIDENING SCHEME

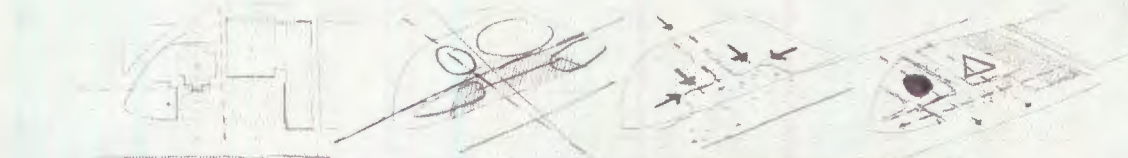
LOSS OF PRESENT MANSE, SUNDAY
SCHOOL BUILDING AND
TRIANGULAR PORTION OF LAND,
(EXISTING MANSE BUILDINGS DUE
FOR DEMOLITION)

DEMOLITION OF ENTIRE 200 LONG
STREET BUILDINGS AND CLOSURE
OF ORPHAN STREET.

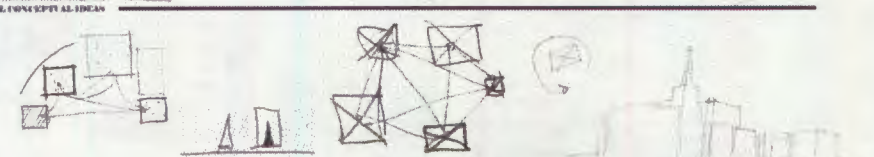
REPLACED BY ST MARTINI
COMMUNITY HALL AND
KINDERGARTEN ON CONSOLIDATED
LAND.

by
**EDWARD JONES & FRANK
MACKINTOSH**
(CHARTERED ARCHITECTS AND TOWN PLANNERS)

ALTHOUGH SERVING A VALUABLE
PURPOSE FOR THE LUTHERAN
CONGREGATION, THE CHANGES
TO THE PROPERTY SINCE 1861
HAVE BEEN DETRIMENTAL TO
THE URBAN ENVIRONMENT AND
TO THE CHURCH'S VALUE AS AN
HISTORIC ARTIFACT.



INITIAL CONCEPTUAL IDEAS



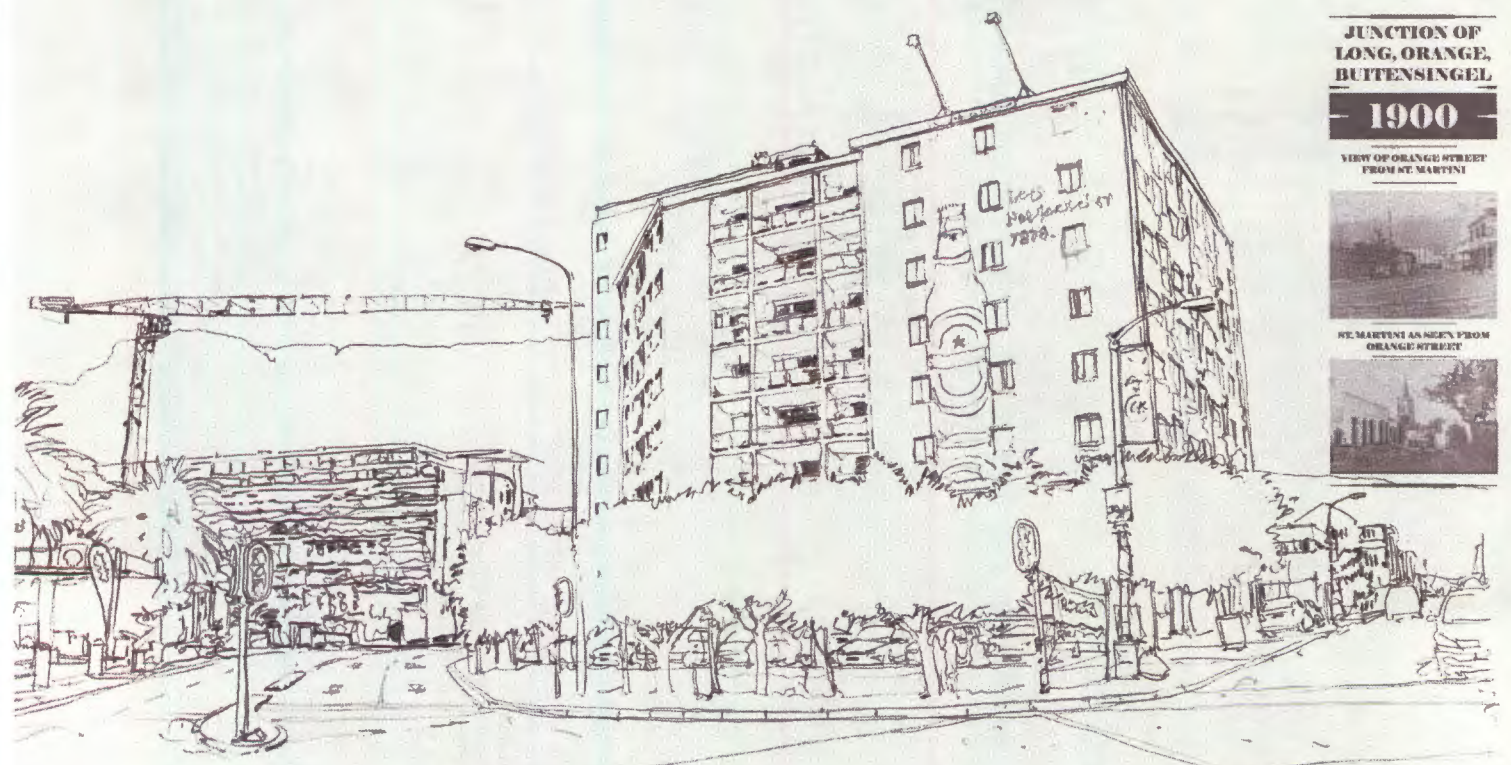
JUNCTION OF
LONG, ORANGE,
BUTTENSINGEL

1900

VIEW OF ORANGE STREET
FROM ST. MARTINI



ST. MARTINI AS SEEN FROM
ORANGE STREET



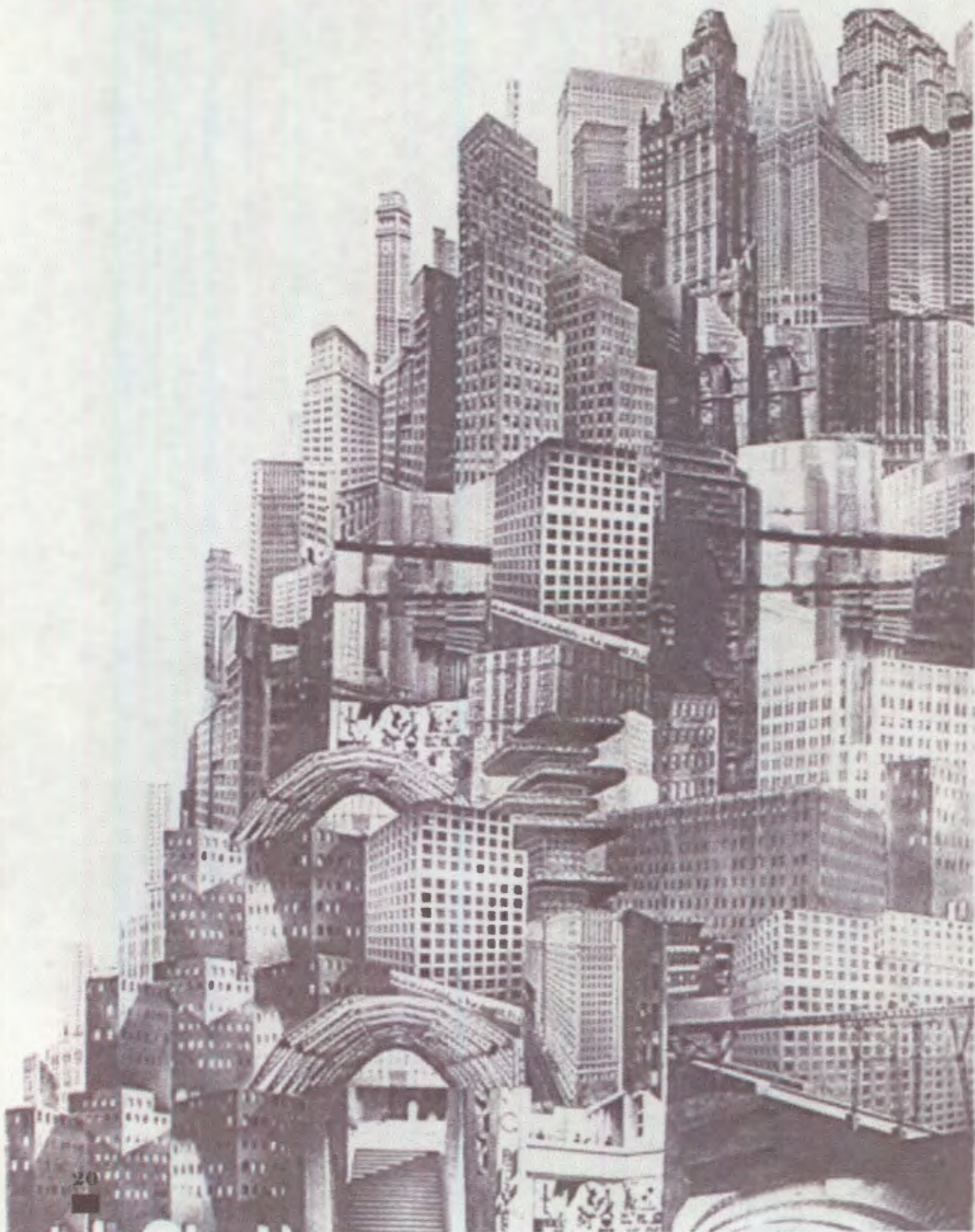


B

Fig. 4

'Metropolis -City-
scape Montage #1'

-Photomontage
collage by René
Clémenti-
Bilinsky, 1972.



Urban Memory

and the Evolution of the Urban Environment

- An investigation into the nature of those primary urban artifacts that give meaning to and constitute our memory of the city.

Introduction

This paper considers buildings as instruments of memory and their corresponding role in meaning and the transference of culture, tradition and history in the evolution of the urban environment. I seek to contextualize the current state of memory in architecture and its treatment by theorists, by looking at the history of functionalism and its role in severing the connection between the past and the present in the built environment. I trace the trajectory of the two popular axioms of 'Form Follows Function' and 'Ornament is Crime' be-

cause of their immense influence in the 20th century, on the place of memory in the contemporary city. I am concerned with continuity in the urban environment and the necessity of this continuity for people to be able to find meaning in their surroundings. As a means of analysis, I use Aldo Rossi's critique of "naïve functionalism", and his theories on permanence, type and locus, to come to grips with the dynamics of the evolution of the city. Following on from Rossi's theories concerning memory and the city, I will consider symbolic and sensorial mechanisms in artifacts that enable us to engage with and connect to history and culture.

You have to begin to lose your memory, if only in bits and pieces, to realize that memory is what makes our lives. Life without memory is no life at all... Our memory is our coherence, our reason, our feeling, even our action. Without it we are nothing...

-Luis Bunuel (Moody, 1992 p. 86)



Memory

Autobiographical and Collective

To neglect history, to neglect memory, which is owed to our ancestors, is then to deny oneself; it is to begin suicide.

- Cesar Daly (Boyer, 1996 p. 16)

Both autobiographical and collective memories are integral to one another. They exist as the foundation upon which meaning is built. Dianne Chisholm posits that memory is possible because it is collective. 'An individual knows herself or himself as a being of enduring, if evolving, character because she or he possesses memories that are collectively articulated,

DA
720
9687
BUIL

Fig. 5

Panorama of Cape Town's 'city bowl'.

From cover of 'Buildings of Central Cape Town'- volume one, *Formative Influences and Classification*. (Cape Provincial Institute of Architects, 1982)

revised, and confirmed'. (1953 - The City of Collective Memory, 2001 pp. 195-243) Thus, individual connection to the world is facilitated by memory, as it envelops every feature of human experience. Memory is also the link between the lived-in now, the past and the future. Without memory, the construction of meaning cannot happen.

It is logical then that in the experience of meaning in the built environment, a correspondence between an individual's memory and the embodied memory of the architecture itself will occur. To speak of a building as having memory is to give words to its relationship to time and to history.

The patina of age a building acquires as time passes contextualises it in the time line of its life to date. Scratches, weathering and layered coats of paint are manifestations of its memory, hinting at the life the building has had. A building's memory is also connected to its visible relationship to history, indicated through its style or type.

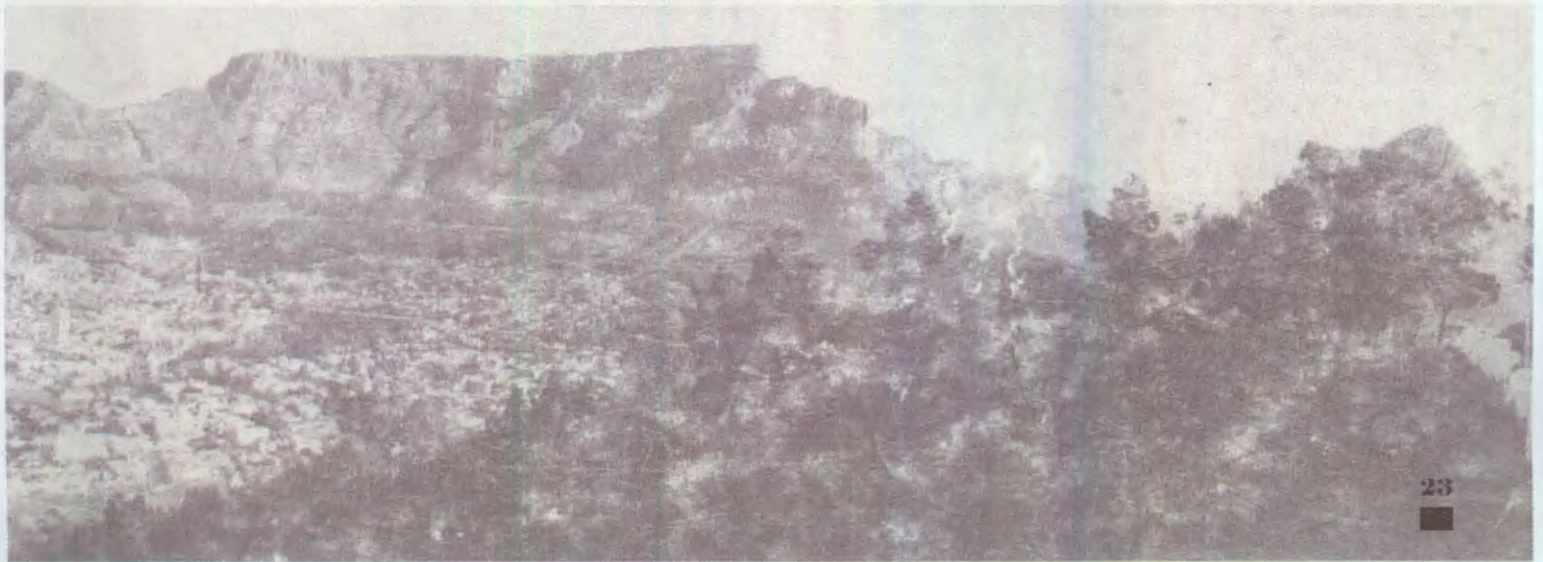
Every building will always visibly express its relationship to time in this way, by its very nature as a man-made artifact because, as physical constructions, buildings exist in time and in place. As inhabitants of buildings, we bring to any building a unique personal

history, constructed by individual, autobiographical memories. This is the backdrop and context of human experience when engaging the built environment.

'This temporal structure of building can be compared to a person's experience of time. At every moment of one's life, earlier times of infancy, childhood, youth, and all other stages up to now are still present, increasing in number and yet unchanged and familiar and subject to redefinition and appropriation. Never is one's past not present, nor is the individual's past ever cut off from the tradition of one's culture and the time of the natural world. Duration invokes recollection of each of its advancing moments.'

(Mostafavi, et al., 1993 p. 12)

In many ways, users of buildings are responsible for the construction of meaning, as personal experience and memories come to bear on the complete situation. Situation is here used to mean the entire context of a building; its memory, meaning and immediate environment. We encounter every possible type and quality of building and to varying degrees we will feel led to engage it and in that engagement, meaning will be constructed or discovered. Bloomer hypothesizes that meaning is made 'when the boundary between the 'container' and the 'contained' dissipates, when the embodied



memory of the architecture resonates with our memories and experiences.'
(Bloomer, 1987 p. 30)

The special nature of this relationship between memory, meaning and environment, necessitates the use of Aldo Rossi's concept of locus, or context. The etymology of the word context is helpful; originally 'contextere', which is literally a weaving together.

'History is not simply the repository of unchanging facts, but a process, a pattern of living and changing attitudes and interpretations. As such, it is deeply a part of our own natures. To turn backward to a past age is not just to inspect it, to find a pattern that will be the same for all comers. The backward look transforms its object; every spectator at every period - at every moment, indeed - inevitably transforms the past according to his own nature.'

- Sigfried Giedion (Giedion, 1967 p. 5)

In addition to the variable aspects of a building's context and situation, like environmental qualities such as time of day and year or psychological qualities such as atmosphere, the building itself will always display aspects of its own history. The building's communication of itself here becomes integral to the user's experience of memory. The success or failure of architectural memory greatly depends on the user's ability to perceive the information that is being communicated by the building in its entirety.

A city remembers through its buildings, Aldo Rossi argued, so the preservation of old buildings is analogous to the preservation of memories in the human mind. The purely material processes of physical and programmatic changes to buildings are the domain of history. In contrast to this, it is the succession of events that constitutes a city's memory, and to make sense of the urban environment, it is valuable to consider this psychological context of the city's memory.

It follows that a very real threat exists to memory in the urban environment in the form of 'development'. If 'development' sweeps buildings away, then memory loss and identity crisis threaten, and the city loses its typology (its memory forms), and can no longer effectively act as a mnemonic device for its inhabitants.

'We may live without her, and worship without her, but we cannot remember without her. How cold is all history, how lifeless all imagery, compared to that which a living nation writes, and the uncorrupted marble bears. How many pages of doubtful record might we not often spare, for a few stones left one upon one another!'

- John Ruskin (Ruskin, 1865 p. 147)

Fig. 6

Demolition of
Pruitt Igoe
housing
development in
Saint Louis,
1972.
Untraceable
source.



Fig. 7

Plan Voisin for
Paris, 1925, Le
Corbusier.
Untraceable
source.

Amnesia



"...there are but two strong conquerors of the forgetfulness of men, Poetry and Architecture; and the latter in some sort includes the former, and is mightier in its reality. It is well to have, not only what men have thought and felt, but what their hands have handled, and their strength wrought, and their eyes beheld all the days of their life."

-John Ruskin (Ruskin, 1865 p. 148)

"It is amnesia and not memory that seems to preoccupy us in today's world"

-Baudrillard. (Foster, 2002 p. 138)

Some critics have described the present situation in the built environment as a crisis of memory; a kind of collective amnesia. In the last century, the persistent Modern agenda of transcendence has led to urban environments globally where historic disconnection is experienced. This has led the public to look for meaning and connection in other detrimental ways. Consumerism is one of the most notable distractions from this acute feeling of alienation.

"Identities are the names we give to the different ways we are positioned by, and position ourselves in, the narratives of the past."

- Stuart Hall - Cultural Identity and Diaspora (Brazier, et al., 2006 p. 52)

Writing in the early 20th century, Siegfried Giedion recognized the importance of history and the need to establish a healthy relationship between the past and the present for our sense of place and well being, as a prerequisite for progress in society. He encouraged people to 'conduct [their] lives against a much wider historical background', and warned that '...it is always dangerous to assume that one's own time has an exceptional importance'.

'This living from day to day, from hour to hour, with no feeling for relationships, does not merely lack dignity; it is neither natural nor human. It leads to a perception of events as isolated points rather than as part of a process with dimensions reaching out into history. The demand for a closer contact with history is the natural outcome of this condition. To have a closer contact with history: in other words, to carry on our lives in a wider time-dimension. Present day happenings are simply the most conspicuous sections of a continuum...'

(Giedion, 1967 p. 7)

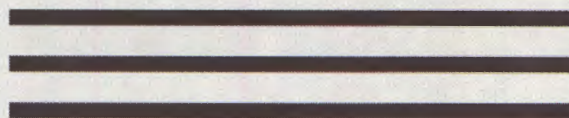
It is helpful to extend the analogy between a city's memory and a person's. In the pursuit of healthy connection, we can rely on history to reveal the forgotten elements of the city's being in the same way that human parents can reveal to their children childhood and familial idiosyncrasies that, independent of the child's consciousness, continue to determine his nature.

Having established the importance of memory in the built environment, the following questions by Christine Boyer give further structure to the discourse, the possible answers to which will be explored throughout this paper. (Boyer, 1996 p. 25)

How much of the memory is good for the present, which would help us to connect with the past and work towards a guaranteed social stability?

Where should these memories be stored so that they don't burden the present with unnecessary remembrance?

What are the methods of recalling forgotten memories and hidden traces for conscious narrations?

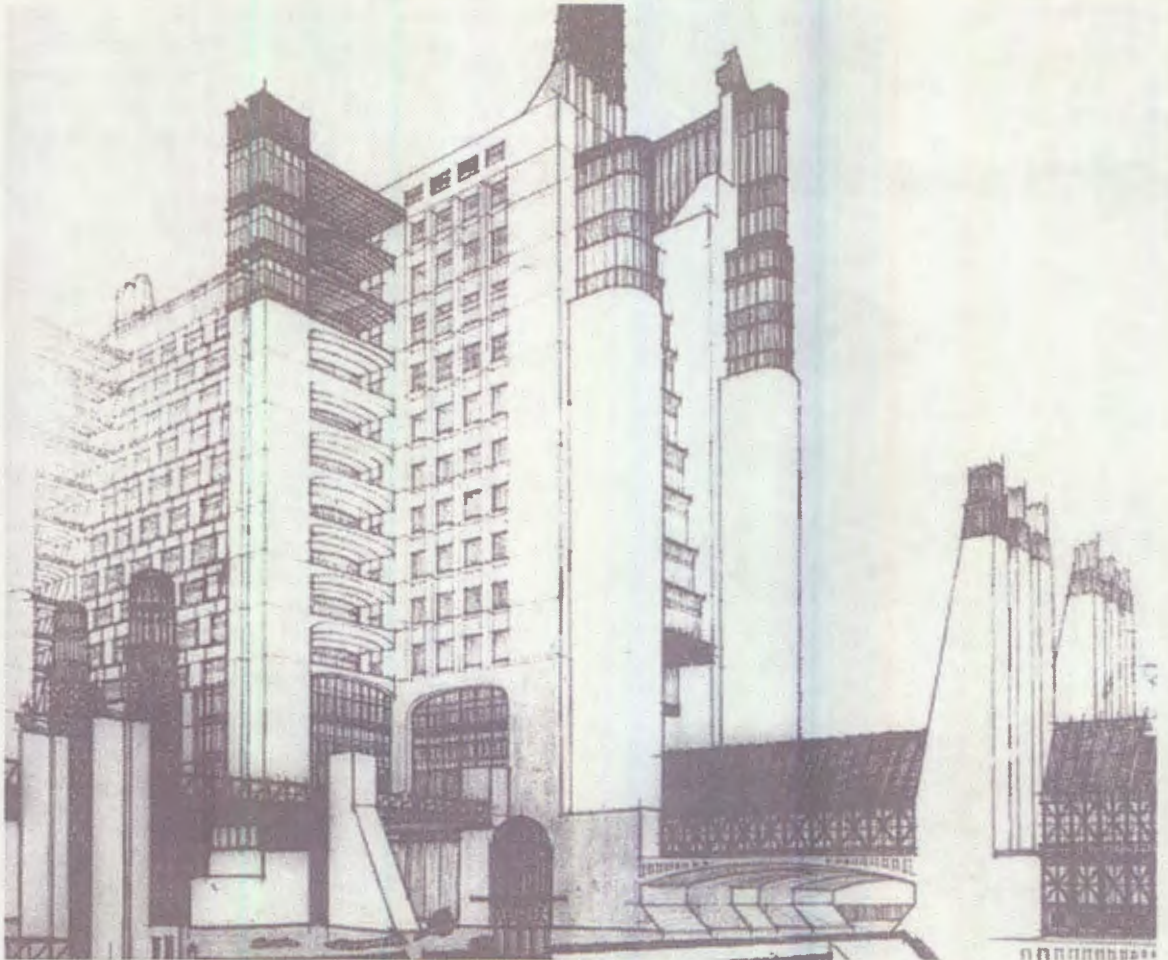


The course that the 20th century took with regards to history (denial, repression and attempts to eradicate), has naturally threatened our ability to find meaning in the built environment. Consideration will now be given to how buildings have come to negotiate this complex relationship between the past, present and the future, in terms of the Functionalist tradition and its influence on the evolution of the urban environment.

Fig. 8

Antonio
Sant'Elia, Futur-
ist Architecture.

([www.viswiki.com/
en/Futurist_ar-
chitecture](http://www.viswiki.com/en/Futurist_architecture))



The Modern Task of Transcendence

The Demand for Continuity

'We do not need to fall into eclecticism of drawing our material directly from the forms of the past but we should have a greater respect for the spirit of the past' - Helena Syrkus argued at the seventh meeting of CIAM in Bergamo in 1949.

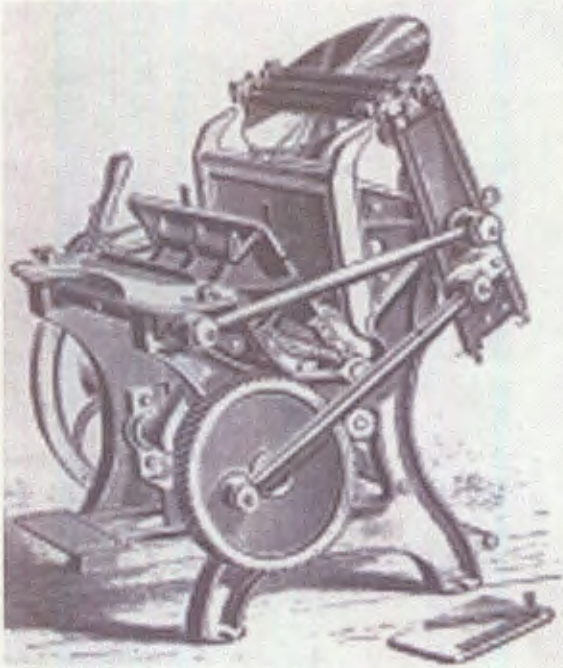
(Mostafavi, et al., 2005 p. 18)

At the turn of the 20th century, the enlightenment tradition's faith in the machine and in progress produced remarkable revolutions in all spheres; rather noticeably, faith in technology:

'The Machine is Intellect mastering the drudgery of earth that the plastic art may live; that the margin of leisure and strength by which man's life upon the earth can be made beautiful, may immeasurably widen; its function ultimately to emancipate human expression.'

- Frank Lloyd Wright in 'The Art and Craft of the Machine' (Braham, 2007)

In the 19th century, Victor Hugo saw the advent of how the technology of the printing press would replace architecture's role as the main perpetuator of human thought. **The book would kill the edifice.** (Hugo, 1834)



'It may well be that what we have hitherto understood as architecture, and what we are beginning to understand of technology are incompatible disciplines. The architect who proposes to run with technology knows now that he will be in fast company, and that in order to keep up, he may have to emulate the Futurists—and discard his whole cultural load, including the professional garments by which he is recognized as an architect. If on the other hand, he decides not to do this, he may find that a technological culture has decided to go on without him.' — Reyner Banham (Banham, 1960 p. 329)

Modernists aimed for a radical aesthetic purism that was also largely

a reaction to the ornamental architecture of the 19th century, described by modern architects as overly sentimental, picturesque and eclectic. Unprecedented invention and production was experienced.

There was now an opportunity to define an architecture that appropriately expressed the spirit of the new age, and that would transcend the limiting styles, materials and technologies of architecture past. This ideology of progress sought to be liberated from history, famously demonstrated by Walter Gropius, who wished to ban the teaching of architectural history from the Bauhaus. In 'Modernism and the Revenge of the Book' Jencks describes this feature of modern architecture as **a self inflicted loss of historical consciousness.**

(Rattenbury, 2002 p. 174)

To date, rational meaning and historical consciousness has come to be replaced by consumption, where meaning has ironically become a saleable commodity. 'Meaning' is purchased and used to construct world views as the situation demands. Consumers, according to personal preferences, can now easily construct historical vantage points. **This consumption is typified by 'volatility, obsolescence, the rapid passing of fashions and ideas, the disappearance of stability, constant innovation, constant revision, repackaging, the new look, the newer than new product, the future always looming over the present'.** (Wells, 2005 p. 77)

Contemporary architecture reflects this high capitalism as a producer of commodities to be consumed. Society is now dominated by consumer appetite. A myriad of choices with which consumers are confronted with every-

Fig. 9

Printing Press.
(www.ralphmag.org)

day, causes a breakdown in our ability to sustain a world view larger than the present moment.

This state, (architecture's having to compete with the pace and nature of other commodities), has lead architecture to be 'increasingly obsessed' with the present, and to neglect ideas about permanence, stability and history.

'Architects have become increasingly obsessed with images and image making, to the detriment of their discipline. The sensory stimulation induced by these images may have a narcotic effect that diminishes social and political awareness, leaving architects cosseted within their aesthetic cocoons, remote from the actual concerns of everyday life. The Intoxication of the aesthetic leads to an aesthetics of intoxication and a consequent lowering of critical awareness. What results is a culture of mindless consumption, where there is no longer any possibility of meaningful discourse. In such a culture, the only effective strategy is one of seduction. Architectural design is reduced to the superficial play of empty, seductive forms, and philosophy is appropriated as an intellectual veneer to justify these forms.'

- Neil Leach (Leach, 1977 p. VIII)

Bernard Tschumi has stated that all of culture, including architecture, is now aestheticized, meaning reduced to the realm of the image. This reduces history to a series of simultaneous images, 'not only those of the gulf war interspersed with basketball games and advertisements, but also those of our architectural magazines, and ultimately, those of our cities' (Tschumi). (Leach, 1977 p. 23)

Architecture in this state suffers acutely in its ability to provide continuity.

'There is a widespread yet largely unarticulated belief that buildings are going to disappear, and I share this sensation as well. Architecture is now prepared for being an ephemeral art. That is very evident in this world... That is why architecture today so frequently appeals to the superficial images of its predecessors; today's society does not believe in the lasting condition of its own creations. The initial impact of the building is what counts. Not its long life. My point of view however is that this durability - this condition of being built to last is very powerful. One must still fight for that ... but I believe that from many points of view, it would be favorable to have more stable cities, more stable architecture, more durable and less ephemeral constructions. I realize that being against ephemerality is a very difficult issue, but that is the position which I have taken, with the awareness that I could be mistaken.'

- Raphael Moneo (The Idea of Lasting - a Conversation with Raphael Moneo, 1988 pp. 146-157)

There is a widening chasm between the past and the present in architecture. Another way of describing the condition is as a break between

Fig. 10

Le Corbusier,
Villa Savoye,
Poissy, 1929.
(www.stolaf.edu)

Fig. 11

Functionalism,
from the cover of
Kenneth
Frampton's *Modern
Architecture*.

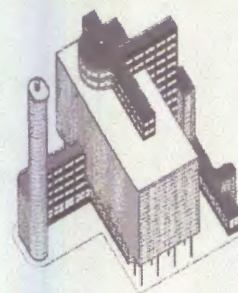


On Functionalism

20th century architecture has much to answer for in terms of its memorial legacy. Possibly, the two most influential ideas by which the modern movement became known were 'form follows function' and 'ornament is crime'. These two axioms in many ways fixed Modernism's trajectory. They include in themselves a summary of the modern understanding of self and have had tremendous influence in the formation and evolution of our contemporary cities, as well as the role and priority of history and memory therein. These assertions are functionally opposed to history and memory, and so by following the two strains through 20th century architecture, we will be able to better understand the contemporary situation of architectural memory. It will

also lead us to a better understanding of Aldo Rossi's valuable theories and his critique of functionalism.

In recent years, the history of both modernist architecture and modernist design theory has gone through a series of attempts at radical revisions. Theorist's readings of modernist architecture and design have become increasingly removed from the modernist self-understanding.



Reyner Banham called 'form follows function' an 'empty jingle' in the 1960's, and this is taken for granted

today, but this empty jingle preoccupied several generations of architects and designers. (Banham, 1960 p. 320)

Irrespective of its theories and philosophies, the functionalist notion of design eventually came to function as a blank slate. Architects and designers felt free to define it in ways that always legitimized their own aesthetic priorities. Practically, the 'jingle' that 'form follows function' proved infeasible as a design precept for objective design. Instead of bringing an end to formalism, it inaugurated and justified an era of covertly formalist approaches to architecture and design, in the wake of a war against that very idea. (Form Follows What? - The Modernist Notion of Function as a Carte Blanche, 1995)



Fig. 12

Louis Sullivan's
Wainwright
Building, Saint
Louis, Missouri,
USA.

(www.commonswiki-
media.org)



Form follows function was coined by the American architect Louis Sullivan in his article 'The Tall Office Building Artistically Considered' published in 1896, where Sullivan presented his approach to the emerging building type. Sullivan claimed that the vertical character and the tripartite model of his design was a 'natural' result of a universal law.

'It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that life is recognizable in its expression, that form ever follows function. This is the law. -- Shall we, then, daily violate this law in our art? Are we so decadent, so imbecile, so utterly weak of eyesight, that we cannot perceive this truth so simple, so very simple? ... Is it really then, a very marvelous thing, or is it rather so commonplace, so every-

day, so near a thing to us, that we cannot perceive that the shape, form, outward expression, design or whatever we may choose, of the tall office building should in the very nature of things follow the functions of the building?' - Louis Sullivan (The Tall Office Building Artistically Considered, 1896)

The phrase eventually came to be used to encapsulate modernist ambitions, with its inherent claim that the Modern Epoch was charged with new, predetermined forms; a new, predestined aesthetics specific to this epoch. It became the duty of the designer to 'channel' this new, objective aesthetic, which claimed to be independent of anybody's tastes or preferences.

However, the formula masks the remarkable claim that function is something that precedes and exists independently of form. In both natural and social sciences, it is in fact that form pre-dates function. Function only originates in relation to existing forms or phenomena. As long as we consider function to refer to actual functioning, form always precedes function, since the notion of function is discovered only by observing an existing form. Alternatively, if intended functioning is meant by their use of 'function', the form is yet to be. Only in this sense can form be said to be following function.

This understanding, however, that forms of buildings and products should follow the purposes for which the buildings and products are intended is a trivial statement, and one that the hated revivalists of the 19th century would have readily agreed with. This idea that form follows human wishes, demands and preferences could not be taken for a new design principle very different from those of the 19th century. There is little doubt that in

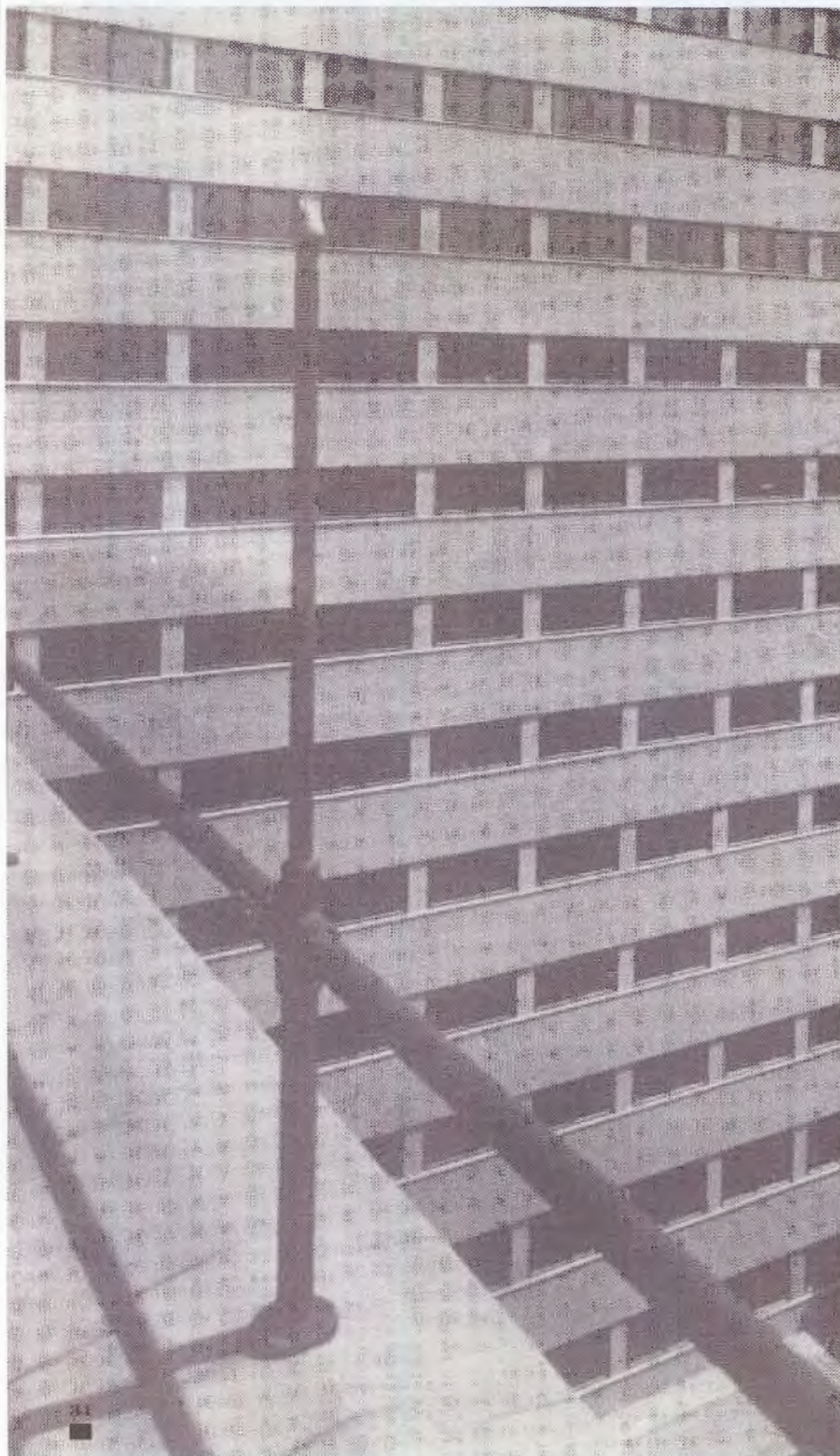
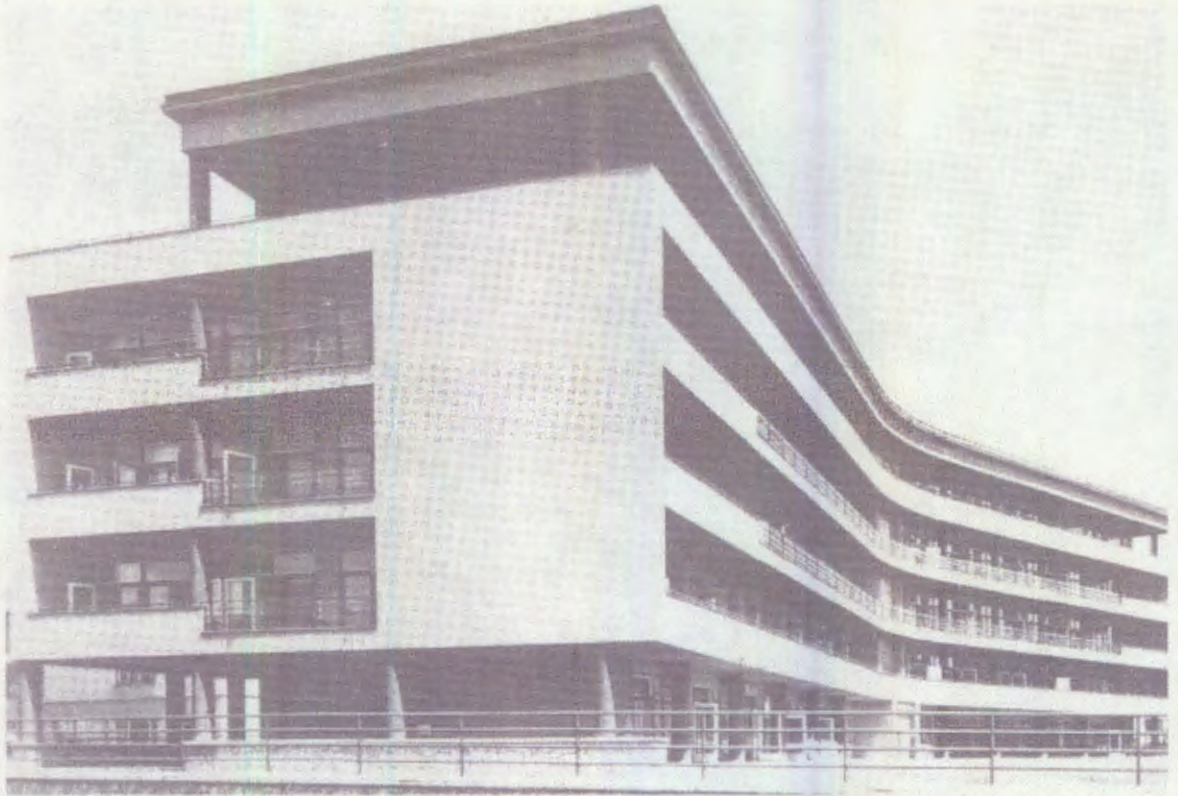


Fig. 13,14

**Typical
Functionalist
Architecture.**
Untraceable
source.



any neo-baroque facade of the last century, the forms followed purposes in this sense.

However, such understanding of the word function, or purpose, would only reinforce the legitimacy of demands of human users, clients, or builders, on architects and designers. Understood this way, the dictum's argument for objective forms, independent of both the user's and the designer's aesthetic preferences collapses and the whole functionalist assumption of moral superiority and its criticism of historicism and eclecticism in design disintegrates, unless the notion of function is taken to refer not to purposes of humans, but to metaphysical 'Purposes'.

The key to understanding the functionalist notion of function seems to be the finding that the notion does not refer to a common sense concept but rather to a denizen of a separate

reality (functionalist design metaphysics).

In summary, the functionalist notion of function did not refer to the world of preferences, wishes and demands of human users, but rather to the alleged Purposes of the 'Modern Epoch'. The functionalist claim that function exists prior to form is logically consistent only when the notion of function is understood as an 'objective purpose' imputed to an other-than-human intelligence.

The requirement that function ought to be the starting point of design in this sense is understandable, because function becomes an objective rather than a subjective demand. In other words, it is only within the

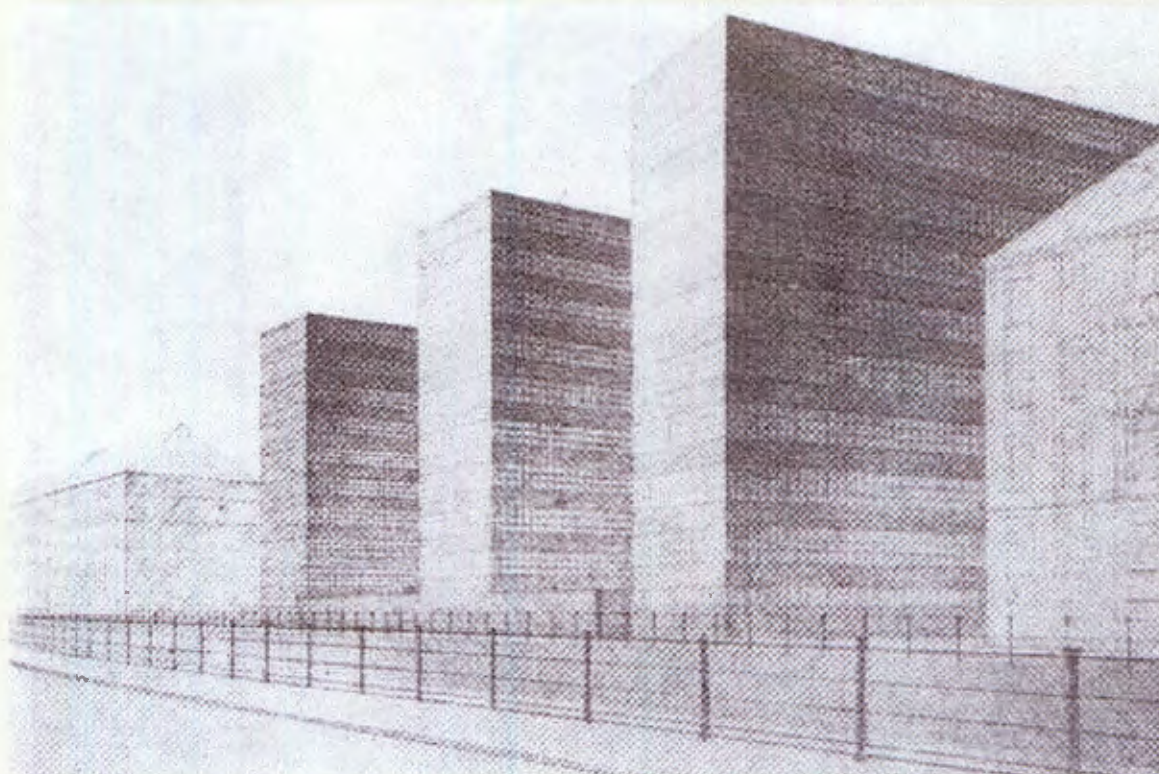


Fig. 15

**Typical
Functionalist
Architecture.**
Untraceable
source.

framework of 'functionalist design metaphysics' that the functionalist notion of function, and the dictum 'form follows function', makes sense as a revolutionary idea.

This promise of an epoch of faultless harmony of both functional and aesthetic worlds had tremendous global influence on designers. Designers thought themselves to be applying neither old forms, (as historicists did), nor simply devising new forms but rather revealing true, functional forms. These functional forms were argued to be the antithesis of the formalist architecture of historicism and eclecticism. The force of this thinking was so strong that it became morally reprehensible to design forms other than those that were supposedly intrinsic to 'functions'.

Furthermore, since functional forms were not conceived according to aesthetic preferences of anyone in par-

ticular, they would be acceptable, even pleasing, to everyone, regardless of social or cultural background. The functionalist designer would have maintained that he was therefore creating a common architectural language that transcended time: since such forms were not related to any fashion, they could not go out of fashion either. They would not age, because they were fundamentally timeless.

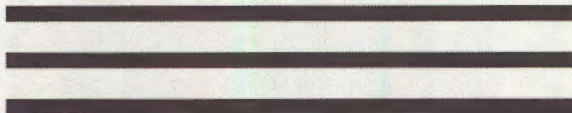
The functional language of forms sought to end the wasteful use of resources, implied in the fashion-based changes of forms, as well as the aesthetic pretense of false facades.

Ornament became a 'crime'.

The exercise of the profession was now infused with a new sense of purpose, creating a strong sense of solidarity among the architects. As the mod-

ernist designer's claims to authority increased, his role took on a more edifying bent as he revealed what was best for users and clients, aesthetically and functionally. The conception of the users and their lives became increasingly idealistic to the point that to qualify as a user worthy of the functionalist architect's attention one had first to qualify as a 'Modern Man', whose tastes and requirements reflected those of the modernist architect himself. The more architects trusted that their functional starting points guaranteed objective aesthetics, the less they understood their formal solutions to be in reality addressed to the aesthetic sensitivities of their professional peers.

Due to the functionalist dominance of design education since the 1950s, and the increased faith in functional starting points that guaranteed objective aesthetics, the education of would-be architects and designers was geared mainly to tastes and needs of their own privileged group, and to those of clients with avant-garde tastes. Students were no longer taught the need for architecture to be meaningful to its owners and users, and the importance of signs of social or institutional belonging and historic continuity.



To conclude, the Functionalist strand of Modern architecture and design was largely driven by formalist purposes under the guise of objectivity that gave architects unmitigated autonomy that progressively widened the gap between themselves and the building users.

The Functionalist trajectory shows how

architecture has slowly relinquished its role as a conveyor of memory, because of its dissociation from people and culture.



Fig. 16
Ornamented
building in Perth
CBD, Western
Australia.
Author's picture.

Fig. 17

Perth Council House, Jeffrey Howlett & Don Bailey, 1961-1963, Perth, Western Australia. Author's picture.



On Ornament

'The need for the superfluous is as old as mankind' - Jose Louis Sert. (Mostafavi, et al., 2005 p. 18)

The philosophies of Adolf Loos and Louis Sullivan have influenced the course that Modernism followed remarkably. Sullivan is less well known for his views that ornamental treatment endows a building both with life and individuality. This view characterizes Sullivan's approach to design in the 1890s, when his most prolific period as an architect was also his most profuse in terms of his ornamentation of the building fabric.

In many ways Sullivan's statements regarding ornament with all its qualifications, are in conflict with those of Adolf Loos, who took a much more severe approach, even though his

buildings, like Sullivan's are also adorned in various ways.

Gottfried Semper's theory on ornament is on the opposite end of the spectrum. For Semper, the functional and structural requirements of a building were subordinate to the semiotic and artistic goals of ornament.

For Loos, ornamentation was an impediment to progress. His view was that ornament was used in traditional societies as a means of differentiation for which there was no need in a modern society. Loos believed ornamentation had lost its social function and had become unnecessary.

'I have discovered the following truth and present it to the world: cultural evolution is equivalent to the removal of ornament from articles in daily use.' - Adolf Loos (Tournikiotis, 1996 p. 23)

Like 'Form follows Function', 'Ornament is crime' was taken up as the rallying cry of the modern movement: a radical, puritan manifesto that encouraged the suppression of ornamentation in modern architecture. Among Loos' writings, *Ornament and Crime* is, without doubt, the most famous. It resonated with the functionalist agenda.

He accused his contemporaries of using ornament as a way of masking the mediocrity of their culture and their social condition. His position on clothing clarifies his position on ornament: clothing for Loos was a natural envelope that should neither be the sign of an artificial personality nor a manner of deception.

'The outfit should be of revelatory transparency, it should by its discretion and simplicity, reflect a truthfulness and purity in man' (Tournikiotis, 1996 p. 24).



Fig. 18

Adolf Loos, Gottfried Semper and Louis Sullivan.

Fig. 19

Clothing advertisement by Adolf Loos. Untraceable source.

No 1 WIEN 1903 Preis 20 h

DAS ANDERE

EIN BLATT ZUR EINFUEHRUNG ABENDLAENDISCHER KULTUR IN OESTERREICH: GESCHRIEBEN VON ADOLF LOOS I. JAHR

<p>TAILORS AND OUTFITTERS GOLDMAN & SALATSCH</p> <p>K. U. N. HOF- LIEFERANTEN U. K. U. HOF- LIEFERANTEN</p>  <p>KAMMEL- LIEFERANTEN Dr. K. u. K. Hofrat des kaiserl. Hofes 201-216</p> <p>WIEN, I. GRABEN 20.</p>	<p>HALM & GOLDMANN ANTIQUARIATS-BUCHHANDLUNG für Wissenschaft, Kunst und Literatur WIEN, I. BABENBERGERSTRASSE 5</p> <p>Großes Lager von wertvollen Werken aus allen Wissenschaften. Anfertigung von belletristischen und Vollständigen Bänden. Ankauf von ganzen Bibliotheken und einzelnen Werken aus allen Zweigen der Wissenschaft. Übersetzung von Böchern- und Autographen- sammlungen nach individuellen Bedürfnissen.</p> <p>COXIN das neue Mittel zur Entwicklung photographischer Platten, Rollen ohne DUNKELKAMMER bei Tages- oder künstlichem Licht ist in allen entwickelbaren Gerichten zu haben. COXIN ist ein gelberer Entwickler. -- COXIN entwickelt schnell und ohne Schaden sowohl Schwarz- als auch Cyanin-Platten.</p> <p>COXIN-EXPORTGESELLSCHAFT Wien, VII. Alserstrasse 5</p>
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Loos likened ornament to fashion that reduced the durability and adaptability of objects:

'The functional object endures as long as the material from which it is made; its modern value comes from its solidarity. When a functional object suffers an ornamental digression, its durability is abridged, be-

cause then it is submitted to fashion... Functional objects such as fabrics or carpets, whose endurance is limited, remain submissive to fashion and, consequently, are ornamental'. - Adolf Loos (Tournikiotis, 1996 p. 24)

'The evolution of culture is synonymous with the removal of ornament from objects of daily use. I had thought to introduce a new joy into the world: but it has not thanked me for it. Instead the idea was greeted with sadness and despondency.. We have become more refined, more subtle. Primitive men had to differentiate themselves by various colors, modern man needs his clothes as a mask. His individuality is so strong that it can no longer be expressed in terms of items of clothing. The lack of ornament is a sign of intellectual power. Modern man uses the ornament of past and foreign cultures at his discretion. His own inventions are concentrated on other things.' - Adolf Loos in 'Ornament and Crime' (1908) (Pevsner, 2000 p. 28)

He did not, however, insist on the suppression of all architectural ornament, and he practiced and approved, on the contrary, of some decoration

Fig. 20

Building by Adolf
Loos, Untraceable
Source.



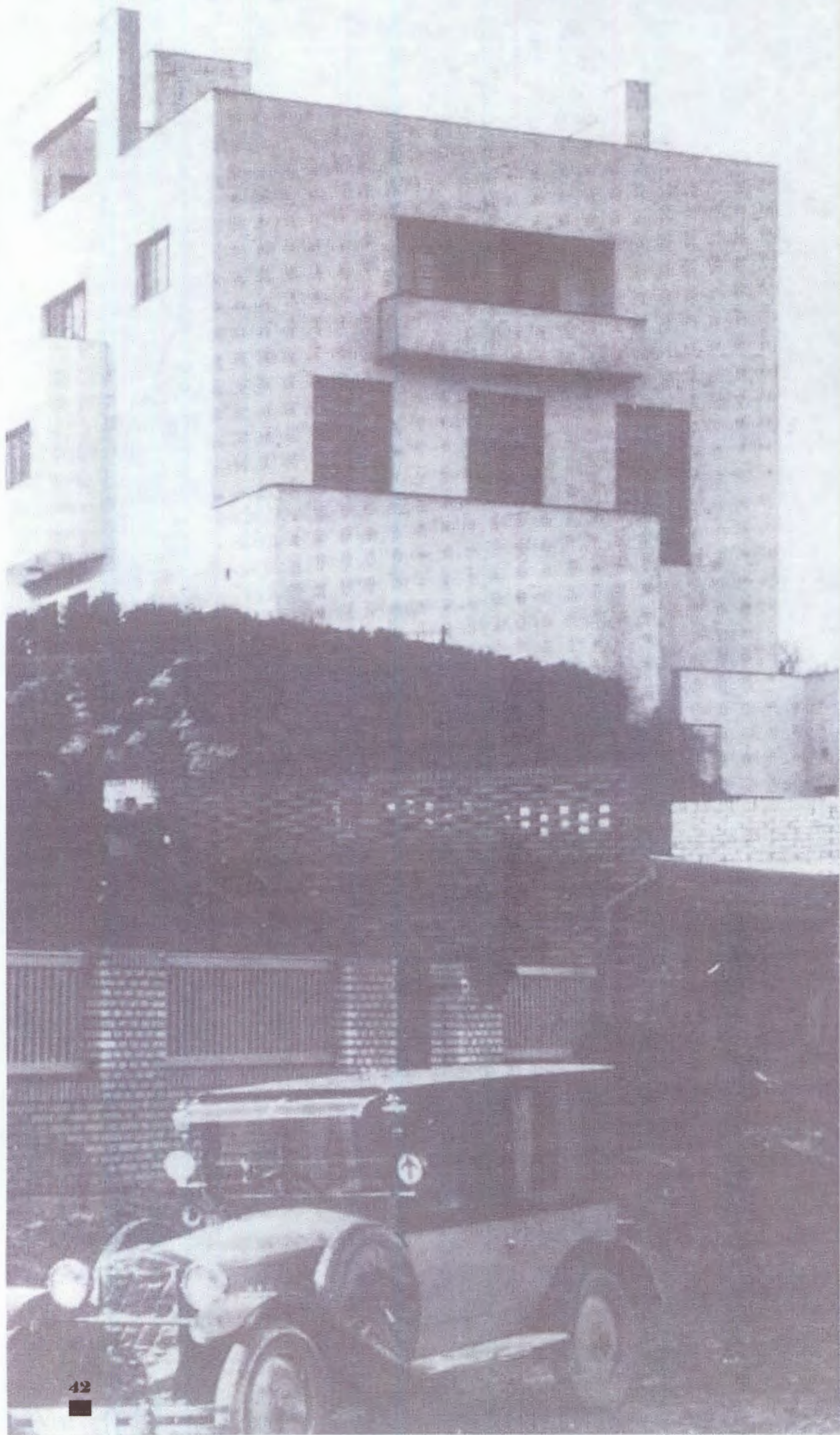


Fig. 21

**Building by Adolf
Loos. Untraceable
source.**

considered as a set of rules (issuing from properly worked materials and from the 'grammar' of classical language) that he agreed to observe so as to render architecture more palatable. He saw this classical grammar as capable of conveying, simply and directly, the identity of a structure.

However, outside Vienna and distanced from the causes that engendered it, Loos considered the initial meaning of his essay, with its provocative title, to have been altered. In Paris, it was received as a purist manifesto that demanded the total suppression of ornament; ('Ornament IS crime'). This slip-page of meaning; the identification of ornament in general with crime, even shocked the author himself. As he wrote in 'ornament and education':

'I affirmed twenty-six years ago that the evolution of humanity would cause ornament to disappear from functional objects, an evolution which would follow its ineluctable and logical path... But I never thought like the purists who pushed this reasoning to the absurd, that ornament should be systematically abolished. It is only where the passage of time makes it disappear that it cannot be reborn'. (Pevsner, 2000 p. 24)

It is easy to hear a battle cry against ornament in Adolf Loos' writings. He is much more severe than Sullivan, who seems to battle against his own romantic connection to ornament. Louis Sullivan proposed a need for consistency and organicity in building expressions. This led to ornament that grew from the material organization and that was inseparable from it. Sullivan was very hesitant in his promotion of ornament though, and went to great lengths to qualify its appropriate use. His view can be summarized by the following statement,

'...I believe... that an excellent and beautiful building may be designed that shall bear no ornament whatever; but I believe just as firmly that a decorated structure harmoniously conceived, well considered, cannot be stripped of its system of ornament without destroying its individuality.' (Sullivan, 1947 pp. 187-189)

Sullivan takes it as self-evident that ornament does not heighten the intrinsic elemental properties of architecture, and that a building devoid of ornament (if such a thing is possible) can be sufficiently dignified by virtue of its mass and proportion.

To qualify an approach for justifiable and appropriate ornament he reiterates that:

'...it would be greatly for our aesthetic good, if we should refrain entirely from the use of ornament for a period of years, in order that our thought might concentrate acutely upon the production of buildings well formed and comely in the nude. We should thus perforce eschew many undesirable things, and learn by contrast how effective it is to think in a natural, vigorous and wholesome way. This step taken, we might safely enquire to what extent a decorative application of ornament would enhance the beauty of our structures - what new charm it would give them. If we have then become well grounded in pure and simple forms, we will reverse them; we will refrain instinctively from vandalism; we will be loath to do aught that may make these forms less pure, less noble'. (Sullivan, 1947 p. 187)

By equating inappropriate ornament to vandalism, Sullivan echoes Loos' concerns and allusions to moral degeneracy. However, reiterating that ornament should not be considered all



Fig. 22

Carson Pirie
Scott Department
Store, Louis
Sullivan,
Chicago, US,
1904.
Untraceable
source.

together superfluous, Sullivan continues his qualifications for its permission by an appeal for restraint in our tendency to decorate, though he does freely admit to his own romance with ornament.

'We have in us romanticism. And feel a craving to express it. We feel intuitively that our strong, athletic and simple forms will carry with natural ease the raiment of which we dream, and that our building thus clad in a garment of poetic imagery, half hid as it were in choice products of loom and mine, will appear with redoubled power, like a sonorous melody overlaid with harmonious voices... I believe that architectural ornament brought forth in this spirit is desirable, because beautiful and inspiring, that ornament brought forth in any other spirit is lacking in the higher possibilities.' (Sullivan, 1947 p. 187)

He argues for consistency and unity between mass and ornament and alerts us to the enormity of the task as well as the reward. He also affirms the place of ornament in providing historic continuity:

'...an ornamented structure should be characterized by this quality, namely that the same emotional impulse that flow throughout harmoniously into its various forms of expression - of which, while the mass composition is the more profound, the decorative ornamentation is the more intense. Yet must both spring from the same source of feeling... a decorated building, designed upon this principle, will require in its creator a high and sustained emotional tension, an organic singleness of idea and purpose, maintained to the last. The completed work will tell of this; and if it be designed with sufficient depth of feeling and simplicity of mind, the more intense the heat in which it was conceived, the more serene and noble it will remain forever as a monument of man's eloquence. It is this quality that characterizes the great monuments of the past. It is this certainly, that opens a vista toward the future.' (The Tall Office Building Artistically Considered, 1896 p. 188)

Conclusion:

Ornament and Memory

The ideological abandon of ornament from modern architecture flowed directly from Modernism's disrespect of history and tradition. It follows that ornament has a powerful role to play in architecture as objects of recollection.

In spite the Modernist denunciation of ornament, many buildings throughout the 20th century continue to effectively relate to the public through ornament by creating sensation and affect. Architecture needs such mechanisms as ornament that allow it to become connected to culture. It achieves this by continually capturing forces that shape society as material to work with. Carefully considered ornament has great communicative potential with regards to culture and memory and as a means of engaging the urban setting. Ornament is necessary and inevitable and produces affect and resonance.

Ornament should not be applied to buildings as a 'discreet non-essential entity' but there should be an internal order between ornament and material. These kinds of internal orders produce contemporary expressions that are resilient in time. It is through these internal orders and consistencies that architecture gains an ability to perform relative to culture. Ornament of this kind emerges from the expression of embedded forc-

es and materials, through processes of construction, assembly and growth. It is through ornament that material transmits affect. Ornament is therefore necessary and inseparable from the object.

Fig. 23

'Metropolis-
Cityscape Montage
#1'

-Photomontage
collage by René
Clémenti-Bilin-
sky, 1972.

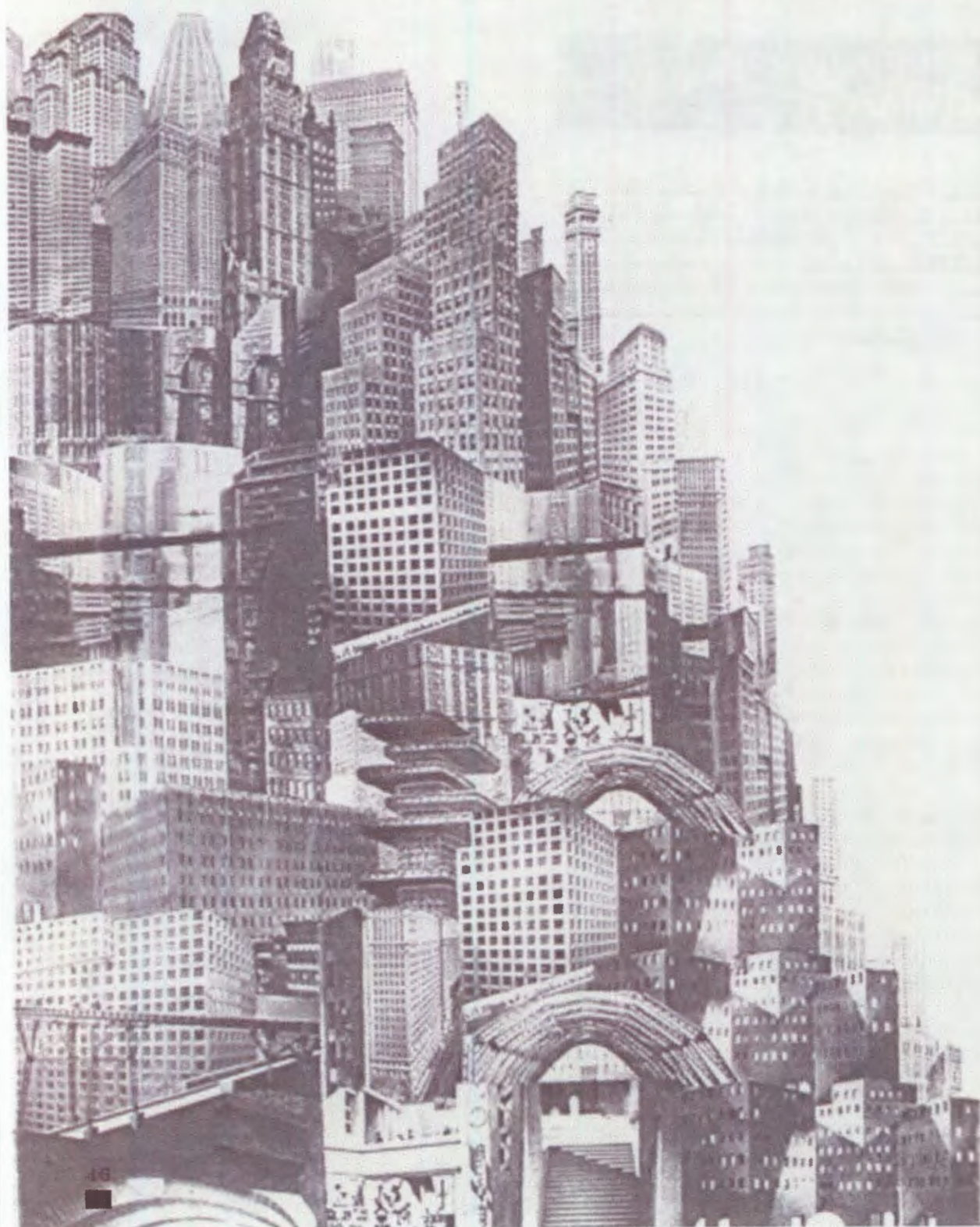


Fig. 24

Sketch of Long Street by Author.



The City as Archeological Artifact

Aldo Rossi – the Dynamics of Memory and the City

'One can say that the city itself is the collective memory of its people, and like memory, it is associated with objects and places. The city is the locus of the collective memory.' (Rossi, 1984 p. 130)

'Thus the union between the past and the future exist in the very idea of the city that it flows through in the same way that memory flows through the life of a person; and always, to be realized, this idea must not only shape but be shaped by reality. This shaping is a permanent aspect of a city's unique artifacts, monuments, and the idea we have of it.' (Rossi,

1984 p. 131)

Aldo Rossi was one of the Functionalist Movement's severest critics. His book 'The Architecture of the City' was in many ways a critique of the functionalist notion that had taken hold of the Modern Movement. The book nevertheless reflects ambivalence with respect to Modernism suggesting Rossi's own uncertainty as much with the general ideology of Modernism as with the failure of the specific aspirations of modern architecture. Rossi's anxiety with respect to Modernism is thus refracted through his sympathy with its very concerns.

Rossi's critique calls into question the modern notion of function in particular. He emphatically denies the explanation of urban artifacts in terms of function.

'I believe that any explanation of urban artifacts in terms of function must be rejected if the issue is to elucidate their structure and formation.' (Rossi, 1984 p. 46)

He assents that functionalist theory is convenient as a means for elementary classification, but only as a last resort, and since we don't have a substitute for the term. It is tolerable as long as it only serves to maintain a certain order, and provide us with straightforward instrumental facts, and does not pretend that an explanation for more complex facts can be derived from this same order.

'Such classifications presuppose that all urban artifacts are created to serve particular functions in a static way and that their structure precisely coincides with the function they perform at a certain moment. I maintain on the contrary that the city is something that persists through its transformations, and that the complex or simple transformations of functions that it gradually undergoes are moments in the reality of its structure.' (Rossi, 1984 p. 55)

Rossi turns the idea of function preceding form (as implied in 'form ever follows function') on its head, maintaining the opposite view, that form precedes functions, and persists through functional transformation.

'... if urban artifacts were constantly able to reform and renew themselves simply by establishing new functions, the values of the urban structure, as revealed through its architecture, would be continuous and easily available.

The permanence of buildings and forms would have no significance, and the very idea of the transmission of a culture, of which the city is an element, would be questionable. None of this corresponds to reality.'

(Rossi, 1984 p. 46)

As an alternative to understanding the city and its transformations and to classify urban artifacts in terms of function, Rossi suggests his definition of type to be used. His description of the city is concerned primarily with its form and through a formal analysis using type he introduces his ideas about history. To represent history, Rossi uses the analogy of a 'skeleton' whose condition serves as a measure of time and, in turn is measured by time. Past and future actions bear their imprint on this skeleton.

Architecture's history therefore lies in its material, and typology becomes the instrument of time's measurement in the city. This understanding of the process of time can be seen in Rossi's concept of permanence, which affects collective and individual artifacts in the city in different ways.

According to Rossi's understanding, an urban artifact can be a building, a street or even a district. The significance of urban artifacts in the city lies in their tendency to point us to certain major themes, individuality, locus, design, and memory.



Fig. 26, 27

Two registry maps of the amphitheater in Nimes, France, 1762 and 1809, indicating proprietors and trades (Rossi, 1964 p. 91)

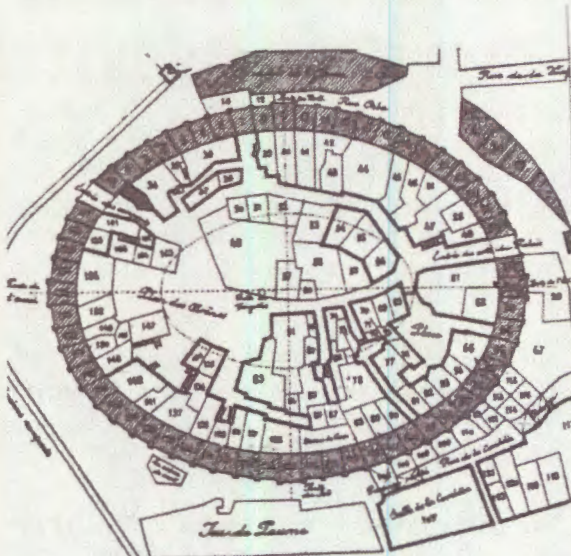


Fig. 28

St Martini, German Lutheran Church and Manse in Long Street, early 1900s. Photo from Church's private archives.



The Dynamics of Urban Elements

The presence of these cities, their meaning, architecture, and the actual way they came to be defined, is a record of their transformations.

To show how the architecture of urban artifacts emerges in the dynamic of the city, Rossi discusses a number of European cities.

In the case of Nimes in France, an amphitheater with a very singular, precise form and function became transformed through a series of dramatic historical events, reversing its function as theater to become a fortress, enclosed to defend its inhabitants.

Similarly, in Villa Vicosa, Portugal, a city developed between the walls of a castle, the walls comprising its exact boundaries and landscape.

In either case, only the pre-existing conditions of a closed and stable form permitted continuity and the production of successive actions and forms.





Fig. 29

Acropolis,
Athens, Greece.

Permanences

Some urban artifacts persist as a result of their capacity to constitute the city; its history and art, its being and memory. Rossi calls these artifacts, permanent, as they are a past that we are still experiencing. These physical signs of the past persist in a city's basic layout and plans. The value of these artifacts often resides solely in their form, which is integral to the general form of the city.

Two main permanences at work in the evolution of the city are housing and monuments. With respect to the first, Rossi distinguishes between housing and individual houses. Housing is a permanence in the city, while houses are not; thus, a residential district in the city may persist as such over many centuries, while individual houses within a district will tend to change. With respect to monuments, the relationship is the opposite, for here it is the individual artifact that persists in the city. Monuments are distinguished from housing, the other primary element in the city, by their nature as a place in the city with symbolic function, and thus a function related to time, as opposed to a place of conventional function, which is only related to use.

A monument is considered to be a primary artifact and is dialectically related to the city's growth, and this dialectic of permanence and growth is characteristic of time in Rossi's skeleton-city. It implies a city which not only possesses a before and an after, but which is defined by their interrelationship.

These primary urban artifacts can either **retard** or **accelerate** the process of urbanization in a city. Thus they are catalytic.

'Sometimes these artifacts persist virtually unchanged, endowed with a continuous vitality; other times they exhaust themselves, and then only the permanence of their form, their physical sign, their locus remains. The most meaningful permanences are those provided by the street and the plan. The plan persists at different levels; it becomes differentiated in its attributes, often deformed, but in substance, it is not displaced.'

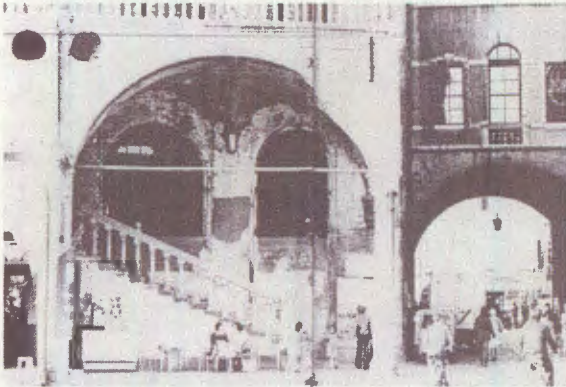
(Rossi, 1984 p. 59)

In this respect, permanent artifacts are either **propelling/vital** elements, or **pathological/aberrant** elements. They either enable us to understand the city in its totality, bringing the past into the present for us to experience, or they appear as a series of isolated elements that we can link only vaguely to an urban system appearing with respect to the city as isolated and aberrant.

Fig. 30

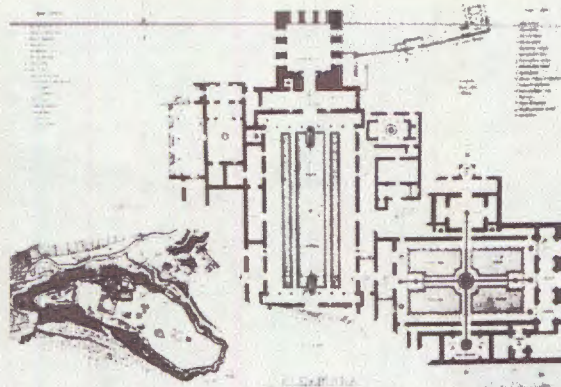
Palazzo della
Ragione, Padua,
Italy (Rossi,
1984 p. 29)





To illustrate the distinction between permanent elements that are vital and those that are pathological, Rossi uses the Palazzo della Ragione in Padua as an example where the physical form of the past has assumed different functions and has continued to function, conditioning its urban area and continuing to constitute and important urban focus. This building proves its vitality in that it is still in use as a retail market, even though it is considered more as a work of art. Alhambra in Granada is used as an example of a pathological permanence that defies 'naïve functionalist' classifications. It no longer houses either Moorish or Castilian kings. At Granada, the form of the past is experienced in a way that is quite different from at Padua.

The form of the past has assumed different functions in Padua, but it is still intimately tied to the city. It is synchronized with the urbanization because it is not defined only by an original or previous function, nor by its context, but has survived precisely because of its form, one which is able to accommodate different functions over time. It has undergone modifications, and will undergo future modifications as it evolves with the rest of the social and technological environments. It continues to function as a record of time. Granada stands isolated in the city; nothing can be added. It constitutes an experience so essential that it



cannot be modified. It functions more like a museum piece, something that stands outside of technological and social evolution. Such preserved or pathological permanences, often tend to owe their permanent character to their location within a specific context. In both cases, the urban artifacts are permanent and parts of the city that cannot be suppressed. They constitute the city.

This argument about permanences, is the body of his critique of 'naïve functionalism' through its formal explanations, and contains within it Rossi's concept of specific place or locus solus.



Fig. 31

Palazzo della Ragione, Padua, Italy (Rossi, 1984 p. 31)

Fig. 32

Plan of Alhambra, Granada, Spain (Rossi, 1984 p. 58)

Fig. 33

Diocletian's Palace in Split, Yugoslavia (www.galenfrysinger.com/croatia_split_palace.htm)

Fig. 34

Aerial view of Roman amphitheater transformed into a marketplace, Lucca, Italy (Rossi, 1984)



'Locus Solus'

The locus is a component of an artifact, which is determined not just by space but also by time, by topography and form, and, most importantly, by its having been the site of a succession of events, ancient and/or recent.

For Rossi, the city is a theater of human events that absorbs moments and feelings, containing within it a memory of the past and a potential memory of the future. While the locus is a site accommodating a series of events, it also in itself constitutes an event. In this sense, it is a unique place, a 'locus solus'. Its singularity is recognizable in signs that come to mark its occurrence as an event.

Included in this idea of the 'locus solus', is the specific relationship between a certain site and the buildings that are on it. The specific site becomes the place where architecture or form is imprinted as signs of events. This threefold relationship of site, event and sign are characteristic of urban artifacts.

Architecture gives form to the singularity of place, and it is in this specific form that locus persists through many changes, particularly transformations of function.

To illustrate such transformations of function, Rossi uses the example of the city of Split in Yugoslavia. He says: 'The city of Split which grew up within the walls of Diocletian's palace and gave new uses and new meanings to unchangeable forms. This is symbolic of the meaning of the architecture of the city, where the broadest adaptability to multiple functions, correspond to an extreme precision of form.' (Rossi, 1984 p. 179)

'Here, a large building, Diocletian's Palace, became a city, transforming its internal characteristics into urban ones and thereby demonstrating the infinite richness of analogical transformations in architecture when they operate on specific forms.' (Rossi, 1984 p. 174)

When form and function are severed as in the case of Split, and only form remains vital, history shifts into the realm of memory. 'When history ends, memory begins.' The singular form of Split now not only signifies its own individuality, but at the same time, it is also a sign, a record of events that are part of a collective, that is urban-memory. (Rossi, 1984 p. 7)

History comes to be known through the relationship between a collective memory of events, the singularity of place (locus solus), and the sign of the place as expressed in form.

(Rossi, 1984 p. 7)

Thus it can be said that the process by which the city is imprinted



Fig. 35

St. Malo, France, a 'vital' walled port city that has experienced various functional transformations through its life. Untraceable source.

with form is urban history, but the succession of events constitutes its memory. The new time of architecture is thus that of memory, which replaces history. The individual artifact for the first time is understood within the psychological construct of collective memory.

Time as collective memory leads Rossi to his particular understanding of the idea of type. With the introduction of memory into the object, the object comes to embody both an idea of itself and a memory of a former self.

Type is no longer a neutral structure found in history but an analytical and experimental structure which now can be used to operate on the skeleton of history. It becomes an instrument for **analysis** and **measure**. Following this, **questions of type become important.** 'They have always entered into the history of architecture, and arise naturally, whenever urban problems are confronted... I would define the concept of type as something that is permanent and complex, a logical principle that is prior to form and that constitutes it'. (Rossi, 1984 p. 40)

'One of the major theorists of architecture, Quatremere de Quincy, understood the importance of these questions and gave a masterly definition of type and model:

'The word 'type', represents not so much the image of a thing to be copied or perfectly imitated as the idea of an element that must itself serve as a rule for the model... The Model understood as the practical execution of art, is an object that must be repeated such that it is; type, on the contrary, is an object according to which one can conceive works that do not resemble one another at all. Everything is precise and given in the model; everything is more or less vague in the type. Thus we see that the imitation of types involves nothing that feelings or spirit cannot recognize...' (Rossi, 1984 p. 40)

Thus typology presents itself as the study of types of elements that cannot be further reduced, elements of a city as well as of an architecture. Type is thus a constant, and manifests itself with a character of necessity; but even though it is predetermined, it reacts dialectically

Fig. 36

A religious mnemonic device; each of the fingers represents different steps in the Examen Conscientiae, from 'Exercitia Spirituality', an illustrated edition of the Spiritual Exercises of Saint Ignatius of Loyola. (bibliodyssey.blogspot.com/2007/09/distillate.html)

with technique, function and style, as well as with both the collective character and the individual moment of the architectural artifact.

'Ultimately we can say that type is the very idea of architecture, that which is closest to its essence. In spite of changes, it has always imposed itself on the 'feelings and reason' as the principle of architecture and of the city.' (Rossi, 1984 p. 41)



Instruments of Memory

Architecture needs mechanisms that allow it to become connected to history and culture. Our engagement with urban artifacts and the meaning embedded in them takes place on different levels. We engage on an intellectual level that mainly takes the form of symbolic communication of the built artifact. We also engage on a more emotional level, where the reading/communication happens more through our senses, and direct physical contact with the artifacts.







Fig. 37

Dinosaur building. From "The Language of Post Modern architecture", Charles Jencks.

Fig. 38

Chapel at Ronchamp, Le Corbusier. Untraceable source.

Engagement with permanent artifacts through symbolism

(Intellectual)

The ability of architectural form to communicate and create historic and memorial associations: this is primarily an intellectual engagement through signs etc. and is complicated by the heterogeneity of society today. There is therefore a need for interpretive openness with regards to symbolism - for the symbols and signs to engage people and to be meaningful.

The two theorists that have been most vocal about the communicative ability of architecture are Charles Jencks and Robert Venturi. Both represent

different streams of the Post Modern Movements in architecture and each has written very influential books on the subject. Though I do not agree with their conclusions, I find their work very valuable in thinking about the issue. Their philosophies inevitably led to ideas about decoration that are very helpful for design in the 21st century.

'We believe a new interest in the architecture of communication involving symbolism and mixed media will lead us to reevaluate the eclectic and picturesque styles of the last century, to reappraise our own commercial architecture - Pop architecture, if you wish and finally to face the question of decoration.' - Robert Venturi (Venturi, 1977)

Robert Venturi formulated a theory of signs and symbols in 'Learning from Las Vegas' in which he argues for a separation between building and sign, distinguishing between two forms of architectural communication in the commercial environment: building as sign (ducks) and building and sign

Fig. 39

The Big Duck, Flanders, Long Island, New York. ("Learning from Las Vegas")

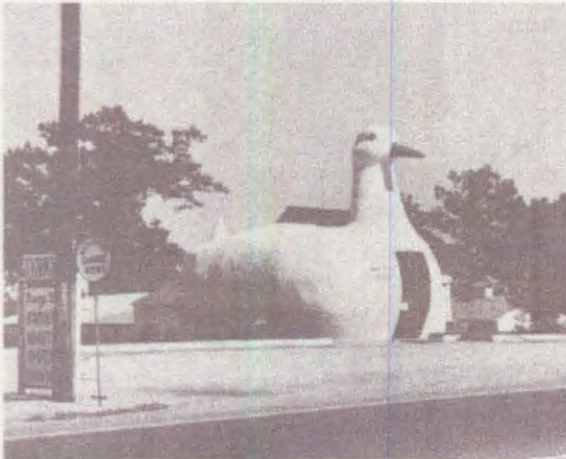
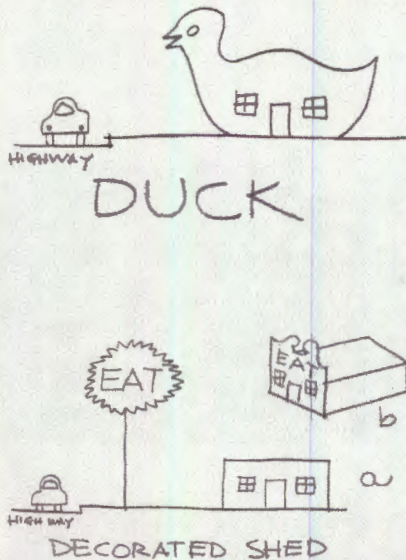


Fig. 40

Venturi sketch of 'Duck' and 'Decorated Shed' buildings. ("Learning from Las Vegas")

(decorated sheds). He maintains that a building functioning as a sign, distorts the programmatic function in favor of the formal, symbolic agenda.

In contrast, a decorated shed is a simple enclosure with signs attached like a billboard, and conventional ornament. These he promoted as being in keeping with the spirit of the age. Modest buildings, without formal distortion, that convey a simple message about its program, permitting the symbolic function (through the separate sign) its own flexibility. For him, form and symbol need not coincide.



His thesis is that most contemporary buildings are 'ducks', where impressive aims distort the whole, beyond the limits of economy and convenience; the building becoming its own decoration. For Venturi, in Modern buildings, construction, structure and volume distort its function by becoming the decoration itself. Venturi relegates this mode of communication to the scrapheap of history arguing that it is out of keeping with an electronic society based on signage.

He rather opts for a contemporary version of applied decoration, unlike that of the Victorians or the Functionalists. According to him, this allows the building to go its own conventional way. It also means that it is easier to adapt, cheaper and leads to a more honest way of approaching the issue of decoration.

Venturi wants us to reevaluate Ruskin's horrifying statement that 'architecture is the decoration of structure' and add to it Pugin's warning: it is all right to decorate construction, but never to construct decoration. (Harries, 1998 p. 72)

Charles Jencks also starts from the position that architecture should be looked at as communication, but comes to very different conclusions from Venturi.

He considers Venturi to have cut out a whole area of architectural communication, opting for an exclusive, simplistic path, not a complex and contradictory one. Jencks is much more optimistic about symbolic communication in architectural form, saying **'the more metaphors, the greater the drama, and the more they are slightly suggestive, the greater the mystery.'** (Jencks, 1977 p. 30)

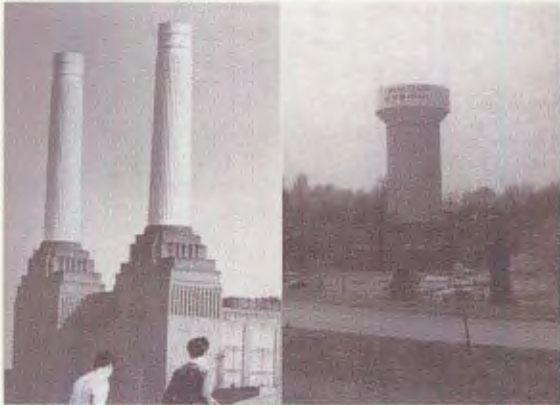


Fig. 41

Columns.
(The Language of
Post Modern Archi-
tecture)



Fig. 42

Southbank, London.
(The Language of
Post Modern Archi-
tecture)

To illustrate Jencks's understanding of the various analogies that architecture shares with language:



'We see a babble of tongues, a free-for-all of personal idiolects, not the classical language of the Doric, Ionic and Corinthian orders (or even the coherent prose of the vernacular). Where there once were rules for architectural grammar, we now have a mutual diatribe between speculative builders and bureaucratic monoliths. Look at the prime site on the south bank of the River Thames in London. Where there once was a gentle discourse between the Houses of Parliament and Westminster Abbey, there is now, across the river, the Shell Building bellowing at the Hayward Gallery, which grunts back at a stammering and giggling Festival Hall - the whole boisterous shouting match now warily regarded by a Ferris wheel lost from the circus, London's misplaced Millennium Eye. It is all jabber and strife, and yet this invective is still language even if it is not very comprehensible or persua-

sive.' (Jencks, 1977 p. 25)

Because of architecture's communicative potential, we can speak of architectural 'words,' 'phrases,' 'syntax,' 'metaphors' and 'semantics'. As a language, architecture is much more flexible than spoken language, and is subject to the transformations of short-lived codes. Like the spoken word, it must use known units of meaning. We would call these units architectural 'words'; Doors, windows, columns, partitions, cantilevers etc.

Yet there is a crucial difference between the 'words' of architecture and of speech. Architectural language is more elastic and polymorphous than those of spoken or written language and is more based on its physical context and the code of the viewer for its specific sense. Jencks uses the example of the column to illustrate this point. 'A column on a building is one thing, the Nelson Column in Trafalgar Square another, the column smokestack at Battersea Power station in London a third, and Adolf Loos' entry for the Chicago Tribune Column a fourth. If the column is a 'word', then the word has become a phrase, a sentence, and finally a whole novel.' (Jencks, 1977 p. 35)

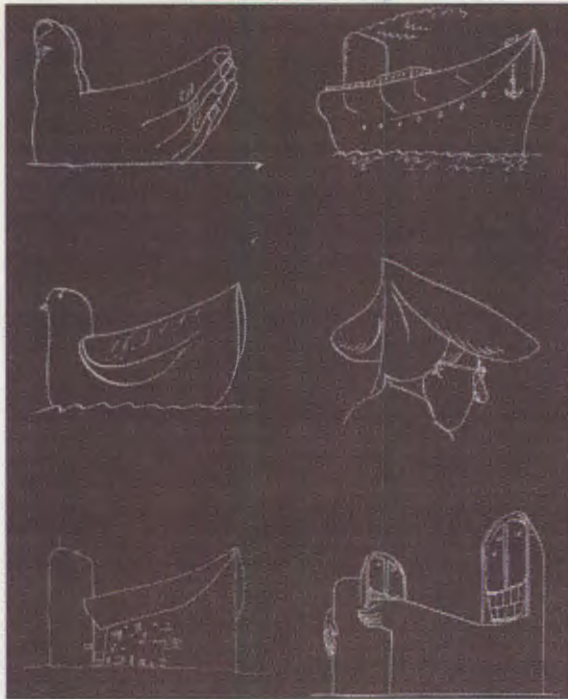
In architecture, metaphorical meaning is the most potent. The interpretation of architectural metaphor

Fig. 43

Variety of symbolic associations made by Le Corbusier's Ronchamp Chapel. (The Language of Post Modern Architecture)

is also more elastic and dependant on local codes than the interpretation of metaphor in written language. Local context guides the reading, and limits the metaphors to travel along certain routes.

A mixed metaphor is stirring, but a subtle mixed metaphor is more powerful. In architecture, to explicitly name a metaphor is often to kill it, as in the dissection and analysis of a joke.



As an example of the effective use of architectural metaphor, Jencks uses Le Corbusier's chapel at Ronchamp in Northeast France. 'It has been compared to all sorts of things, varying from the white houses of Mykonos, to Swiss cheese. Part of its power is this suggestiveness - to mean many different things at once, to set the mind of on a wild goose chase where it actually catches the goose, among other animals'. (Jencks, 1977 p. 48)

The visual codes, which here take in both elitist and popular meanings, are working mostly on an unconscious level. We read the metaphors immediately without bothering to name or draw them. Clearly the skill of the architect is dependent on his ability to call up our rich storehouses of visual images without our being aware of it.

While a building may stand three hundred years, the way people regard and use it may change every decade. In a global civilization there are multiple codes, some of which may be in conflict. Code restrictions based on personal learning and background culture underlie the way we see architecture and value it and therefore guide our reading of architecture.

If architecture is to communicate as intended it should avoid signs that have only one meaning, and secondly, it should utilize a variety of codes, popular signs and metaphors to survive the transformation of fast changing codes, and codes of the locale. This way it becomes saturated with possible interpretations while remaining interpretatively open, meaningfully engaging people through signs and symbols.

Surprisingly, many contemporary architects continue to neglect the potential of metaphorical meaning in architecture, instead focusing on more rational aspects of design, cost, function, space and packaging. The result of this neglect is the accidental creation of unfortunate

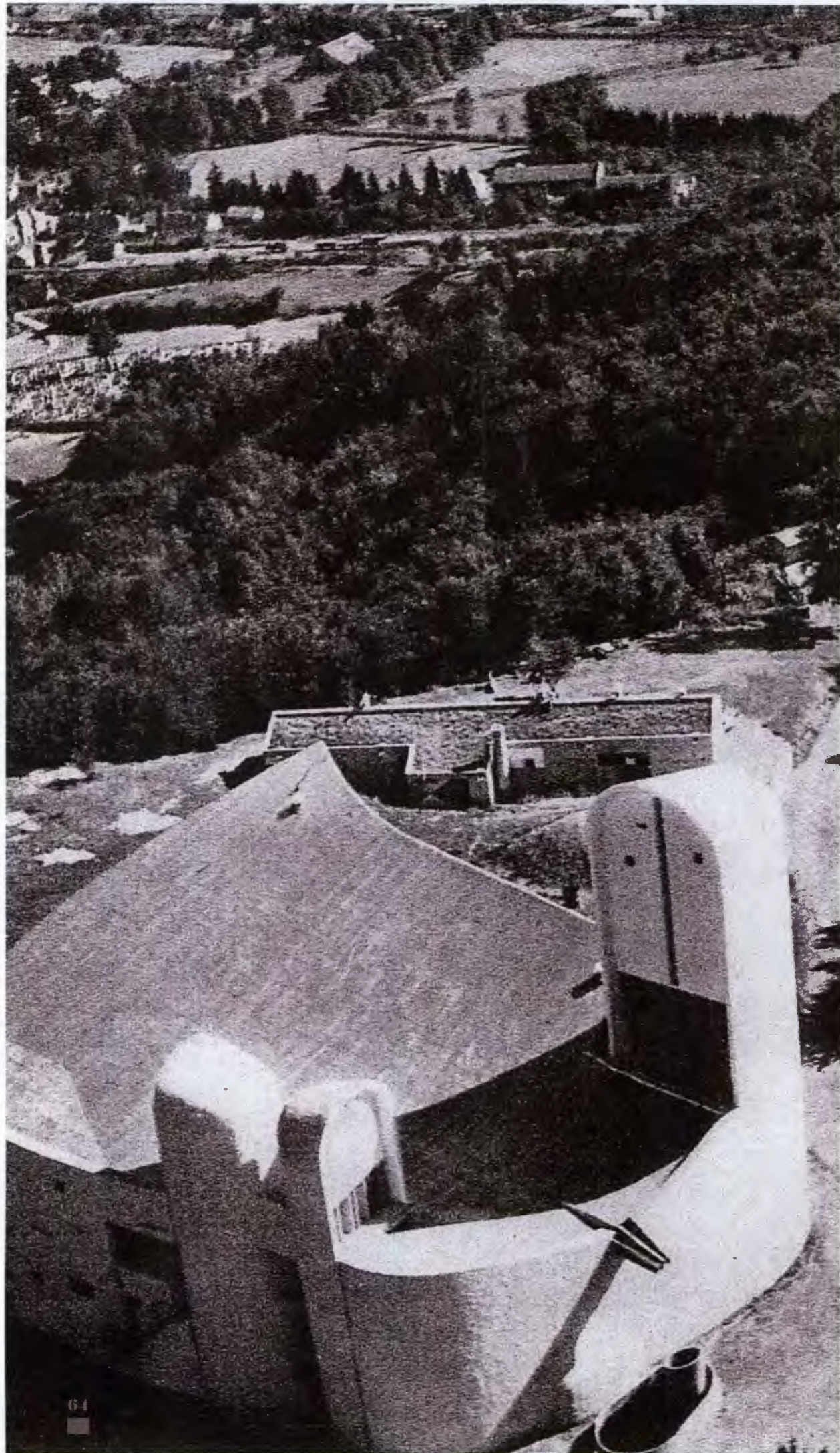


Fig. 44

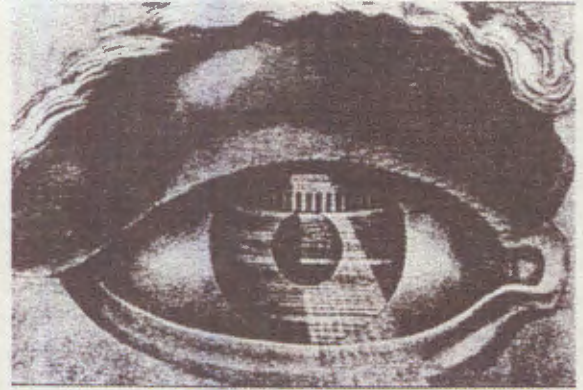
Aerial view of Le Corbusier's Ronchamp chapel, untraceable source.

Fig. 45

Architecture of
the Retina.
Untraceable
source.

metaphors where some buildings simply end up coming across as metaphors of function and economics -like much of the 'boxes' produced by the modern movement. Architects must come to recognize the inevitable symbolic communication in every building.

It is in this way that their buildings will be able to communicate meaningfully and effectively across cultural and historic boundaries.



**Engagement with
permanent artifacts
through**

sensation

(Physical and Emotional)

(Please refer to sections on temporality and weathering in the technology component for further discussion of the sensorial engagement in architecture.)

On a more experiential level, autobiographical and collective memorial associations can be captured and encouraged by the engagement of all the senses. This is primarily a physical and emotional engagement. Architecture, more than other art forms, 'engages the immediacy of our sensory perceptions'. The passage of time, light, shadow and transparency, color phenomena, texture, material and detail all participate in the complete sensory experience of architecture. The intensity and variety of these experiences can incite very strong memory associations, especially as they relate to time.

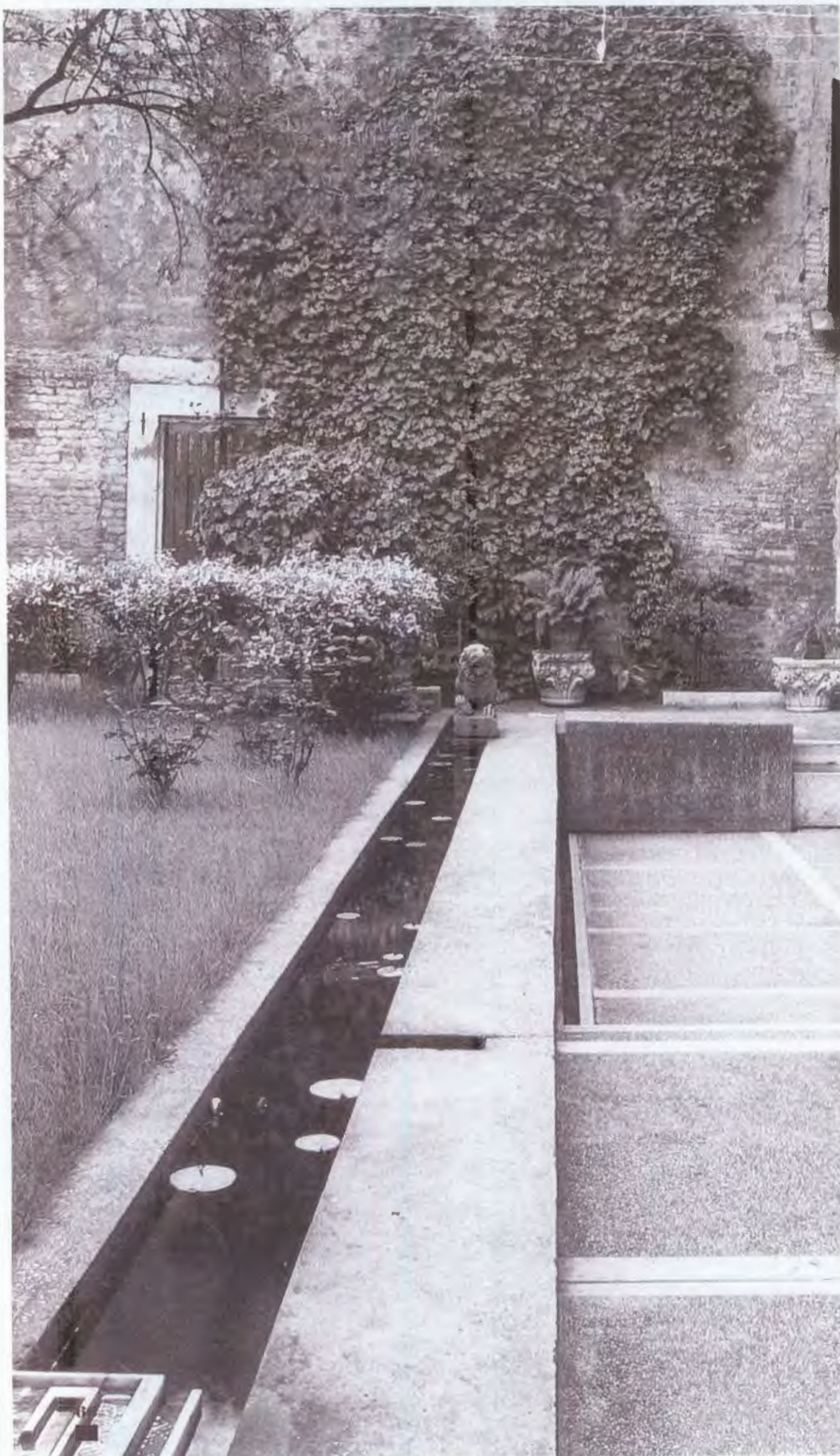


Fig. 46

Castelvecchio
Museum, Verona,
Italy, Carlo
Scarpa.
(www.greatbuildings.com)

As has already been discussed, ocularcentrism, the privileging of vision and the resulting sensorial alienation, is a major inhibitor of meaningful associations and interactions in the built environment, specifically as it relates to the passage of time and memory. There is a need for sensory balance - an architecture of the senses; sensory pleasure.

'Beyond architecture, our culture at large seems to drift towards a distancing, a kind of chilling, de-sensualization and de-eroticization of the human relation to reality. The overemphasis on the intellectual and conceptual dimensions of architecture further contributes to a disappearance of the physical, sensual and embodied essence of architecture.'

'The architecture of our time is turning into the retinal art of the eye. Architecture at large has become an art of the printed image fixed by the hurried eye of the camera. The gaze itself tends to flatten and lose its plasticity; instead of experiencing our being in world, we behold it from outside as spectators of images projected on the surface of the retina.'

(Pallasmaa, 2007)

The experience of the passage of time is very important in the built environment. Sensorial alienation occurs when the passage of time is mediated - in particular, the natural indexes with which we measure the passage of time: weather, seasons, day and night. Additionally, the building's life and age is testified to by all the transformations to it over time: 'scratches and blemishes, coats of paint and cosmetic face-lifts, additions and subtractions'.

It is very important for building technology to,

rather than mediate the passage of time, encourage an awareness of and engagement with the passage of time, nature and memory.

To summarize Pallasmaa, the growing domination of technology causes buildings to lose their connection with the 'language and wisdom of the body', i.e. the loss of 'scale and details crafted for the human body and hand'. This is a great loss to architecture, as structures become 'repulsively flat, sharp edged, immaterial and unreal'. Materials that are immune to time (sheets of glass, enameled metal and synthetic materials) perpetuate the obsession with newness, but do little to convey anything of their 'material essence or age'. A return to natural materials and materials that age freely also means a return to a more human experience of the built environment, because of how natural materials testify to the 'veracity of matter and of time'.

'Only architecture can simultaneously awaken all the senses - all the complexities of perception. Only the architecture itself offers the tactile sensations of texture: stone surfaces and polished wooden pews, the experience of light changing with movement, the smell and resonant sounds of space, the bodily relations of scale and proportion. All these sensations combine within one complex experience, which becomes articulate and specific, though wordless.'

"The building speaks through the silence of perceptual phenomena."

Conclusion

Memory in the built environment is perpetuated when urban artifacts remain vital through functional transformations, and through transformations in their social and technological environments. The communication of this memory to successive generations of users happens through mechanisms of symbolism and sensorial experience. Thus, buildings allow users to engage with the passing of time and enables users to locate themselves in history. In this way, buildings provide the absolutely necessary continuity between past, present and future, in a way that is more stabilizing and compelling than all other arts.

These points are to be considered if architecture is to be effective in this position of responsibility.

- **A reconsideration of the modern notion of functionalism, and the endeavor for newness.**
- **Allowance for continuity between the past, present and the future.**
- **Allowing/enabling architecture to change over time.**
- **A focus on materiality and the sensorial nature of the experience of architecture.**
- **Accommodating the experience of the passage of time in the built environment on all levels.**
- **Respect for the temporality of the architectural project through material choices.**
- **Facilitating architecture's change over time.**
- **Use of architecture to connect with the past.**
- **Deliberate use of symbolism and decoration to create mnemonic associations.**



C



Fig. 47

**Weathered
building on UCT
Campus 2009.
Author's picture.**

Title borrowed
from the subtitle
to Mosafavi's book
'On Weathering',
published by MIT
Press in 1993.

The Life of Buildings in Time

An investigation into the divergent possibilities for technology in terms of memory: technology's potential to undermine or reinforce memory.

Introduction

This paper is the technology component of my M.Arch design project and is concerned with the temporality of the architectural project with respect to technology. It investigates the potential of building technology to either undermine or enforce autobiographical and collective memory. It considers weathering and ornament as mnemonic mechanisms that have the potential to remedy the alienating impact that the short-sighted use of contemporary technology has on buildings and their users.



Fig. 48

Weathered wall.
Constitution Hill.
Johannesburg.
Author's picture.

Fig. 49

Dilapidated Villa
Savoie, Poissy,
1929, Le
Corbusier.
Untraceable
source.



The Temporality of the Architectural Project

Time and Place

‘The unit of analysis for us isn’t the building; it’s the use of the building through time. Time is the essence of the real design problem.’

– Frank Duffy (Tiesdell, et al., 2007 p. 303)

Despite the temporal condition of architecture, the important relationship between artifact and the course of time receives relatively little critical attention today. The modern movement’s heritage still continues its obstinate denial of the temporality of the architectural project, as if buildings somehow exist outside of

a reality rooted in time.

The following is an investigation of the consequences of the temporal dimension of architecture regarding the production and experience of architecture.

As physical constructions, buildings exist in time and in place. From our limited perspective, they far outlive us. ‘They loom over us and persist beyond us. They have the perfect memory of materiality.’ (Brand, 1994 p. 2)

We will find that much is to be gained from engaging this temporality and its ramifications. A denial of the realities of the temporality of architecture often results in sensorial alienation, where our experience of time becomes mediated through technology. The natural indicators with which we measure the passage of time: weather, seasons, day and night and the transformations that occur over time, are fought against and hindered from narrating the stories of buildings and their inhabitants’ lives.

‘People are happiest in buildings where change occurs at every scale from weeks to centuries.’

(Brand, 1994 p. 208)

In terms of a building’s relationship to time, a building will inevitably age. As time goes by it acquires a specific patina as the surface records the marks of its use over time – the subtractions and additions, scratches and ‘scars’, peeling coats of paint and superficial renovations. All these continually construct a narrative about a building’s age that is transformed and assembled through the events and activities



that it witnesses.

"The older a building gets, the more we have respect and affection for its evident maturity, for the accumulated human investment it shows, for the attractive patina it wears - muted bricks, worn stairs, colorfully stained roof, lush vines." (Brand, 1994 p. 10)

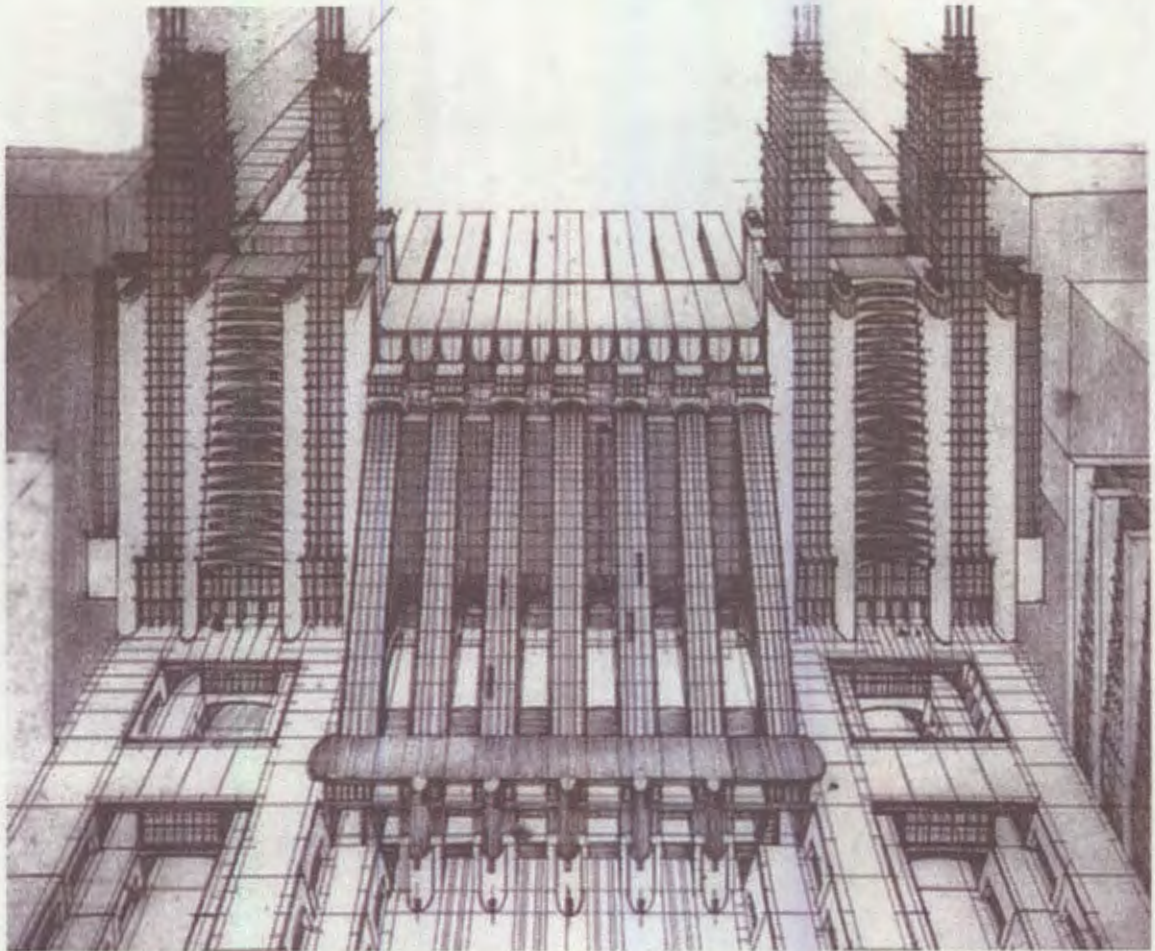
There is a need for building technology to encourage an awareness of and engagement with the passage of time, nature and memory, rather than mediate the passage of time.

Fig. 50

Biodeterioration
of building on
UCT Campus 2009.
Author's picture.

Fig. 51

Antonio Sant'Elia,
Futurist Architecture.
(www.viswiki.com/en/Futurist_architecture)



Aesthetics in an Industrial Age

The Modern Task of Transcendence

“Buildings have lives in time, and those lives are intimately connected with the lives of the people who use them. Buildings come into being at particu-

lar moments and in particular circumstances. They change and perhaps grow as the lives of their users change. Eventually - when, for whatever reason, people no longer find them useful - they die.”

- Patricia Waddy (Brand, 1994 p. 210)

Inherent in technology's gift of independence comes a degree of alienation. Distance develops between people and the natural environment. Technology affords both individualization and globalization, and for all their benefits, both of these are



Fig. 52

Demolition of
Pruitt Igoe
housing
development in
Saint Louis,
1972.

known to be factors participating in the condition of alienation. Contemporary communication technology has exacerbated all of the alienating tendencies inherent in technology.

The particular alienation in question here has much to do with aestheticisation, and the artificial constancy that is part of the contemporary global social condition, sustained and encouraged by contemporary technology.

At the turn of the 20th century, the enlightenment tradition's faith in progress produced remarkable revolutions in all spheres. A certain faith in technology emerged, seen to be able to liberate us from our past:

"The Machine is Intellect mastering the drudgery of earth that the plastic art may live; that the margin of leisure and strength by which man's life upon the earth can be made beautiful, may immeasurably widen; its function ultimately to emancipate human expression." Frank Lloyd Wright

in 'the Art and Craft of the Machine' (Braham, 2007)

In 1901, Frank Lloyd Wright, in his speech entitled "the art and craft of the machine" encouraged the profession to move forward and asserted that architecture's role in society had changed; that it could no longer stay the same. Architecture would have to revise itself and adapt.

As the machine took over, architecture lost its main function of retaining our collective memory, and its power in the transmittance of culture. Rapid technological revolutions had trumped architecture and forced it to assume a place of equality with the rest of the arts. The 'book' had killed the edifice.

"It may well be that what we have hitherto understood as architecture, and what we are beginning to understand of technology are incompatible disciplines. The architect who proposes to run

Fig. 53

Factory,
Manufactured
Landscapes,
([http://www.
core.form-ula.
com/wp-content/](http://www.core.form-ula.com/wp-content/))



with technology knows now that he will be in fast company, and that in order to keep up, he may have to emulate the Futurists and discard his whole cultural load, including the professional garments by which he is recognized as an architect. If on the other hand, he decides not to do this, he may find that a technological culture has decided to go on without him.”
(Banham, 1960 p. 329)

Throughout the 20th century architecture grappled with this predicament, trying to adapt to a technological age in various ways. Put positively, it was an opportunity to define an architecture that appropriately expressed the spirit of the new age, and that would transcend the limiting styles, materials and technologies of architecture past. Unprecedented invention and production was experienced. Modernists aimed for a radical aes-

thetic purism that was also largely a reaction to the ornamental architecture of the 19th century, described by modern architects as overly sentimental, picturesque and eclectic.

The functionalist design philosophy that developed early in the 20th century was extremely forceful and influential and set modern architecture on a trajectory of transcendence. Modern architecture came to believe itself to transcend place and time, tradition and culture and taste preferences.

This ideology of progress and liberation from history was famously demonstrated by Walter Gropius, who wished to ban the teaching of architectural history from the Bauhaus. In 'Modernism and the Revenge of the Book' Jencks describes this feature of modern architecture as a

self-inflicted loss of historical consciousness.
(Rattenbury, 2002 p. 174)

In the 21st century, the rational mean-



Fig. 54

Villa Savoye,
Le Corbusier,
Poissy, 1929.
(www.stolaf.edu)

ing of the modern world view has been replaced by consumption, and meaning has ironically become a saleable commodity. Technology, exploited by capitalism, resulted in 'volatility, obsolescence, the rapid passing of fashions and ideas, the disappearance of stability, constant innovation, constant revision, repackaging, the new look, the newer than new product, the future always looming over the present' (Wells, 2005 p. 77)

Contemporary architecture reflects this high capitalism as a producer of commodities to be consumed.

Architecture's role in the 21st century is further complicated by the fact that increasingly, architecture provides the physical context for all other consumption, considering the rapid pace of global urbanization. This is therefore where the alienating effects of technology will be felt the most intensely.

Today's media-based society, with its

technological advances in telecommunications and in methods of visual reproduction, is dominated by consumer appetite. We are confronted at every moment with a myriad of choices and we are constantly being inundated with images.

Jean Baudrillard describes this state as an "ecstasy of communication" (Baudrillard, 1988 pp. 11-27) which has caused a breakdown in our ability to sustain a world view larger than the present moment. Architects consequently also have become increasingly obsessed with images and image making, to the detriment of our discipline, and the built environment.

According to Neil Leach the "sensory stimulation induced by these images may have a narcotic effect that diminishes social and political awareness, leaving architects cosseted within their aesthetic cocoons, remote from the actual concerns of everyday life. The intoxication of the aesthetic leads to an aesthetics of

intoxication and a consequent lowering of critical awareness. What results is a culture of mindless consumption, where there is no longer any possibility of meaningful discourse. In such a culture, the only effective strategy is one of seduction. Architectural design is reduced to the superficial play of empty, seductive forms, and philosophy is appropriated as an intellectual veneer to justify these forms." (Leach, 1977 p. VIII)

Once reality itself is mediated, all we are left with is a world of images, of hyper-reality and simulacra. Tschumi affirms that all of culture, including architecture, is now aestheticized, meaning, reduced to the realm of the image. This reduces even history to a series of simultaneous images, "not only those of the gulf war interspersed with basketball games and advertisements, but also those of our architectural magazines, and ultimately, those of our cities". (Leach, 1977 p. 23)

Architecture suffers acutely in this state.

"There is a widespread yet largely unarticulated belief that buildings are going to disappear, and I share this sensation as well. Architecture is now prepared for being an ephemeral art. That is very evident in this world... That is why architecture today so frequently appeals to the superficial images of its predecessors; today's society does not believe in the lasting condition of its own creations. The initial impact of the building is what counts. Not its long life. My point of view however is that this durability - this condition of being built to last is very powerful. One must still fight for that. ...but I believe that from many points of view, it would be favorable to have more stable cities, more stable architecture, more durable and less ephemeral constructions. I realize that being against ephemerality is a very difficult issue, but that is the position which I have taken, with the awareness that I could be mistaken." - Raphael Moneo (The Idea of Lasting - a Conversation with Raphael Moneo, 1988 pp. 146-157)

I have attempted to show that this chaotic condition has much to do with the modern obsession with technology, its denial of history and culture, and its aim at transcendence of space and time.

Today, architects, with the benefit of hindsight, can take up the challenge and properly engage the temporality of architecture, utilizing its potential to provide continuity and stability, and ground us in reality, to overcome the alienation of modern life and technology.

The question is, how can technology, which seems by its very nature to be at odds with the idea of permanence, be used to counter its own alienating effects?

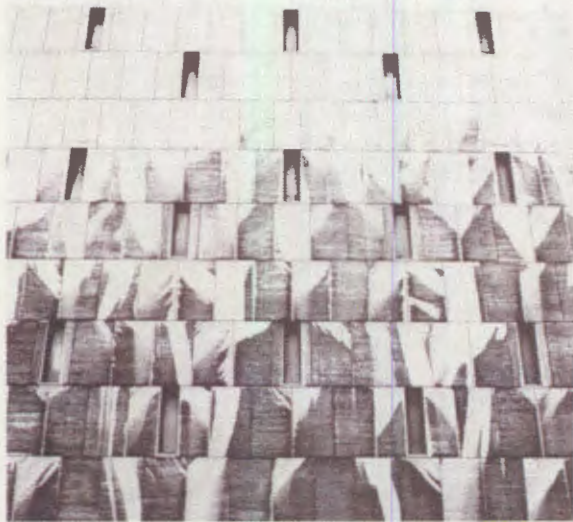


Fig. 55

**Biodeterioration
of concrete
building on UCT
Campus 2009.
Author's picture.**

Fig. 56

De Bijenkorf
Department Store,
Rotterdam,
Netherlands -
Marcel Breuer,
1955 (Mostafavi,
et al., 1993)



Weathering

Harnessing the Potential of Weathering as a Source of Architectural Finishing for Urban Environments.

Weathering marks the passage of time through the lives of buildings, and even through our built environment in its entirety. Using design and technology to provide for such marks to occur brings a building project closer to 'reality', based on its potential transformation over time. These marks show the past, present, and future layered together in a time-space narrative. Using technology to structure these material changes through time, allows the built environment to capture weathering's positive emotive force, and this in turn has the potential to counteract the alienating effects of modern technology.

"We are convinced by things that show internal complexity, that show the traces of an interesting evolution. Those signs

tell us that we might be rewarded if we accord it our trust. An important aspect of design is the degree to which the object involves you in its own completion. Some work invites you into itself by not offering a finished, glossy, one-reading-only surface. This is what makes old buildings interesting to me. I think that humans have a taste for things that not only show that they have been through a process of evolution, but which also show they are still a part of one." - Brian Eno (Brand, 1994 p. 11)

Memories of the city come to life through the existence of historic structures and the reinterpretation of form in existing buildings. Similarly, memories of buildings come to life through the stories told by a lifetime of additions, remodeling, or resurfacing of original fabric. The natural processes of weathering serve as a universal recorder of our past and can capture the memory of materiality if allowed to do so.

Memory itself concerns only the representation of things recalled, while material provides, through traces, the very manifestation of the past. Urban environments are a rich source of material memory. The urban environment allows one to remember the past, through historic buildings and reused fragments. According to Anne-Catrin Schultz,

"Memory in the city is the recollection of past situations and places or buildings through the quotation of materials, forms or even details. Woven together, elements in the city

fall into layers created in different times, simultaneously referring to historic incidents and cultures as well as their different times, simultaneously referring to historic incidents and cultures as their adaptation to later actions and lifestyles." (Birksted, 2000 p. 50)

I will later examine the conditions surrounding the notion of "weathering well," looking for an approach that not only manages the inevitable effects of time but also actively participates in a temporal composition that makes us aware of the passage of time itself.

As John Ruskin noted in the 19th century, buildings are the repositories of memories:

'It is centralization and protectress of this sacred influence that architecture is to be regarded by us with the most serious thought. We may live without her, worship without her, but we cannot remember without her.' (Ruskin, 1865 p. 147)

Understanding how objects and materials weather over time could lead to increasingly appropriate material choices, participant expectations, and preventative maintenance. Anticipating the weathering that occurs around a given set of environmental conditions, and planning for its effects through design would revise the sense of ending in architecture by facilitating its growth over time.

"Is it possible that weathering is not only a problem to be solved, or a fact to be neglected, but is an inevitable occurrence to be recognized and made use of in the uncertainties of its manifestation?" (Mostafavi, et al., 1993 p. 16)

Fig. 57

Ruin on UCT Campus
2009.
Author's picture.





Fig. 58, 59

Castelvecchio
Museum, Verona,
Italy, Carlo
Scarpa, (www.greatbuildings.com)



A Temporal Composition

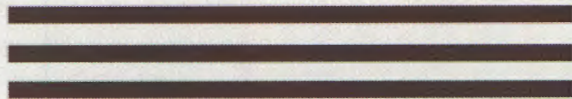
In order to create a comprehensive architectural composition which effectively engages and communicates its temporality, a range of perceptual indicators that evidence differing rates and rhythms of change; seasonal, geological, material, programmatic, etc. are required. Furthermore, the composition needs to offer a thoughtful integration of the artificial with the natural and engage users in maintaining the stability of building processes and material life cycles. A successful temporal composition is not only sensitive to processes of climatic exposure, but wears in such a way that it corresponds in some way to the habitual use and pleasure of

the building.

Interrogating the temporality of the architectural project through critical temporal compositions could counter the alienation that has come as a result of our Modern heritage. The specific concerns relating to time and the weathering of architecture will now be discussed.

“Finishing ends construction, weathering constructs finishes”

Weathering is inevitable. No architect can deny the fact that weathering inheres in all construction. It reminds one that the surface of a building is ever-changing and never really finished. These changes should be considered as part of the total performance of a building. While a potential irritation, the transforma-



Weathering is both the progression and impediment of exposure.

tion of a building's surface can also be positive in that it can allow one to recognize the necessity of change and to resist the desire to overcome it - an ambition that engaged much of modernist thought through its resistance in time. The preoccupation in current practice with the image is partly symptomatic of this desire to resist material change. (Mostafavi, et al., 1993 p. 4)

The marks of weathering begin even before construction and continue over the course of the life of any building. The effects of these marks can be retarded and manipulated, through creative solutions. These solutions could be elements that direct or prevent the flow of water, or they could respond to the effects of the weather by creating solutions that both recognize and utilize the ever-changing characteristics of materials as a way of renewing beginnings by allowing refinishing.

Allowing the past to remain visible and provocative through an openness to material change, the development of a patina, and even dirtiness, can lead to a much more pleasurable and meaningful architectural experience.

The word weathering implies the ability to withstand the effects of weather while at the same time yielding in some measure to the progressive deterioration through such exposure. It is the resistance factor that distinguishes progressive weathering from complete destruction. It could be defined as the ability to withstand the effects of weather. Weathering resists while allowing change, while destruction results from a lack of resistance.

Weathering is both destructive and constructive

"Over time the natural environment acts upon the surface of a building in such a way that its underlying materials are broken down. This breakdown, when left to proceed uninterrupted, leads to the failure of materials and the final dissolution of the building itself- ruination..." (Mostafavi, et al., 1993 p. 4)

Yet this deterioration can be exploited to create intentional, desired effects. Carlo Scarpa makes deliberate use of the deterioration of ordinary building elements in his work as devices that 'decorate' the building surface. Weathering adds the 'final' finish of the environment, by removing the final finish of construction. Through subtraction, weathering continues to build surface finishes long after the 'completion' of construction.

Weathering is both inevitable and preventable

The question of weathering is more about the nature and duration of material change than about whether or not material change will occur. Buildings will inevitably age and be neglected to varying degrees. Without some kind of intervention, exposure will lead to deterioration and ultimately destruction. All buildings require some form of maintenance in order to retard or prevent this process of deterioration. Due to the costs of maintenance, buildings are increasingly designed to be maintenance free, but this is generally done with an aim at creating artificial constancy, and not to attractively reflect changes over time. Nevertheless, some weathering still occurs, in spite of our attempts to hide it.

"No building stands forever, eventually every one falls under the influence of the elements," observes Moshen Mostafavi. (Mostafavi, et al., 1993 p. 4)



Fig. 60

Stained glass facade, Johannesburg CBD, 2009. Author's picture.

Causal Factors Involved in Weathering

According to J.W. Simpson there are four fundamental causal factors involved in the weathering behavior of building materials (Simpson, et al., 1970). The relationship between these causes is dynamic, each one building upon the other to produce unique weathering effects.

• **Environment** - The natural environment has particular significance in respect to the external fabric, generating a wide range of effects and the most deteriorating influence on external materials. Over time, the environmental impact of various climatic conditions, seasons, pollution, rainfall pattern, wind speed and direction, humidity etc. transforms the surface of the building.

• **Use** - Deterioration resulting from use typically depends on habits and behavior patterns of building users, combined with other factors such as workmanship and design and has rela-

tively insignificant influence on the external fabric. Predictions based on performance and effects of materials, planning and detailing should inform design decisions as there is considerable interaction between the factor of design and that of use.

• **Design** - The most control over the weathering performance of the building fabric is in the factor of design which includes manner of assembly and combination more than basic material qualities. The role of design in the prediction of weathering is complex as it requires a comprehensive understanding of all the other factors involved in deterioration.

• **Workmanship** - Poor workmanship can result in undesired deterioration of a building through the misuse of materials in the sense of craft, and this can ultimately lead to the failure of materials. The weathering influence of all the other causal factors rely fundamentally on the standard of workmanship which should be confined to a set of defined tolerances or limits implicit to the particular project.

Layers of Organisation

All materials exposed to the atmosphere deteriorate, and all parts of the external fabric deteriorate at different rates because of their composition and location in or on the face of the building.

According to Simpson, "it is clear from site observations that orientation, and surface geometry or sectional profile, are of paramount importance in determining the extent of failure in a given situation." (Simpson, et al., 1970 p. 25)

Climatic agents of deterioration, such as surface temperature, rain, or wind particularly affect the degree and nature of weathering of a building surface and can be clarified through the following organizational framework. In decreasing levels of importance:

- **Location** - This refers to the local climate and concerns the specific atmospheric cycles, including temperature changes, cycles of humidity and rain, wind patterns etc.

- **Orientation** - This refers to the position of surfaces in relation to other agents of change. Weathering greatly depends on patterns and direction of wind and rain, and orientation with regards to the movement of the sun.

- **Configuration** - This refers to the relationship between the various surfaces and their shapes. Roofs, drip edges, copings, cornices, and sills all mediate climatic conditions and can be configured to deflect or act in

union with the weather.

- **Constitution** - Weathering primarily affects the materials that make up a building. Brick, stone, plastic, glass, wood, metal, and paint all respond differently to the various causal factors. Consistent weathering usually results from homogeneity of materials and the other organizational components.

The interaction of these layers with one another present a variety of weathering possibilities in their differing abilities to mitigate meteorological processes.



Fig. 61
Biodeterioration.
Author's picture.

Surface Form

Orientation and surface geometry are fundamental in predicting weathering patterns as is clear from observing similar materials in different forms and locations. The sectional profile of a wall, for example, directly determines its ability to direct rainwater away from its surface. A good understanding of the weathering effects of sectional profiles and surface geometry can be very useful for the designer concerned with using technology to reflection of time in architecture.

Addleson defines four categories for surface considerations: (Addleson, et al., 1991)

- **Surface Modeling** - The dispersion or concentration of the flow of water over a surface, apart from environmental factors, depends on surface modeling. Disfiguring staining can easily be prevented or controlled through strong modeling and variations in texture plane can lead to the control of the amount and nature of washing any surface might receive.

- **Vertical Features** - Vertical

features can easily be utilized to control water flow and by implication, staining. They can be very effective in controlling and concentrating the speed of flow down a surface, and includes features such as vertical joints to projecting window frames and vertical concrete ribbing.

- **Horizontal Features** - Horizontal features and projections can be just as effective in directing the flow of water down a façade. Intentional staining can be result from partial washing produced by components such as string courses, window sills, copings, and cutbacks, such as cornices, often coinciding with a sun cast shadow. Horizontal projections and recesses such as a drip edge or inclined soffit is necessary to effectively interrupt the flow of water down a façade. Narrow projections such as sills lets water stream over the edges while short projections tend to result in water being blown back onto the façade.

- **Arrises** - Edges formed by vertical surfaces with angular junctions generally receive the greatest concentrations of water and therefore end up being cleaner than the surrounding fabric.

Fig. 62

Biodeterioration.
Author's picture.



Durability

As long as climatic forces continue to weather the fabric of a building, a steady source of change is found. This change can take the form of growth when finishes are designed to enhance over time and people are encouraged to take an active part in the maintenance of their buildings. Like living organisms, the durability of a building varies among component parts.

"Durability also varies among component parts of organisms and artifacts - blood, nerves, eyes, and skin age at different rates- and the apparent age of any being or environment depends on how these components interact." (Lowenthal, 1985 p. 126)

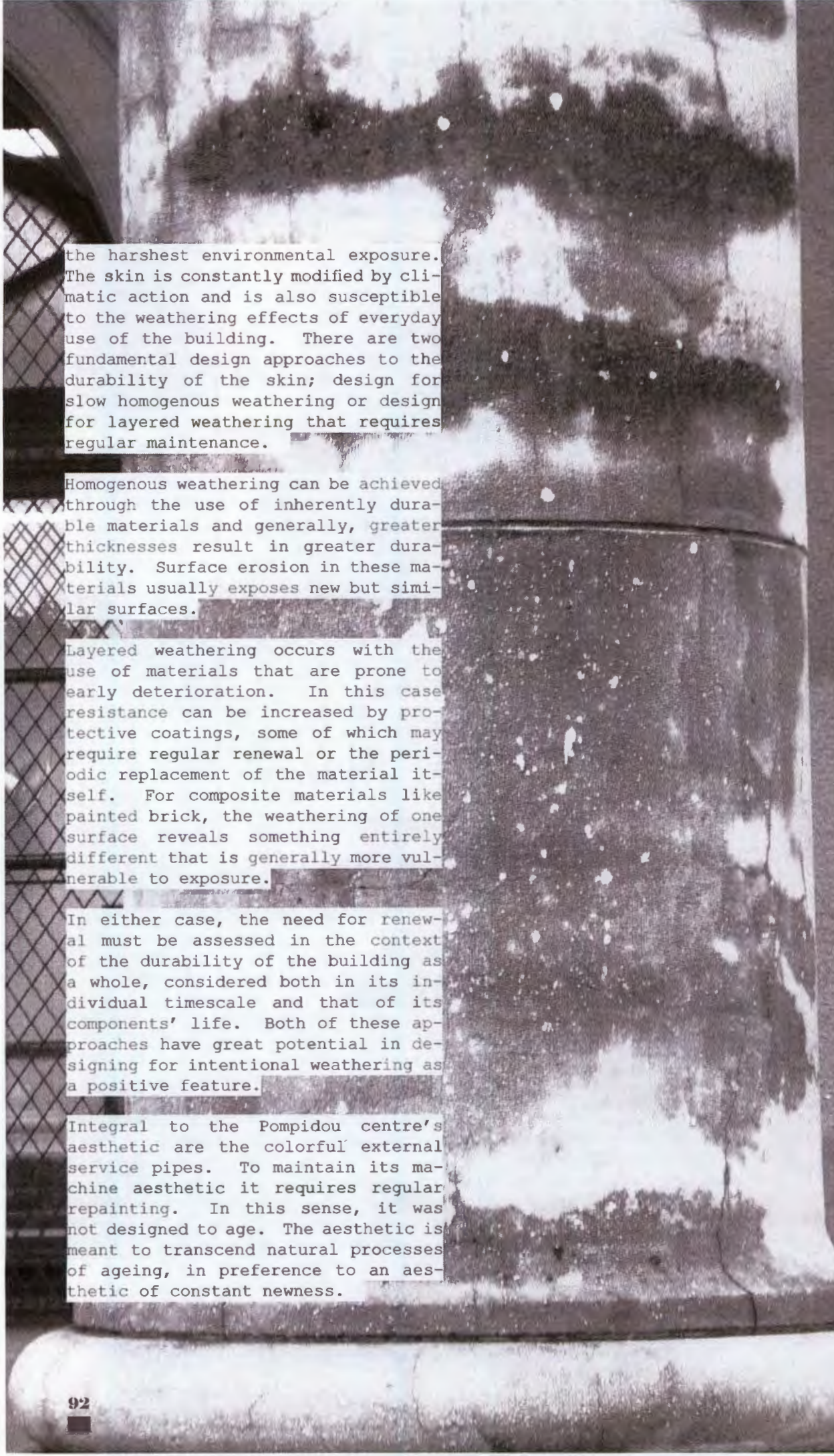
Without intervention, environmental exposure eventually leads to destruction, irrespective of the durability of materials and composition but generally a slow rate of change in a building is healthy; durable building surfaces change very gradually, sometimes as a result of some degree of replenishing maintenance and protection from exposure. Frank Duffy de-

scribes the durability of a building in terms of "several layers of longevity of built components". (Tiesdell, et al., 2007 p. 302)

Steward Brand expands on Duffy's description by identifying the following "shearing layers": (Brand, 1994 pp. 12-23)

- **Site** - Represents the geographical and urban setting.
- **Structure** - Includes the foundation and load-bearing elements that are built to last between 30 to 300 years.
- **Skin** - The exterior surface that is expected to last around 20 years.
- **Services** - The 'working guts' of a building such as, electrical wiring, plumbing, HVAC, data/communication wiring, that are expected to wear out or be obsolete every 7 to 15 years.
- **Space Plan** - The interior layout of walls, ceilings, and floors expected to change every 3 years in commercial environments to every 30 years in residential buildings.
- **Stuff** - These are the chairs, desks, phones, appliances, etc. that move around daily to monthly.

They layer most vulnerable to weathering is the external skin as it receives



the harshest environmental exposure. The skin is constantly modified by climatic action and is also susceptible to the weathering effects of everyday use of the building. There are two fundamental design approaches to the durability of the skin; design for slow homogenous weathering or design for layered weathering that requires regular maintenance.

Homogenous weathering can be achieved through the use of inherently durable materials and generally, greater thicknesses result in greater durability. Surface erosion in these materials usually exposes new but similar surfaces.

Layered weathering occurs with the use of materials that are prone to early deterioration. In this case resistance can be increased by protective coatings, some of which may require regular renewal or the periodic replacement of the material itself. For composite materials like painted brick, the weathering of one surface reveals something entirely different that is generally more vulnerable to exposure.

In either case, the need for renewal must be assessed in the context of the durability of the building as a whole, considered both in its individual timescale and that of its components' life. Both of these approaches have great potential in designing for intentional weathering as a positive feature.

Integral to the Pompidou centre's aesthetic are the colorful external service pipes. To maintain its machine aesthetic it requires regular repainting. In this sense, it was not designed to age. The aesthetic is meant to transcend natural processes of ageing, in preference to an aesthetic of constant newness.

Fig. 63

Weather stained column on UCT Campus 2009. Author's picture.

Fig. 64

Sculptural virtual drip feature, Banca Popolare di Verona, Carlo Scarpa. Untraceable source.



Fig. 65

Ronchamp Chapel roof drain detail. Untraceable source.



Water

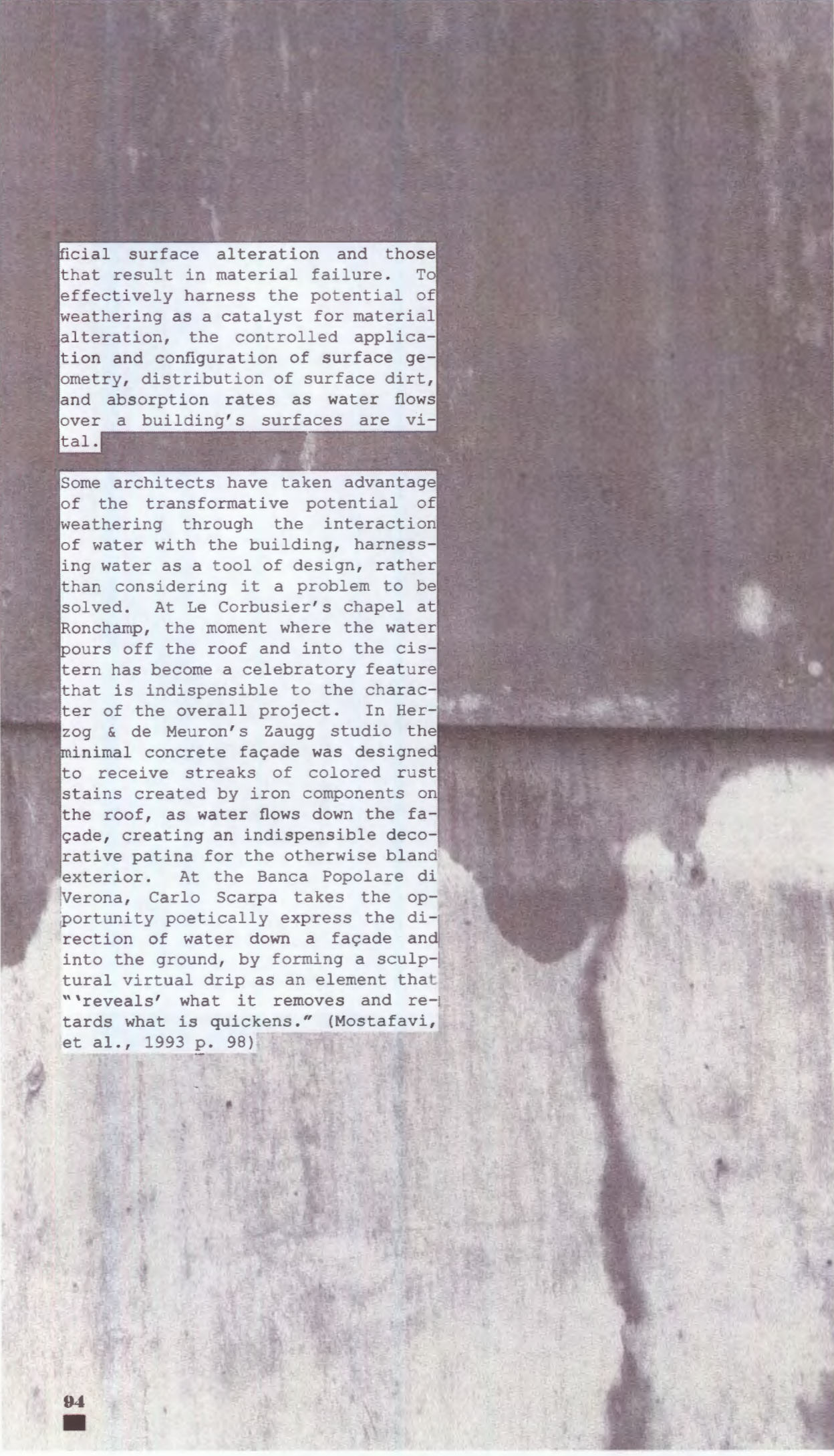
Water is inextricably involved in and necessary for nearly all the processes that lead to the weathering of buildings, whether in the form of rain, frost, condensation, or damp, be it physical, biological or chemical.

Rainfall, especially when combined with pollutants or directed by wind is the operative element in the most dynamic weathering effects and can potentially infuse otherwise lifeless materials with rich coloration and surface pattern. Design that anticipates the transformative weathering potential of water in its various forms reinforces memory in the total experience of architecture, particu-

larly through its visible relationship with changes in environment and the passing of time. However, water remains the most destructive element of exposure buildings experience throughout their useful lives. Steward Brand emphatically explains:

"The root of all evil is water. It dissolves buildings. Water is elixir to unwelcome life such a rot and insects. Water, the universal solvent, makes chemical reactions happen every place you don't want them. It consumes wood, erodes masonry, corrodes metals, peels paint, expands destructively when it freezes, and permeates everywhere when it evaporates." (Brand, 1994 p. 114)

It is therefore imperative that certain methods of exclusion be provided between factors resulting in super-



ficial surface alteration and those that result in material failure. To effectively harness the potential of weathering as a catalyst for material alteration, the controlled application and configuration of surface geometry, distribution of surface dirt, and absorption rates as water flows over a building's surfaces are vital.

Some architects have taken advantage of the transformative potential of weathering through the interaction of water with the building, harnessing water as a tool of design, rather than considering it a problem to be solved. At Le Corbusier's chapel at Ronchamp, the moment where the water pours off the roof and into the cistern has become a celebratory feature that is indispensable to the character of the overall project. In Herzog & de Meuron's Zaugg studio the minimal concrete façade was designed to receive streaks of colored rust stains created by iron components on the roof, as water flows down the façade, creating an indispensable decorative patina for the otherwise bland exterior. At the Banca Popolare di Verona, Carlo Scarpa takes the opportunity poetically express the direction of water down a façade and into the ground, by forming a sculptural virtual drip as an element that "'reveals' what it removes and retards what is quickens." (Mostafavi, et al., 1993 p. 98)

Fig. 66,67

Weather stained
concrete on UCT
Campus 2009.
Author's picture.



Staining


Staining is a natural part of the life of any material and it therefore functions as a record of events and the progress of time in the life of a building, thereby enforcing memory. Staining can be pre-empted and used intentionally to function as a positive addition rather than a detraction.

Staining effects and the nature and course of dirt movement and deposition on building surfaces can loosely be predicted according to the following five interrelated factors, expanded from categories defined by Addleson. (Addleson, et al., 1991)

1. Absorption - The absorptive characteristics of building materials determine the nature of the flow of water over a surface, sometimes allowing partial washing that corresponds to partial run-off. Staining effects differ according to any given

exposure and is least when the rate of absorption is high enough to prevent run-off under normal exposures. Similarly, staining is reduced where run-off is high enough to facilitate thorough regular washing under normal exposures. Absorption behavior is difficult to predict requiring close observation of material being considered under similar conditions. Vegetation also contributes to water retention and staining through biological deterioration and the various root systems with their mineral deposition.

2. Dirt retention - Dirt retention together with absorption significantly enhances the probability and nature of staining. Rough textures may sometimes disguise staining in spite of their dirt retaining qualities. There is an increase of grit-type dirt in very polluted atmospheres whereas biological-type dirt is more prevalent in rural environments that encourage biological growth. South facing and sunless environments where drying out is slower provide suitable habitats for the growth of various



kinds of mold and lichens that retain dirt. Corroding metals and soluble materials such as limestone increases dirt derived from these materials themselves.

3. Texture - Smooth textures display stains more clearly than rough ones, often revealing established paths of water-runoff. Texture has the ability to either disguise differences in the concentration of dirt, or to disperse run-off by surface modeling.

4. Color - Darker colors and mottled tones tend to disguise stains although very dark colors can show lighter staining, particularly that produced from the run-off from concrete and limestone. In this respect, black or dark grey sandlime components are especially susceptible.

5. Solubility - Solubility of materials further up a façade increases the tendency of materials staining further down a façade so run-off effects should always be taken into account in design. At the same time, very soluble materials allow for more effective washing since at certain rates of run-off, the surface gets removed together with the dirt.

Fig. 68, 69

Biodeterioration of buildings on UCT Campus 2009. Author's pictures.



Biotedeterioration

In addition to visually reflecting the changes in seasons and time of day through inherent physical changes, vegetation contributes to weathering through biodeterioration. When water is found in continual supply or is retained on the surface of a building, it encourages the growth of biological agents of deterioration. Most porous or semi-porous materials manage to maintain some form of plant life because of the moisture they maintain.

Jacques Herzog, of Herzog & de Meuron, sees potential in the biological modes of weathering:


"...we are also interested in the mosses and lichens that grow on the surfaces of stones. They are an indicator of air quality and their color is spectacular, so bright- the oranges, the yellows-, so beautiful that it almost blinds you. It would be fantastic to have these as another tool in our work: color, photographic images, transparency, solidity. The pencil

of nature would also become the pencil of architecture!" (A Conversation with Jacques Herzog, 1997)

Pleasing effects of patination and overgrowth through mosses, lichens, and algae are produced through this kind of weathering. The biological activity is accompanied by a softening of contours and discoloration in weathered materials that is often associated with a romantic appreciation of the appearance of aged buildings.

Building materials are affected biologically through physical and chemical activities and inevitably create microclimates with specific temperatures, wind speeds, atmospheric and waterborne pollutants, moisture and run-off concentrations that many biological species need to survive. These unique environmental qualities determine the type of ecosystem that will flourish, that in turn becomes indicators of specific environments.

Biological deterioration always takes advantage of other processes of deterioration, working in conjunction and contributing to them. Specific conditions required to stimulate bio-



deterioration varies considerably, depending on the individual organism's environmental tolerance. These include the effects of other life forms present, temperature, moisture, light, pH values, solutes, pollutants, and toxicity.

The categories for biological agents of weathering are: large plants, mosses and liverworts, lichens, algae, and fungi.


Large plants range from trees to smaller rooted plants like grasses and succulents and rely heavily on nutritional sources present in accumulated dirt and building materials. Root systems are often dependant on penetration into building materials for physical support and access to minerals. The penetration most easily occurs in rough surfaces such as stone, brick and mortar where the material is deteriorated through acidic root tips that expand into surface voids. It is quite common for windblown seeds to germinate in cavities that have collected soil or dust. Trees are very good at alerting building users to the passage of time through their different responses to changes in environmental conditions, and their steady growth over time.

Mosses and liverworts are less complex than trees but similar in their root systems, which in this case is very superficial. They occur in colonies and typically require rough, moist surfaces that easily collect dirt and soil in order to flourish. They prefer the slightly acidic environments of brick or clay surfaces and only appear as secondary colonizers on alkaline surfaces such as mortar.

Lichen on the other hand usually precedes the colonization of mosses, preferring the alkaline environments created by lime-rich mortar and concrete. Lichen drill into materials

Fig. 70,71

Biodeterioration
of buildings on
UCT Campus 2009.
Author's
pictures.



on a microscopic scale to attach themselves to surfaces and when they die, leave behind organic acids that softens mortar by increasing its acidity, in turn providing suitable conditions for moss to develop. Although lichen can resist extreme variation in temperature and moisture, they are sensitive to other very specific conditions such as shadow lines, and can therefore effectively indicate microclimatic change and prevalence of pollution.

The many varieties of algae easily adapt to most environments and unlike mosses or lichen, flourish in both alkaline and acidic environments. Algae can colonize across entire surfaces providing there is sufficient porosity, sunlight and humidity. As algae colonize surfaces, it forms a stratum of organic material as it traps moisture and pollutants which in turn allows other organisms to survive. Algae colonies on concrete are often green or red and sometimes take the form of filaments or brown powders. In bright sunlit environments they usually form a superficial dark or light grey layer and in damper, darker surface, they can form a thick green patina.

As sunlight is not essential for the growth of fungi, it depends on organic material for energy and includes mildews, molds, and yeasts. Fungi penetrate materials through an extensive series of filaments and mainly cause material deterioration through acid production. The oxalic and citric acid produced are especially responsive to ferrous metals and also easily dissolves the main element of limestone, calcium carbonate.

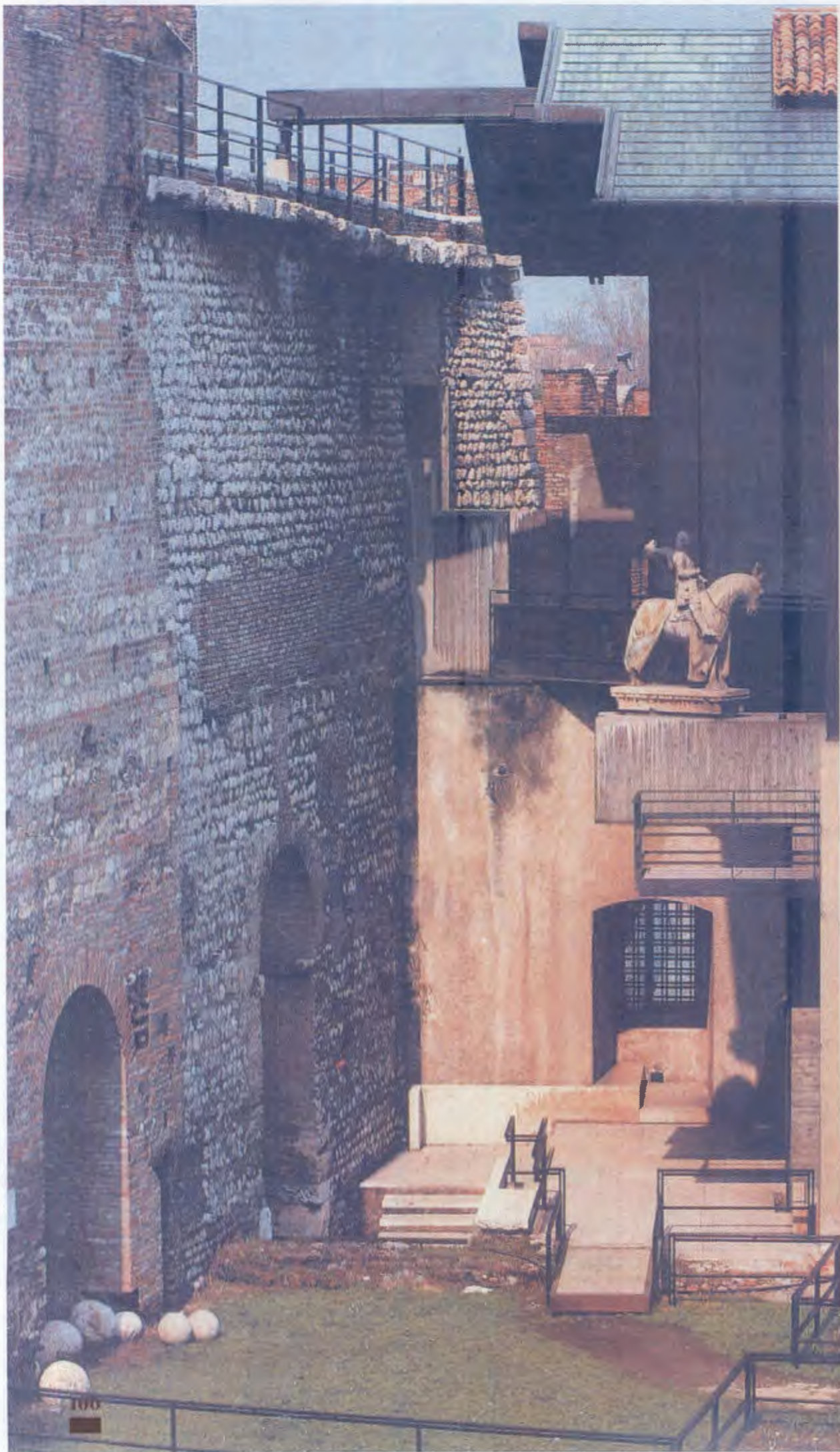


Fig. 72

Fondazione
Querini-Stam-
palia, Venice
interventions by
Carlo Scarpa,
1961-63.

Fig. 73

Adaptive re-use
at the
Constitutional
Court, Johannes-
burg.
Author's picture.



Historic Preservation

Historic preservation maintains a tenuous balance with regards to weathering. It is necessary to reduce the harmful aspects of weathering so as to prevent material failure but if preservation is done carelessly or too meticulously it can easily result in the loss of a building's historic character and integrity.

“It seems there is an ideal degree of aging which is admired. Things should not be new, but neither should they be rotten with age. Buildings should be just ripe; worn but still fully functional.”

(Brand, 1994 p. 10)

Preservation of urban artifacts requires a delicate balance of maintenance and weathering as it runs the risk of erasing the past instead of preserving it, radically impacting the experience of time in architecture. The purpose of preservation is to pass on valuable historic fabric to consecutive generations for historic continuity rather than correcting all defects and signs of ageing. In fact, weathering processes are very often less destructive than attempts to reverse its effects. In some instances, decay even helps preservation as in the case of some metals where the developments of a patina reaches equilibrium with its environment, functioning as a protective layer against further erosion.

John Ruskin, noted for his preservationism, promoted preventative maintenance in order to avoid the need for expensive and often destructive historic preservation. Preventative maintenance, the ongoing routine servicing and maintenance of a building, aims to extend the life of a building, and saves considerable expenses over time.

“Take proper care of your monuments and you will not need to restore them. A few sheets of lead put in time upon the roof, a few dead leaves and sticks swept in time out of a water-course, will save both roof and wall from ruin.” (Ruskin, 1865 p. 162)

Fig. 74

Stained concrete on Studio Zaugg, Herzog & de Meuron. Untraceable source.

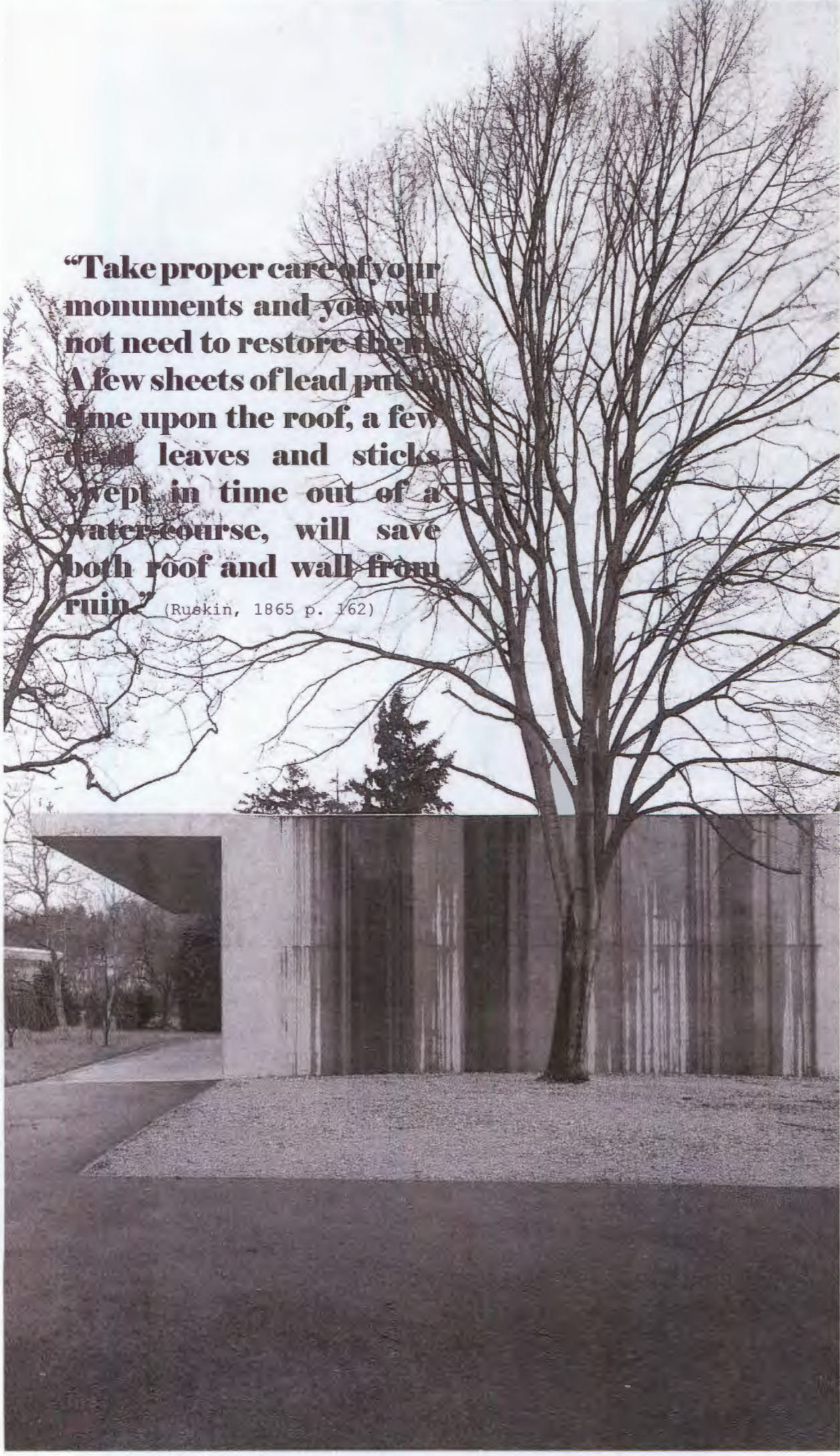


Fig. 75

Brion-Vega Cemetery, San Vito d'Altiavole, Italy, 1970 -72, Carlo Scarpa. (www.greatbuildings.com)

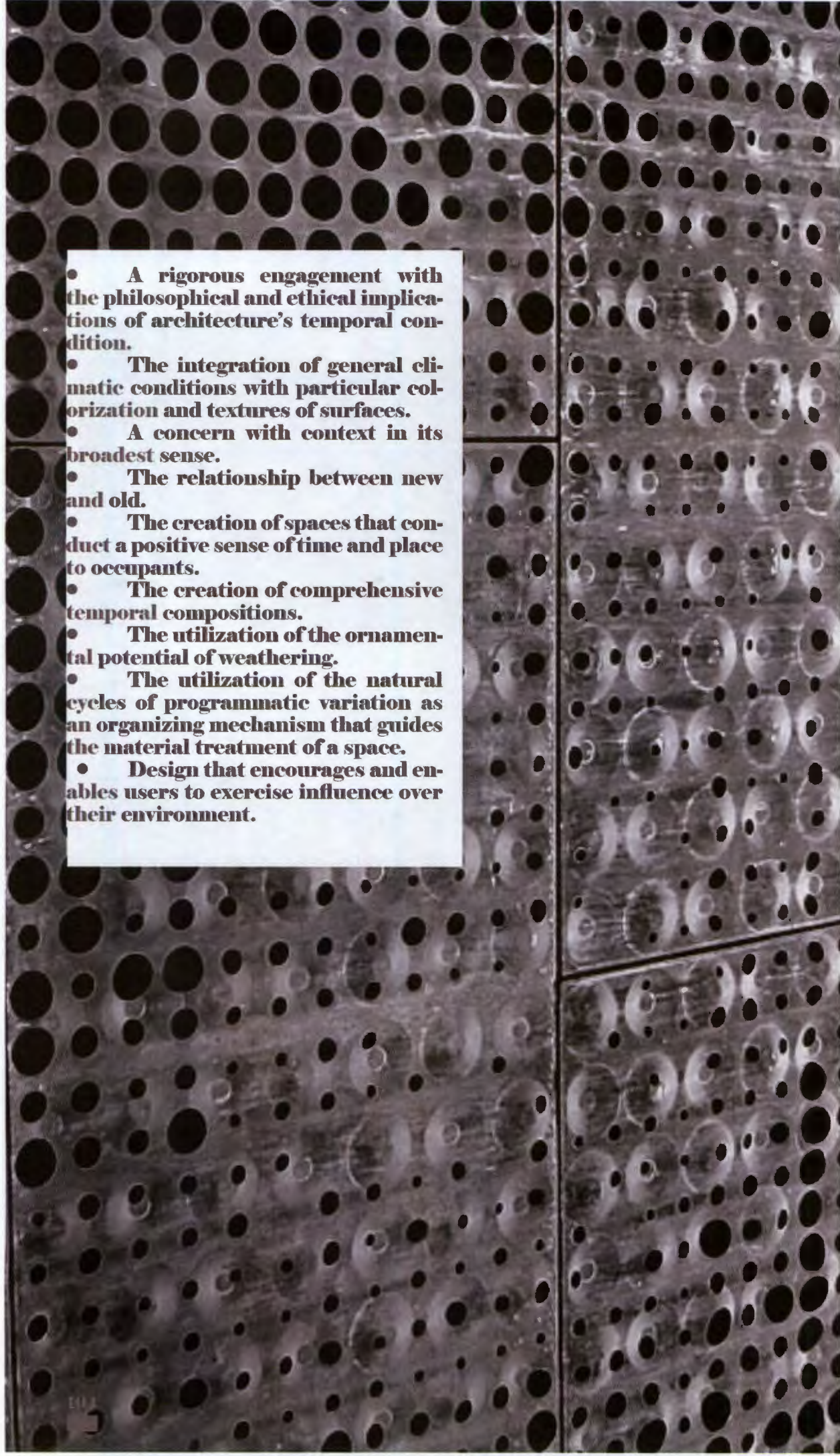


Weathering as a Design Generator

It must be remembered that weathering is merely one dimension of the overall architectural project. Allowing it to assume too dominant a role could hinder rather than enforce memory in the built environment and cause the whole project to suffer. Nonetheless, much is to be gained from any increased consideration of a building's life through time. Weathering should be considered as another rewarding layer that influences the generation of meaningful urban environments that involve users in the life of the building. A design methodology that embraces the dimensions of weathering necessitates a thorough understanding of materials, details, assembly and of the broader environmental and social context of the site.

Carlo Scarpa believed the lack of context and materiality in the modern world to be the crisis of modern architecture and he is one of the few architects that embrace the dimension of weathering in their design. Nicholas Olseberg said of the work of Carlo Scarpa: "These projects are marked throughout by immensely complex relationships of new to old, of the everyday to the monumental, of the familiar to the unexpected. They all express Scarpa's fanatical discipline: his intensive research into the function and conjunction of materials; his belief in the expressive power of details... Above all, they demonstrate his relentless concern with context in its broadest sense: time past, present, and future; the common sense of a place and the careful reading of its visual character; the methodological traditions of design; and the artisanal techniques in building." (Olsberg, 1999)

By understanding materiality, in respect to climate and use, a designer is better equipped to produce architecture that becomes more beautiful as it ages. The following principles should direct both the design program and its implementation.



- **A rigorous engagement with the philosophical and ethical implications of architecture's temporal condition.**

- **The integration of general climatic conditions with particular colorization and textures of surfaces.**

- **A concern with context in its broadest sense.**

- **The relationship between new and old.**

- **The creation of spaces that conduct a positive sense of time and place to occupants.**

- **The creation of comprehensive temporal compositions.**

- **The utilization of the ornamental potential of weathering.**

- **The utilization of the natural cycles of programmatic variation as an organizing mechanism that guides the material treatment of a space.**

- **Design that encourages and enables users to exercise influence over their environment.**

Fig. 76

De Young Museum,
San Francisco,
US, Herzog & de
Meuron, 2005.

(http://www.foxlin.com/albums/Under-a-copper-tree/de_young_skin.jpg)

Material and Time

The Potential of Ornamentation and Intentional Weathering in the Use of Metal and Concrete in Design.

I am particularly interested in those applications where these materials best reflect their temporality, and most obviously demonstrate changes in their life cycles. Metals in architecture have the potential to strongly alienate the users of buildings and are predominantly used to this effect. They are not often thought of as materials that show change, whilst they have the potential to weather demonstrably and beautifully. Concrete is also often thought of only in terms of its alienating qualities, its permanence and durability, and is generally regarded as a material that ages unattractively. Concrete however possesses qualities that make it an ideal material when planning for weathering.

Metals

Metals can be organized into two distinct categories: those that visually transform over time as they take on other compounds to develop new surface characteristics, and those that essentially remain unchanged. Most metals fall into the first category. Surfaces change on exposure to air as oxidation occurs. As oxide layers grow and metals combine with natural components in the surrounding environment, their reflective level, color and texture is transformed. (Zahner, 2004)

Metals are exposed to differing environmental conditions throughout their useful life. The nature of surface change differs according to the environment to which it is exposed. In particular, the first several weeks after exposure are critical for the development of protective oxide layers.

Oxygen and moisture are the main ageing components of metal and accelerate the formation of oxides. Water especially encourages the development of metal ions that eagerly combine with other reactive substances. Every metal exposed to moisture develops an oxide layer on its surface. Oxide growth varies according to the various exposures and metals. Surface characteristics also influence the nature of the oxide layer. Polished surfaces, for example, tend to develop oxides at slower rates as water and contaminants are more effectively shed than on coarser surfaces.



Copper and Copper Alloys

Copper has peculiar qualities that enable it to beautifully reflect changes in time and the environment, particularly through changes in color and surface pattern. When copper and copper alloys are first installed, they are generally free of surface oxides but copper always develops tarnish. The surface of clean, oxide free copper fingerprints immediately as copper reacts even with the slightly acidic moisture from human skin.

Brass is the term given to cover the various alloys of copper, with the main alloying element being zinc. The more zinc the alloy contains, the more it exhibits yellow and golden tones. Copper alloys mostly perform similar to copper and both are softer than most other metals, polishing easily because of their softness.

Colors of alloys range from Salmon Red, reddish orange, golden red, yellow, golden yellow, silver with gold tint, yellow with green tint, light yellow, red, dirty yellow, golden brown. Different alloy finishes include copper mill, satin, angel hair, bead blast, cast, mirror polish, embossed, pre-patinated, blackened, hammered, and etched.

Fig. 77

Stained copper
sheeting.
Untraceable
source.

Fig. 78

Patinated copper cladding.
Untraceable source.



Weathering of Copper and Copper Alloys

Copper and copper alloys are arguably the most visually changeable of all the metals, especially with regards to color.

On a molecular level, all copper and copper alloy surfaces exposed to the atmosphere undergo dynamic changes as they seek compounds from the atmosphere to combine with. By slowly removing pollutants from the environment, they form mineral compounds that trap pollutants, producing effects that closely resemble their mineral equivalent. This process of change occurs more rapidly in moist environments.

Initial changes are usually surface spotting, exhibiting different colors of oxide, ranging from browns and blacks to yellows, oranges, reds, and dark purples. Seacoast exposures occasionally produce less consistent effects initially, where dark brown spotting occurs unevenly over the reflective copper background. These effects are soon replaced by a variety

of colors, such as maroons, reds, dark yellows and deep purples, intermixed with the spotting. This inconsistent period only lasts several weeks.

Several months of exposure allows the development of muted, darker brown tones without the coppery shines. Interference colors continue to be abundant, particularly dark reds, yellows and purples. The surface spotting recedes gradually with progressive exposure, eventually losing its dominating color variations.

Two or three years of exposure continues the darkening and development of a rich brown tone. In coastal or heavy industrial, the copper may darken considerably and show tints of green in approximately three years. In these harsh environments, after about seven to ten years, the green continues to intensify and eventually comes to dominate. Copper surfaces are often treated with chlorine to promote the development of a blue-green patina in coastal regions. At this stage, the copper compounds are deviant and stubborn and further change is inhibited.

In heavily polluted areas soot and other contaminants intermixes with copper sulfate surfaces producing bright coppery streaks that occur sporadically where moisture is trapped and leaks out onto the surface.

For copper alloys, weathering processes are similar although they often have slightly coarser surfaces which collect more contaminants, resulting in a quicker darkening.

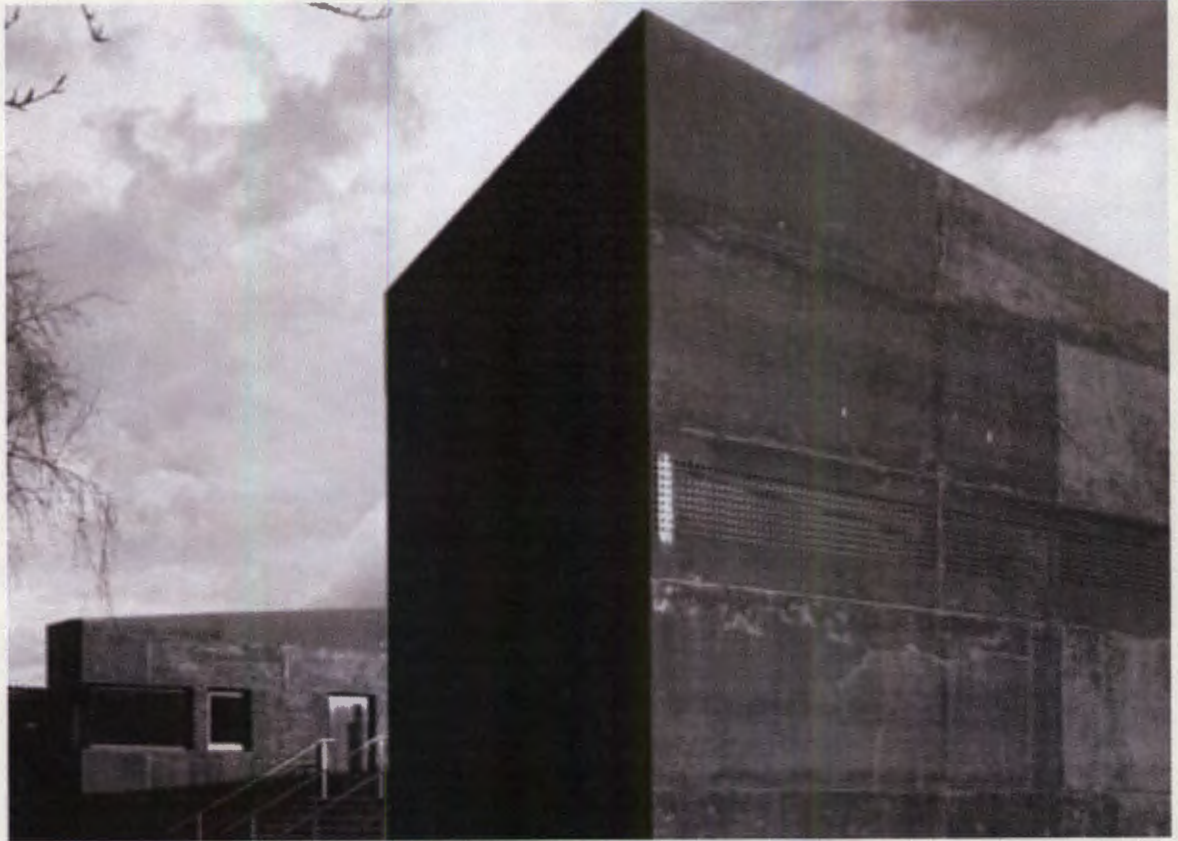
Today, because of reduced sulfur pollution, the development of deep green copper sulfate surface patinas are rare and take considerably longer. In very dry, clean atmospheres, these green patinas may never develop.

A variety of chemical techniques can be used to induce patination effects on copper and copper alloys. Among them are pre-patination techniques that rapidly create deep, rich patinas similar to those that take several decades to develop. Artificial patination processes are used to develop browns, yellows and oranges, in various hues, from the various chemical combinations with copper oxide. Some of these processes take hours to develop, while darker colors like blacks and browns occur almost instantaneously.

Surfaces of these treated coppers should remain unchanged for the first several years after installation requiring very little to no maintenance. Patinated copper in particular, gradually achieves a darkening or thickening of the green patina. Similarly, statuary finishes gradually darken sometimes developing some green patina after many years, but do not change significantly.

Fig. 79

Sarah Wigglesworth used Cor Ten weathering steel in her Cremorne Riverside Centre to clad buildings designed to resemble rusty upturned boats moored on the riverbank. (www.swarch.co.uk)



Weathering Steel

Weathering steel, also known as copper-bearing steel is a steel alloy that contains copper. Similarly to other untreated alloys it rapidly develops a coarse red leather-like iron oxide when exposed to moisture. Often soot, pollutants, and imperfections within the steel create streaks and dark spots.

Surface oxidization can be accelerated by oxidizing agents, such as diluted hydrochloric acid, ammonium chloride solution, or even industrial hydrogen peroxide. The color achieved by acceleration is a similar dark reddish orange. Installed in the raw unweathered form, it has the appearance of dark carbon steel, often with some rust around the edges. As the metal surface comes in contact with mois-

ture, spotty surface rust develops. The rust uniformly progresses across the surface, particularly if rained on.

After one or two months the surface is usually covered with a very light red-orange oxide. Surrounding surfaces receiving loose rust-particles get a rust-colored stain. The surface oxide continues to develop and thicken for several months, occasionally displaying a black spot or streak from contaminants reacting to surface corrosion. After a couple of years, having developed to a dark red-brown, staining slows down as the oxide layer becomes more resilient and dense. Chloride attack can prevent surfaces from forming a sufficiently dense iron oxide, causing continuous erosion of the surface and eventually material failure.



Fig. 80

**Weathered
concrete on UCT
Campus 2009.**
Author's picture.

Fig. 81

Oskar Reinhart
Collection
extension in
Winterthur,
Switzerland, by
Gigon/Guyer.
(www.archiweb.cz)



Concrete - Design for Weathering

Contrary to prevailing opinions that concrete ages to be unsightly, some contemporary architects have used the effects of concrete's weathering to their advantage. The precise course of weathering that any concrete surface takes depends largely on its specific constitution (mixing quality, proportions, compaction, curing, placing etc.) and its resultant ability to resist specific environmental deterioration. The main causes of deterioration are salt crystallization, attack by acidic chemicals in the environment, frost action and mechanical erosion.

Concrete possesses several properties of special significance for their effect on weathering. To understand these properties is consequently in-

valuable when planning to work with weathering.

The degree of penetration of water, dirt, or chemical agents like acidic rainwater carbon dioxide, and sulfur dioxide is tempered by the permeability of concrete. Concrete's non-uniform absorption results in variable wetting that manifests in blotchiness of color and texture; water courses accentuate these differences. Roughness determines how much dirt can be held and also determines how uniform the flow of water across the surface will be. Porosity is critical for its resistance to frost action and chemical attack. Surface integrity and adequate air content protects concrete from deteriorating dust, erosion, abrasion, mechanical damage and protect against damage from freezing and thawing or from salt scaling during freezing.

Detailing has an important effect on uniformity of water flow and wetting.



Fig. 82

**Oskar Reinhart
Collection
extension in
Winterthur,
Switzerland, by
Gigon/Guyer.
(www.archiweb.cz)**

Fig. 83

**Weathered
concrete on UCT
Campus 2009.
Author's picture.**



Openings and their relationship to adjacent elements significantly affect the degree of staining from water flow. Surface textures, slopes, location of weathering elements such as joints and drips are crucial mechanisms when designing concrete for weathering.

The consistent weathering of a smooth concrete surface is difficult to attain due to its tendency toward hydration and segregation discoloration, caused by its variable absorbency. Unplanned irregularities in surface form are usually the determinants of the precise patterns of discoloration caused by rain, and may produce light coloured streaks that are very noticeable on discoloured backgrounds. Generally, surface patterning or profiling or removing the thin skin of laitance from the surface through some form of etching or abrasion improves consistency.

Continually moist environments promote mold growth and discoloration, most significantly on horizontal surfaces. Roof beams, parapets, plinths, gutters, or insufficiently drained area especially susceptible to the growth of algae and lichens. Moisture movement through concrete invariably carries combinations of salts, alkalines, or lime from surrounding materials and the atmosphere and these dissolved compounds may deposit over the surface as efflorescence or form unsightly crystal substances. A variety of materials coming into contact with concrete causes staining in combination with water. In the case of water bypassing the protective concrete surface and coming into contact with steel reinforcing, compound deposits may become rust-tinged. Copper and copper alloys produce green staining on concrete surfaces as they oxidize. Rust from steel elements such as scaffolding, structural steel, bolts and ties from formwork and soluble compounds from early oxidation of weath-

ering steel elements all have different staining characteristics.

Designers occasionally harness the oxidation of cladding elements for their own purposes. The Oskar Reinhart Collection extension in Winterthur, Switzerland, by Gigon/Guyer shows how chemical reactions between different materials can add to the character of a building without compromising its durability. The project encourages chemical reaction in concrete.

Prefabricated concrete walls were specifically designed with weathering in mind having a rich surface derived from an unusual concrete mix. Jurassic limestone and copper were ground and added as fine aggregate to the concrete panels mix to encourage a green patina to the walls. The wall details also allow runoff water from the copper roof to deliberately streak the walls with copper ions to provide the desired effect. Rainwater from the copper roof has left a streaky green patina on the walls providing continuity between the new and the adjacent villa with its copper roof.





Fig. 84

Hindu temple,
Singapore.
Author's picture.

Fig. 85

Ornamented
building in Perth
CBD, Western
Australia.
Author's picture.



Ornament

- as a means of using contemporary technology to reinforce rather than undermine memory.

(Please see the theory component for an analysis of developments in the twentieth century concerning ornamentation.)

Ornament is necessary and inevitable and emerges naturally from the expression of embedded forces and materials, through processes of construction, assembly and growth. It is through ornament that material transmits effect. Ornament is therefore inseparable from the object.

The ideological abandonment of ornament from modern architecture flowed directly from its disrespect of history and tradition. It follows that ornament has a powerful role to play in architecture as objects of recollection and the use of technology to enforce rather than undermine memory.

In spite the Modernist ideological denunciation of ornament, many buildings throughout the 20th century continue to effectively relate to the public through ornament by creating sensation and affect. Architecture needs such mechanisms as ornament that allow it to become connected to culture. This can be achieved by continually capturing forces that shape society as material to work with.

Carefully considered ornament has great communicative potential with regards to culture and memory and as a means of engaging the urban setting. By engaging the immediacy of our sensory perceptions in combination with weathering, ornamentation can encourage a meaningful awareness of the passage of time and exert its proper influence in the transmission of culture. Ornamentation has the ability to communicate a buildings relation to time and culture by dating buildings and making them readable to future generations.



Fig. 86

Perth Council House, Jeffrey Howlett & Don Bailey, 1961-1963, Perth, Western Australia. Author's picture.

'...an ornamented structure should be characterized by this quality, namely that the same emotional impulse that flow throughout harmoniously into its various forms of expression - of which, while the mass composition is the more profound, the decorative ornamentation is the more intense. Yet must both spring from the same source of feeling.' - Louis Sullivan in the Function of Ornament (De Witt, 1996 p. 188)

The challenge is to create affects that resonate with buildings' users through ornamentation's potential symbolic and metaphoric power. Ornament should not be applied to buildings as a 'discreet non-essential entity' but there should be an internal order between ornament and material. It is these kinds of internal orders that produce contemporary expressions that are resilient in time and through these internal orders and consistencies, architecture gains an ability to perform relative to culture. Examples of contemporary techniques in ornamentation are structural patterns, perforated screens, various applications of tiling, pleated floor plates, glass tubes, laser-cut sheets, frits, silk-screening, etc.

Few of the ornamental mechanisms in the following examples are crucial to the operation of the building interiors, but they are fundamental to the affects they generate in the urban landscape and therefore fundamental in the suppression or enforcement of memory.

Ornamentation can be grouped in com-

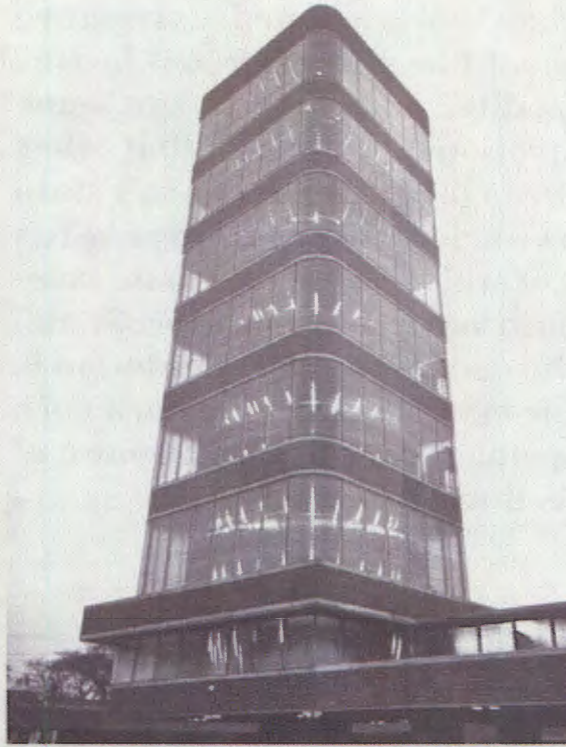
ponents ranging from deep to superficial: Form, structure, screen and surface. (Moussavi, 2006)

Ornament relates to these in a variety of ways and is further produced by material, and the interplay of these materials with the form, structure, screen or surface, transmitting unique affects in each case. In our contemporary situation, ornamental expressions emerge mainly through screens or skins.

Form - where the Ornamental Expression is Produced by the Building's Entire Organization.



Marina City Apartments, Chicago, US, Bertrand Goldberg, 1964.



Johnson Wax Laboratory Tower, Racine, US, Frank Lloyd Wright, 1950.

Fig. 87

Marina City Apartments, Chicago, US, Bertrand Goldberg, 1964. Untraceable source.

Fig. 88

Johnson Wax Laboratory Tower, Frank Lloyd Wright, Racine, US, 1950. Untraceable source.

The entire organization of the Marina City Apartments produces its ornamentation. By visually merging two programmes with entirely different organizations they create a dynamic fluted effect. Together, the projecting balconies of the radial apartment floors and the spiraling floors of the parking section combine to produce an effect that provokes a variety of symbolic associations, tempering the alienating scale of the towers.

Conventional strip windows are replaced by combinations of decorative bands of horizontal strips of hollow Pyrex tubes, blurring the interior that is visible behind the double height glass tubes and producing a banded column effect out of the combination of alternating floors and mezzanine levels together with the rounded profile corners. The horizontal nature of the glazing repeats the brick bands that define the floors.

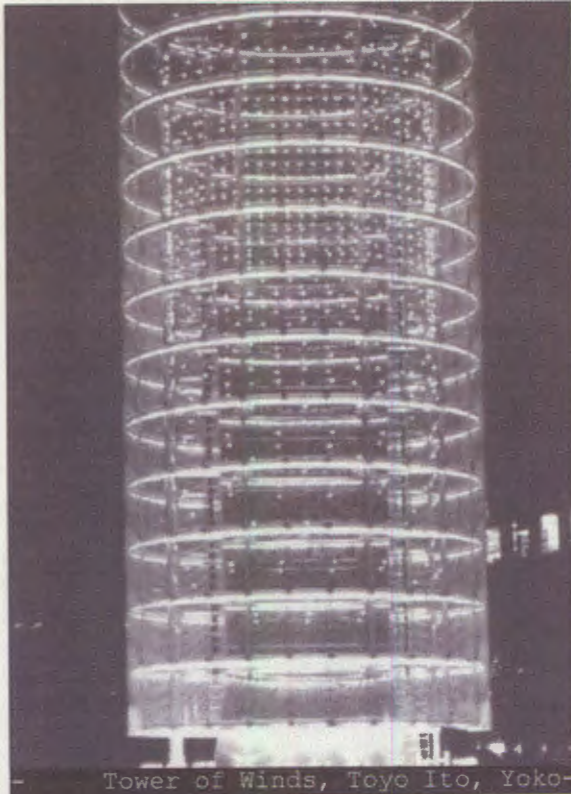
Structure - where the Ornamental Expression involves the Building's Load Bearing Structure.

Fig. 89

Tower of Winds,
Toyo Ito, Yokohama,
Japan, 1987.
Untraceable
source.

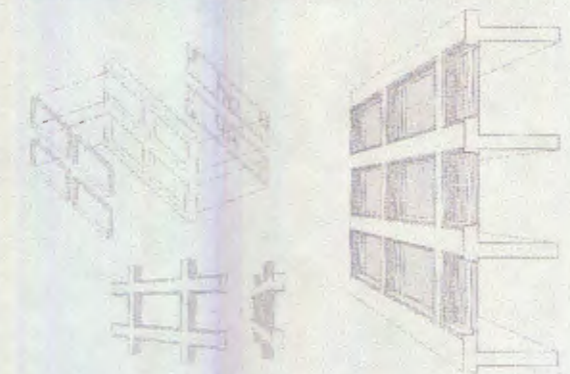
Fig. 90,91

Carson Pirie
Scott Department
Store, Louis
Sullivan,
Chicago, US,
1904.
Untraceable
source.



Tower of Winds, Toyo Ito, Yokohama, Japan, 1987.

Toyo Ito's Tower of winds and its ornamentation holds a precarious position in the discussion about memory/alienation but it adds to the discourse in meaningful ways, particularly through its interaction of the ornamentation with the natural environment. It produces a dematerializing effect by cladding an existing cooling tower with layers that respond to environmental conditions through lighting: neon tubes, mini-lamps and floodlights, reflected in mirror and perforated aluminum panels. The building mediates changes in the environment in an exciting and visually stimulating way, but undermines memory through its immateriality and its dematerializing effects.



Carson Pirie Scott Department Store, Louis Sullivan, Chicago, US, 1904.

The ornamentation in the façade of this building engages the user in an exciting and provocative, yet subtle way, allowing for memorial associations and a rich sensorial experience. Decoration consists of terracotta tiles that line the deep jambs and headers made available by the recessed glazing in the structural grid and this occupies the typical viewpoint for passersby on the pavement. The location of the decoration is entirely determined by the pedestrian view and the sills not visible from the pedestrian perspective are empty. The face of the structural grid remains undecorated, thereby prioritizing the oblique over the frontal privileging the structural grid and giving the building a more restrained appearance in its urban context.

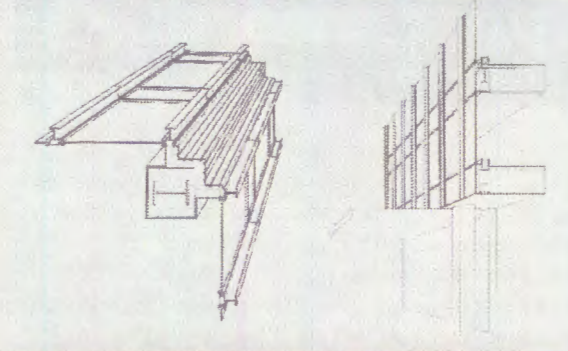
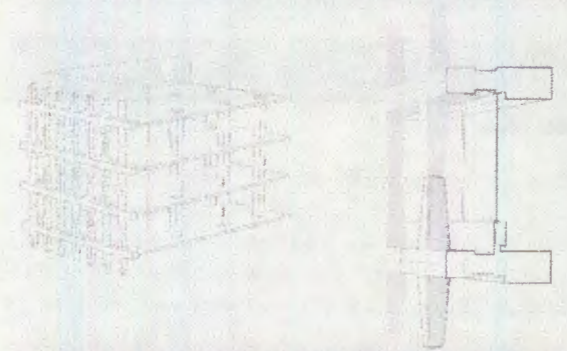


Fig. 92,93

Banque Lambert Headquarters,
Brussels, Belgium, SOM / Gordon Bunshaft, 1963.
Untraceable source.

Fig. 93,94

Seagram Building,
New York, US, Ludwig Mies van der Rohe, 1958.
Untraceable source.



- Banque Lambert Headquarters, Brussels, Belgium, SOM / Gordon Bunshaft, 1963.

- Seagram Building, New York, US, Ludwig Mies van der Rohe, 1958.

Ornamentation is produced through the structural grid that is composed of unique external structural units that envelope the building, producing a directional latticed affect. Unlike in the case of the typical curtain wall, glass is set back and separated from the separate, thereby prioritizing the exterior lattice. In order to give directionality to the lattice, the precast units taper and use pin joints that break the continuity of the lattice in the horizontal dimension.

This building shows the difficulty of suppressing ornamentation even when ideological commitments dictate against its use. Ornamentation is extensively used to create the desired vertical effects by attaching a series of decorative I-beams to the envelope that prioritize the vertical lines of the structure over the horizontal floor plates. Decorative I-beams are attached to express the concealed structure beneath, while the actual structural columns are encased in fireproofing.

Screen - where the Ornamental Expression is produced through Layers inserted between the Interior and Exterior, maintaining some Visibility of the Interior.

Fig. 95

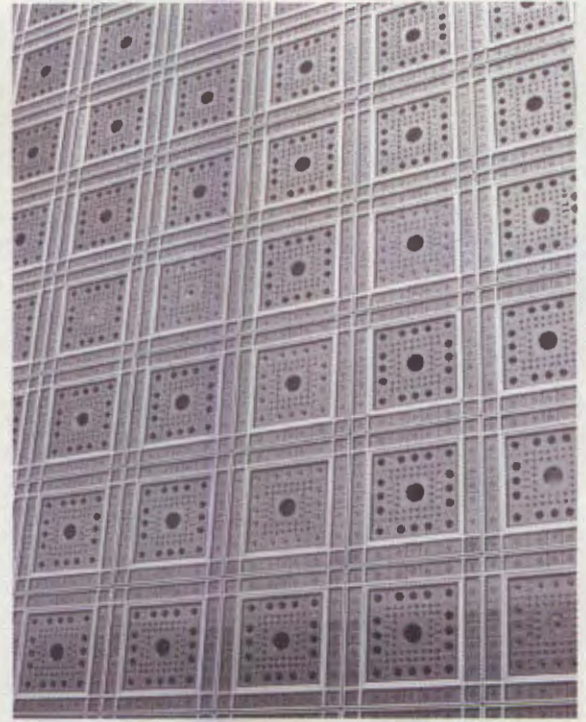
De Young Museum, San Francisco, US, Herzog & de Meuron, 2005. Untraceable source.



- De Young Museum, San Francisco, US, Herzog & de Meuron, 2005.

Fig. 96,97

Institut du Monde Arabe, Jean Nouvel, Paris, France, 1987.



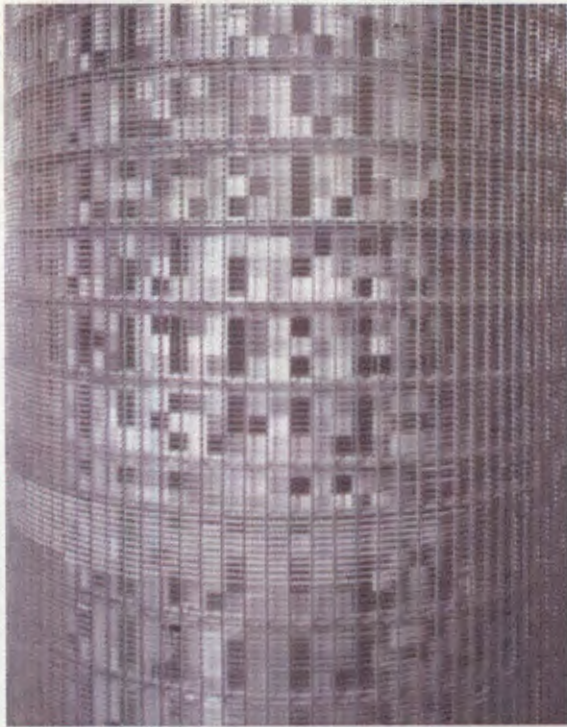
- Institut du Monde Arabe, Jean Nouvel, Paris, France, 1987.

The museum is enveloped in embossed copper sheets that translate images of vegetation from the surroundings into a pixelated matrix. The patterns are produced through a series of embossing and perforations and do not depend on the literal legibility of the original generating images. It simply creates affects through patterns that resonate with the natural context.

Images of vegetation are inverted and digitally converted into a dot matrix. The pattern is then translated into an alternating grid of protruding and depressed embossing to different depths that respond to different tones in the image. Different diameters of perforation are projected onto the panels in response to ventilation and lighting requirements. Due to the misalignment of the two patterns, the perforations do not cancel out the embossing.



The ornamental expression of the envelope is produced through diaphragms operated by computer-controlled sensors that vary their level of opening over the course of the day according to light intensity, casting patterns of light and shadow that create a geometric affect on the interior. By using this mechanized version of traditional ornate screening, the geometric pattern effect effectively refers back to Arab culture.



Torre Agbar Headquarters, Jean Novel, Barcelona, Spain, 2005.

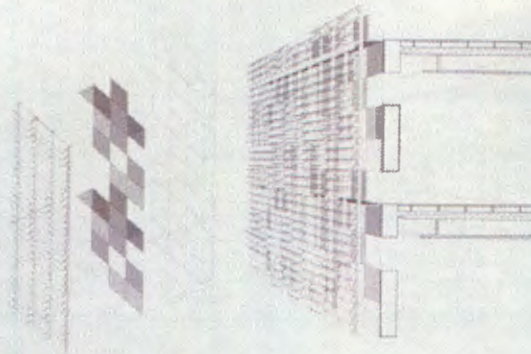


Fig. 98,99

**Torre Agbar
Headquarters,**
Jean Novel, Bar-
celona, Spain,
2005.
Untraceable
source.

A differentiated appearance is created by the pixelated patterning of colorful square panels combined with irregular windows and a horizontal screen of louvers. Variations in color and pattern innovatively integrate window openings and solid walls into dynamic pattern. Three layers are used to produce the pixelated effect. Random square window openings pierce the outer concrete shell, colored corrugated panels unify openings and solid walls into a series of pixels and the outer layer acts as a screen that further masks the difference between opening and solid through a layer of transparent glass louvers controlled and adjusted by temperature sensors.

Surface - where the ornamental expression is produced through an independent, detached layer.

Fig. 100

Eberswalde Library, Eberswalde, Germany, Herzog & de Meuron, 1999. Untraceable source.



Fig. 101,102

Signal Box, Basel, Switzerland, Herzog & de Meuron, 1994. Untraceable source.

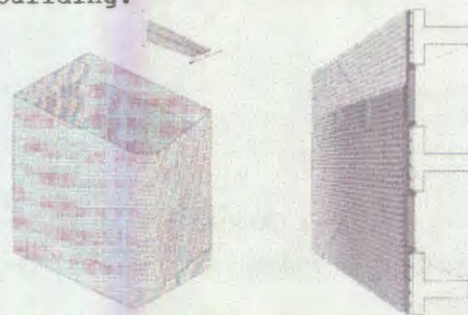


- Eberswalde Library, Eberswalde, Germany, Herzog & de Meuron, 1999.

The library's exterior is clad in bands of decorated concrete and glass panels that are covered with silk-screened photographic images. The decorated panels mask the presence of interior floor slabs and walls by not accurately corresponding to them in height. Clerestory window masked by silk-screened glass panel above head height provides diffuse lighting. Double-height silk-screened images are cut off by transparent windows. Transparent windows interrupt serial pattern of images. The ceramic frit glass panels are produced through a silk-screening process where a silk-screen is placed over the glazing and covered with ceramic through a screen. The silk-screen is then removed and the ceramic is heat fused to the panel. The concrete process starts by silk-screening the image onto the formwork liner using setting retardant. The panel is then cast and finally removed from the formwork after setting. The retarded, unset concrete is then simply rinsed from the panel.

- Signal Box, Basel, Switzerland, Herzog & de Meuron, 1994.

An interesting visual effect is produced through cladding the ordinary volume of an electrical signal box in thin horizontal copper bands. A visual depth of the envelope is created by twisting the copper at strategic locations that allows light to interior spaces, providing an uninterrupted transition from a flat façade to a screen of twisted louvers. Depending on the viewpoint, areas where the louvers are twisted appear either opaque or transparent, alternately revealing or concealing the 'interior' building.



Weathering as Ornament

The various features of weathering (bio-deterioration, staining, erosion etc.) that have been considered above can function as ornamentation. This kind of ornamentation is dynamic and brings another dimension to ornamentation, in that the ornamentation now functions as a record of the buildings memory, in more than purely symbolic ways.

Herzog de Meuron's Zaugg studio demonstrates the utilization of the ornamental capacity of weathering. Iron is deliberately collated on the roof in order to produce colorful run-off stains on the otherwise plain concrete walls.

Conclusion

A thorough consideration of every architectural project's temporal nature is crucial to the retention of the memory of the urban environment and its denizens. By the appropriate and critical use of building technology, weathering and ornament can greatly contribute as reinforcements of autobiographical and collective, urban memory.

Consequently, the following guidelines are to be considered in any architectural project with this aim.

- **A reconsideration of the modern endeavor for newness.**

- **Allowance for continuity between the past, present and the future.**

- **Respect for the temporality of the architectural project through material choices.**

- **Deliberate design with regards to weathering.**

- **Facilitating architecture's change over time.**

- **Use of architecture to connect with the past.**

- **Deliberate use of symbolism and decoration to create mnemonic associations.**

- **A focus on materiality and the sensorial nature of the experience of architecture.**

- **Accommodating the experience of the passage of time in the built environment on all levels.**



D





Revival Design

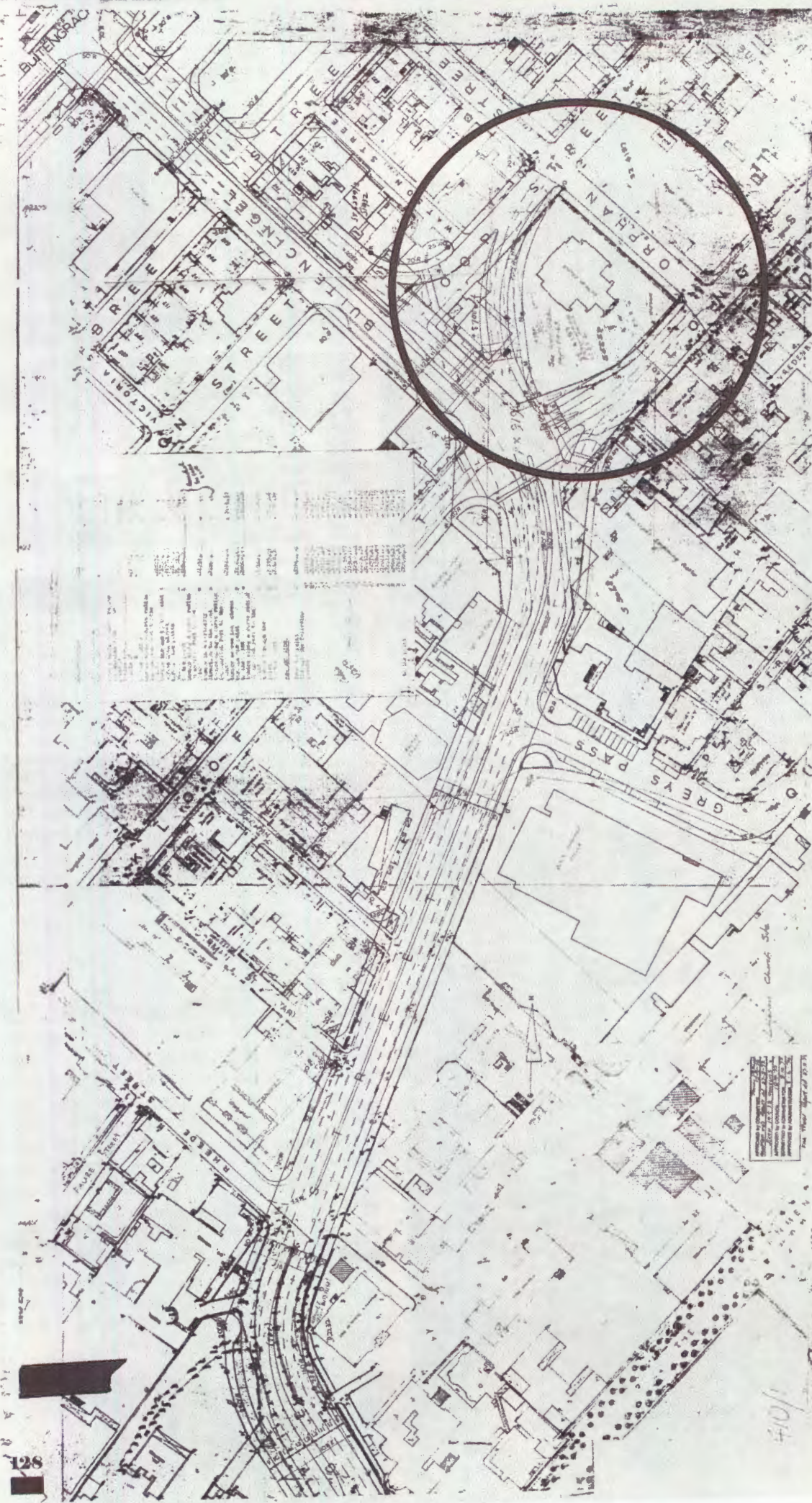
Introduction

My design project is entitled 'Revival' and it explores the relationship between place and memory through the application of conclusions made in the theory and technology components.

As already stated, the proposal reappropriates the site of a permanent urban artifact in the heart of Cape Town's City Bowl and attempts to reverse its 'pathological' tendencies through a reinterpretation of existing programmes in deference to my primary commitment to the continuity of memory in the built environment.

This project considers buildings as instruments of memory with a corresponding role in meaning and the transference of culture, tradition and history in the evolution of the urban environment. I am concerned with continuity in the urban environment and the necessity of this continuity for people to be able to find meaning in their surroundings.

For these reasons, I have chosen to work with a site in the city of Cape Town that occupies a significant historical and social space; rich in memory, meaning and history.



TPR-3959/
REVISED FEB, 1948
410/11

SCALE 1/480

PROPOSED WIDENING OF
ORANGE ST. AND BUTENCINGEL ST

CITY OF CAPE TOWN
CITY ENGINEERS DEPARTMENT

MR. J. H. B. SMITH
CITY ENGINEER
OFFICER

LEGEND
 --- Proposed widening
 --- Existing street
 --- Building footprints
 --- Greys Pass
 --- Church St
 --- Butencingel St
 --- Orange St
 --- Victoria St
 --- Bree St
 --- Treble St
 --- Sterbe St
 --- Orphan St
 --- Lombard St
 --- Grey St
 --- ...

THE "WIDE" REPORT OF 1937

Fig. 103

**Municipal area
map, 1964.**

Fig. 104

**St Martini, Ger-
man
Lutheran Church
and Manse in Long
Street, early
1900s. Photo from
Church's
private
archives.**





Fig. 105

St Martini Church as seen from Orange Street, early 1900s. Photo from Church's private archives.

Aldo Rossi's theories of permanences, as explored in my theory component, greatly influenced my choice of project and site.

The project involves the 'revival' of a city space that is located on the edge of what has historically been the CBD, and (amongst other buildings) is currently occupied by a 160 year old German Lutheran church called St Martini, which I have identified as a permanent urban artifact (Rossi) that exhibits pathological tendencies.

In the discourse of memory's relationship to a city, the importance of permanent urban artifacts lies in their capacity as significant constituents of the city. These artifacts have the ability to either enable us to understand the city in its totality, bringing the past into the present for us to experience, or to appear as a series of isolated elements that we can link only vaguely to an urban system, appearing with respect to the

city as isolated and aberrant. St Martini is utilized solely by the German community of Cape Town, and is located at the top of Long Street, where it intersects with Kloof Street, Loop Street and Buitensingel.

Aldo Rossi's classification of permanent urban artifact applies to this site for a number of reasons. Because of its form, longevity and its location in the city grid, the chosen site and buildings are integral to the general form of the city. Thus, it has greatly contributed to what constitutes the city of Cape Town in terms of history, art, being and memory.

Because of its power as a permanent artifact, it has the ability to retard or accelerate the urban process and has great potential as a mnemonic device in the city.

Fig. 106

View down Orange Street from Orange, Long and Kloof, Street intersection. Photo from Church's private archives.



Fig. 107

Present day context. Sketch by author.

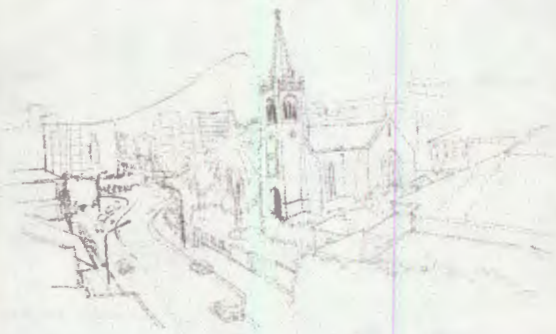


Fig. 108

Site as seen from Loop and Orange Street intersection. Sketch by author.



Fig. 109

Panorama of the top of Long Street. Author's picture.

Fig. 110

Upper Long Street. Sketch by author.

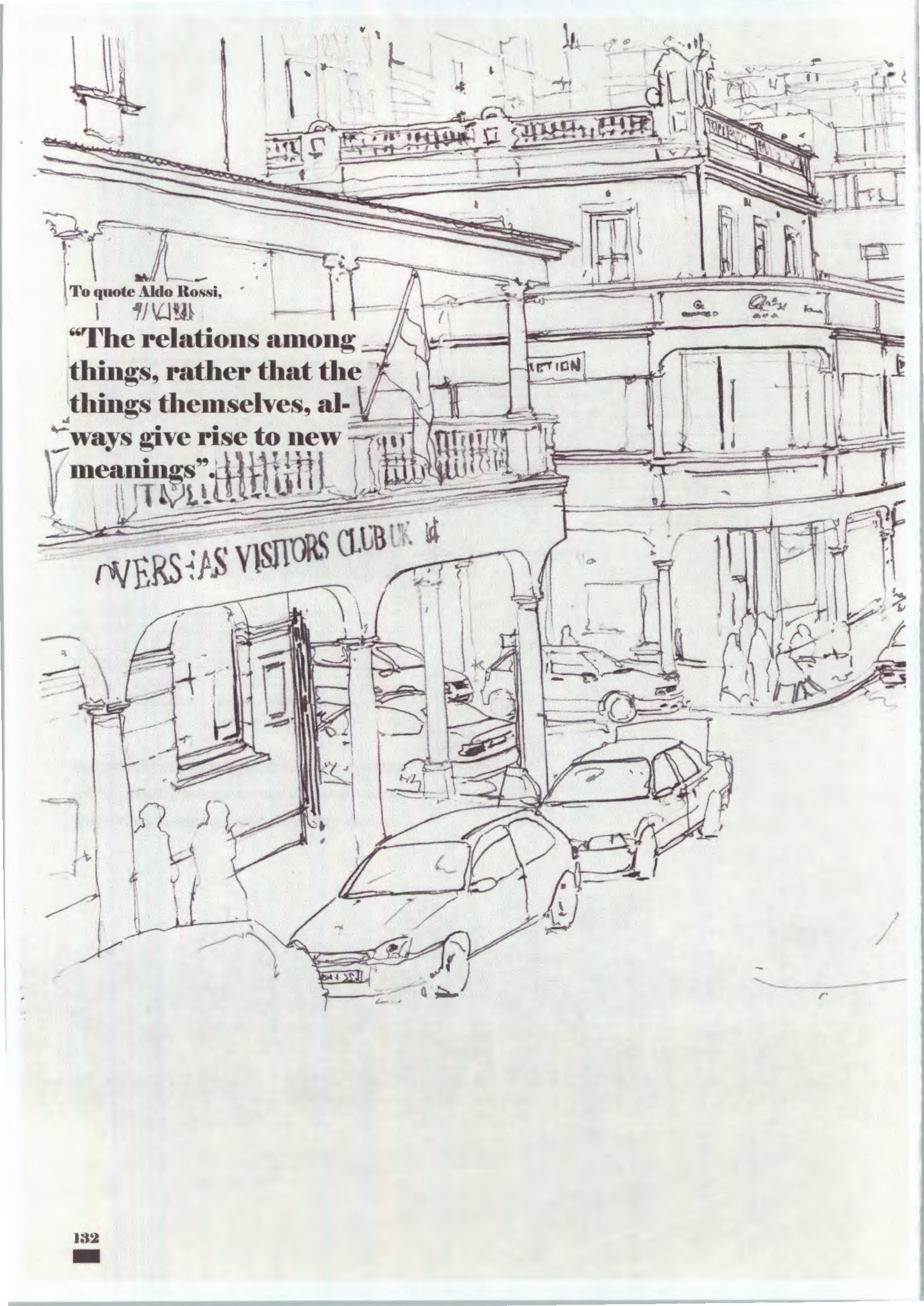
The site as a whole has undergone many changes throughout its 160 year life span, but few have positively contributed to the urban environment, encouraging its pathological trajectory, and as a result, it has gradually receded from active and public urban life denying public engagement with the artifact.

The artifact has some peculiar pathological problems. In spite of its dynamic form, it stands in isolation from the city, hidden by overgrown plants, dilapidated buildings and vehicle-favoring site boundaries. It has not proved to accommodate different functions over time, a criterion of vital/propelling urban artifacts. The building has stopped conditioning its surrounding urban area and has not evolved socially and technologically with the rest of the area, coming to function more like a museum piece, in spite of weekly services that are held.

The site has the potential to become a vital and propelling instrument in urban transformation. By harnessing the artifact's potential, the project will seek to curb the pathological tendency and revive and heighten public urban consciousness, harnessing its symbolic and formal energy, to enable the public to engage meaningfully, and facilitate a more holistic understanding and experience of the city in its totality.

The proposal will seek to establish a significant public place with dynamic relationships between old and new that would mean that the church building would take part in a new formal composition, as well as a new programmatic combination.





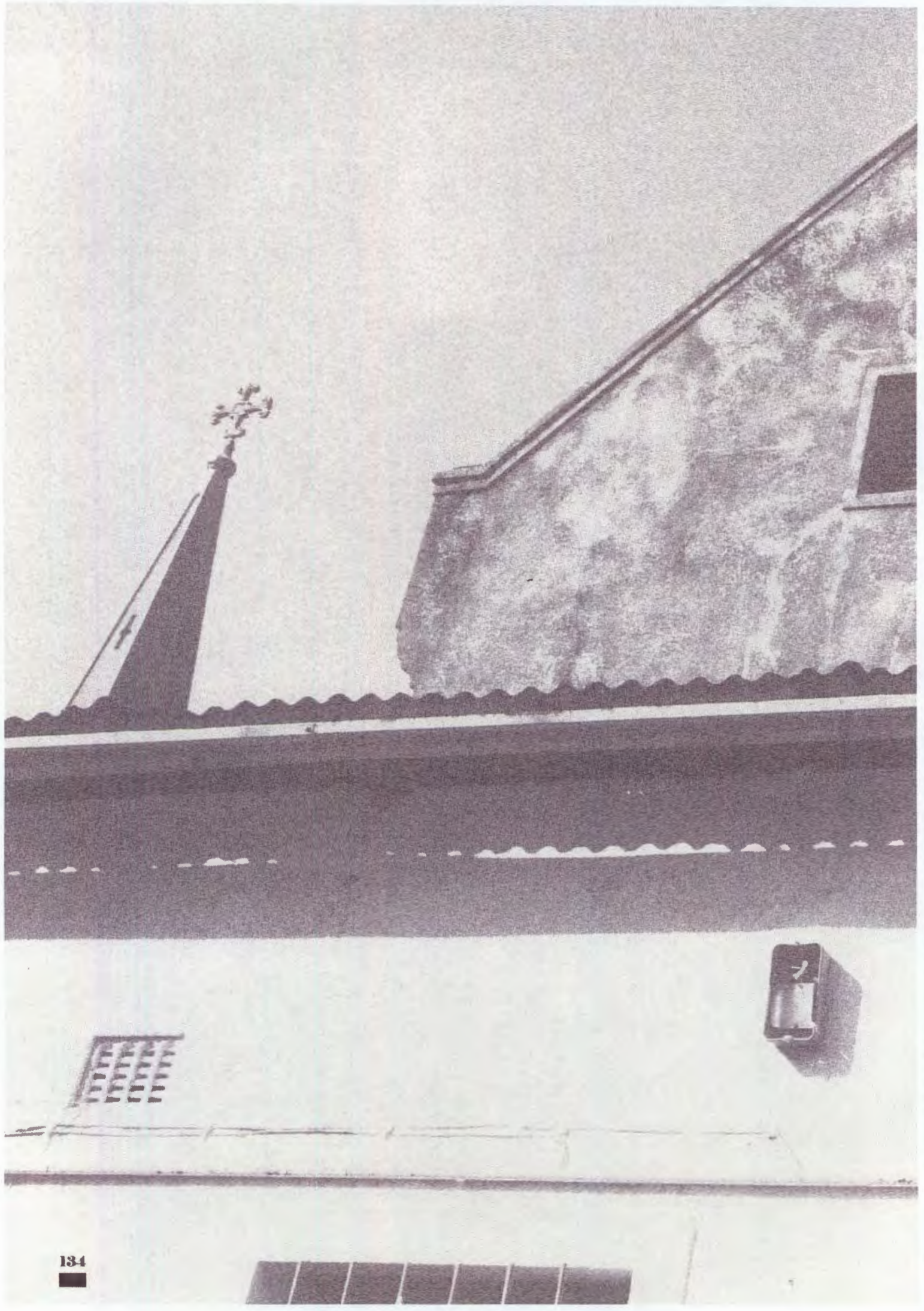
To quote Aldo Rossi,

9/1/1981

“The relations among things, rather than the things themselves, always give rise to new meanings”.

OVERSEAS VISITORS CLUB UK Ltd





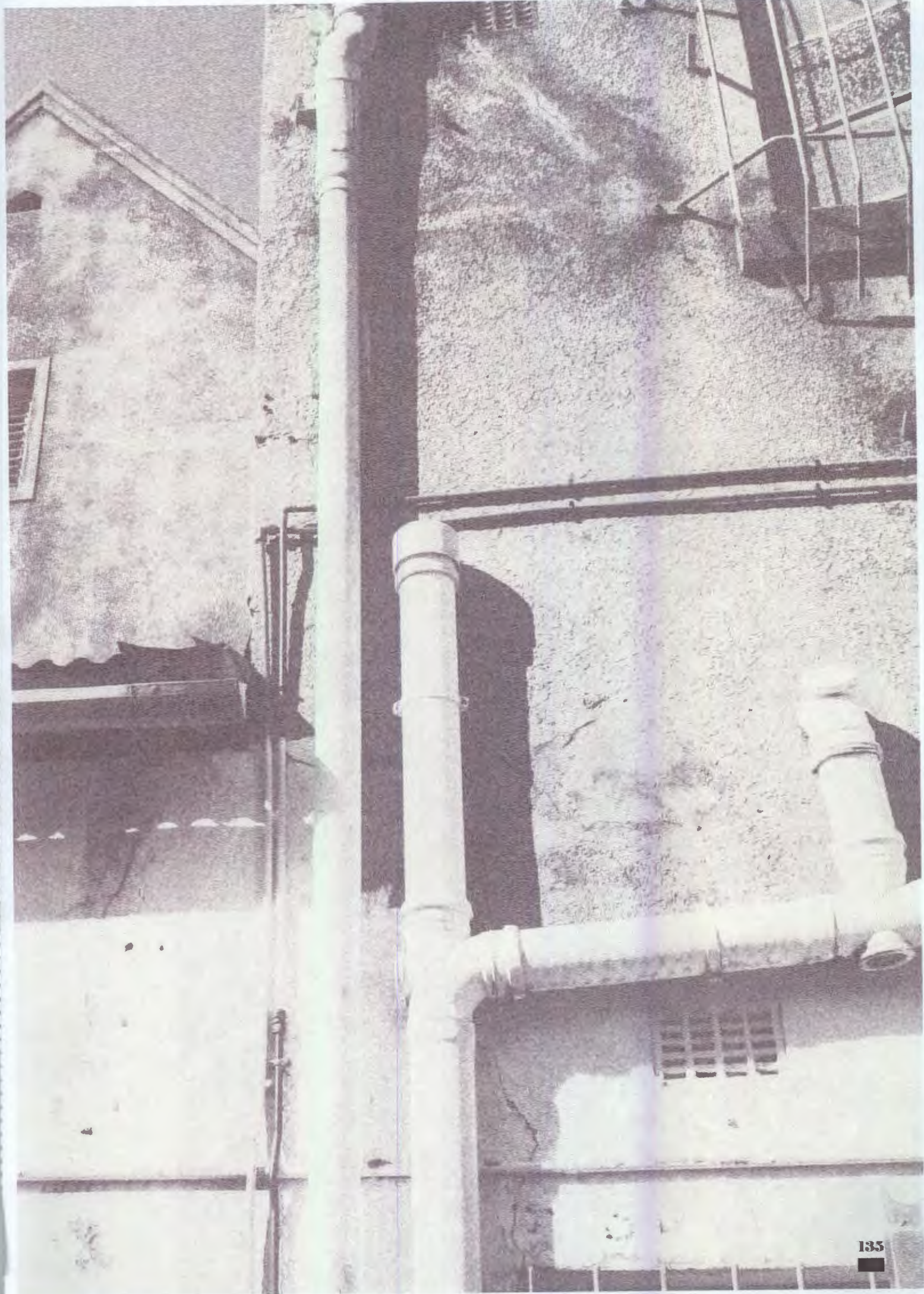




Fig. 111

Loop Street view
of manse.
Author's picture.

Fig. 112

Edge condition at
Kloof, Long and
Orange Street
intersection.
Author's picture.

Fig. 113-115

Long Street.
Author's
pictures.



Existing

Context and Urban Environment

Today, the site experiences urban significance as an intersection of various activities and street conditions.

This intersection experiences high pedestrian and vehicular traffic throughout the day and is a significant place in the day to day lives of a large number of people. Long Street is colloquially known as the most exciting street in Cape Town, and experiences heavy traffic from tourists and locals throughout the day and night. It enjoys representation of many cultures.

Typically, buildings in Long Street open onto the street itself, with narrow colonnades right up to the sidewalk. The human scale is one of the healthiest in the city - the street

has a fine grain of buildings with reasonably narrow building front-ages. The historic layering of the buildings in the street contributes to this variety, with a variety of styles from different periods. The older buildings in the street are extremely decorative.





Fig. 116

Colonnaded sidewalk outside the Turkish Baths, Long Street. Author's picture.

Fig. 117

View of church as seen from Long Street intersection. Sketch by author.

Fig. 118-122

Typical buildings along upper Long Street. Author's pictures.



In contrast, the character of the parallel street, **Loop Street**, which is on the Northern side of the site, is considerably less dynamic. The top of Loop Street is more homogeneous in function, with much larger buildings that occupy whole city blocks to maximum bulk (25m high). There is a higher ratio of office space in this street, and ground floor conditions stand in stark contrast to those in Long Street, with ground floors often functioning solely as entrances to the upper interiors of buildings. This part of the street favors vehicular rather than pedestrian traffic, due to scale, grain and ground floor functions of buildings.





Fig. 123

**Intersection of
Loop and Orange
Streets.**
Sketch by author.

Fig. 124

**Loop Street site
boundary.**
Author's picture.



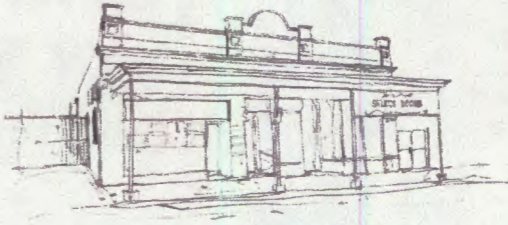
Fig. 125

Mosque opposite church on Loop Street.
Author's picture.



Fig. 126-128

Significant buildings surrounding the church's site.
Sketches by author.



Historically significant buildings surround St Martini; an old mosque on Loop Street, the Turkish Baths at the very top of Long Street, next to the residential Queen Victoria Court. All of these are heritage sites.

Newer buildings also function significantly, with a large residential block of flats exhibiting a changing billboard, 7 storeys high, which functions as a landmark, at the bottom of Kloof Street.

The site is naturally oriented to face the mountains sheltering the City Bowl, specifically Table Mountain. The landscape north of the site slopes steeply up to Buitengracht, and on to Signal Hill. This means that traffic coming down the hill looks down on to the site so that the buildings and activities of the site are observed from a variety of perspectives.





Fig. 129

Loop Street view of site.
Author's picture.



Fig. 130

Loop Street view of site.
Author's picture.



Fig. 131

View of intersection from Kloof Street
Author's picture.

Fig. 132

View of site from Loop and Orange Streets intersection.
Author's picture.

Fig. 133

View down upper Long Street. (section across from church)
Author's picture.



Fig. 134

View up Long Street with site on right.
Author's picture.

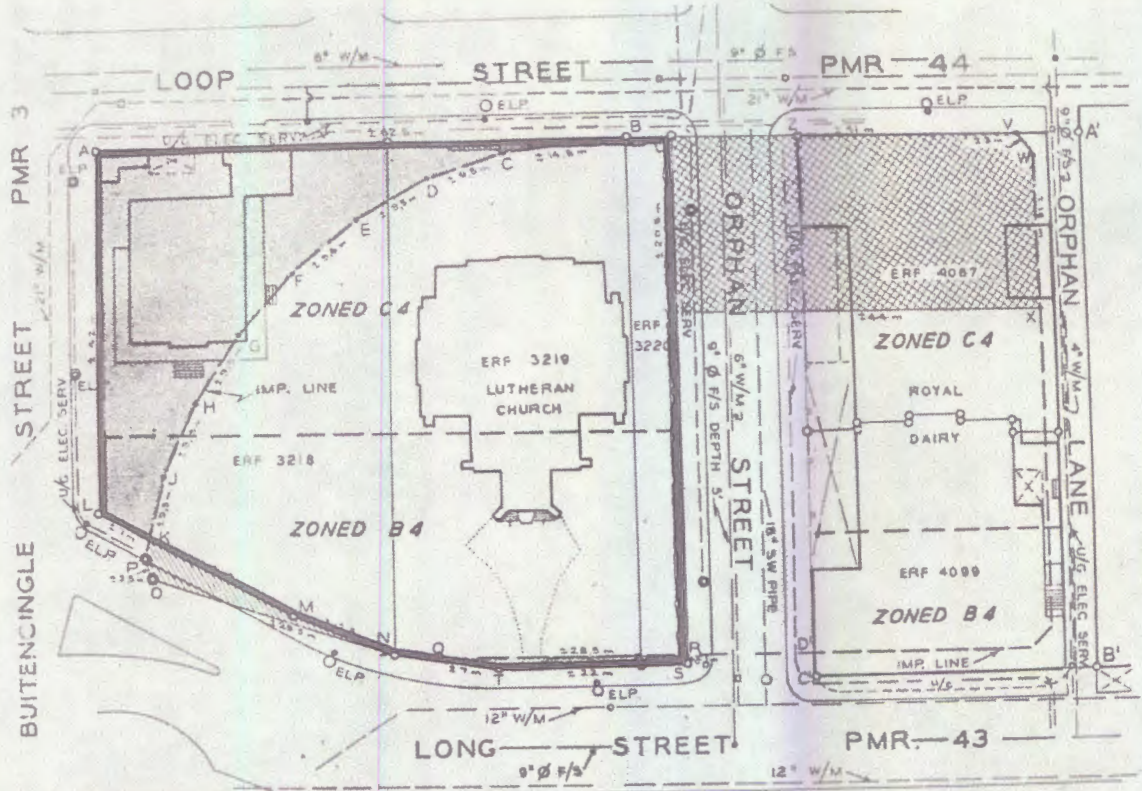


Fig. 135

Site plan before consolidation of erfs in 1981. From church's private archives.

Fig. 136

Long Street view of orphanage, late 1800s. From church's private archives.



Site and Buildings

The site as it is known today is actually a consolidation of a number of erfs. The first development on the site came in 1814 in the form of an orphanage. The site was originally intended as an asylum for widows and old women and foundations were laid for this purpose. However, this plan was adapted and the foundations were used for Cape Town's first orphanage. The orphanage was designed by one of the first renowned architects to practise in Cape Town, Louis Michel Thibault. The Church was designed and built by Peter Penketh, the only practising architect in Cape Town in the 1840s.



In 1851 the four erfs that make up the site underwent consolidation for the construction of the church and its manse. The Church's construction followed a congregational schism in the Lutheran community of Cape Town.

In 1853, the St Martini Church was dedicated, but after a short while the congregation was dissolved. The church remained unused until German services were re-instituted a few years later, and St Martini was formally founded.



Fig. 137

View of buildings on site from Long Street. Author's picture.



Fig. 138

Upper Long Street boundary showing curved face brick wall dividing the church and the manse. Author's picture.



Fig. 139

Manse as seen from parking adjacent to church. Author's picture.



Fig. 140

Parking area adjacent to church. Author's picture.



Fig. 141

Edge of existing secondary hall onto Long Street. Author's picture.



Fig. 142

Edge of existing secondary hall onto Orphan Lane. Author's picture.

In 1929, the South African College that eventually became UCT moved into the front rooms of the orphanage.

In 1923, the orphanage was sold to Bechuanaland Dairies. At this stage, Orphan Street separated the Church and the orphanage.

In 1939, the original front façade was demolished and replaced by a glazed brown brick façade. Gradual but significant alterations and demolitions rendered the original orphanage building unrecognizable by the end of the Second World War.

In 1978, the Dairy moved out and the building was let to a garage.

In 1981, the site and its buildings were expropriated as compensation for loss of land and buildings due to a road widening scheme involving Buitensingel and Loop Street. This plan would have resulted in the loss of a significant portion of the Church's land, and the demolition of the manse, but for reasons unknown was not executed by the municipality. However, the plan did have a significant negative impact on the site. A new, unsightly boundary wall was built along

Fig. 143

Long Street vehicular entrance onto site, with secondary hall to the right. Author's picture.



Fig. 144

Loop Street view of the church, secondary hall and surrounding office buildings. Author's picture.



the proposed building lines, separating the manse from the church, and the entire orphanage building was demolished. Orphan Street was closed and replaced by St Martini Hall and a kindergarten on the consolidated land. The initial plan was to pedestrianise Orphan Street, but instead it was closed off completely. The Community Hall was built in 1981, after the demolition of the buildings on the original orphanage site. To date it is incongruous with the surrounding buildings and urban fabric; it has a harsh and unsightly wall which fronts on to Long Street, with no attempt to

engage street activity.

Although serving the Lutheran congregation in a valuable way, the site continues to recede into a pathological state because the changes to the property since 1981 have been detrimental to the urban environment and to the church's value as an historical artifact.

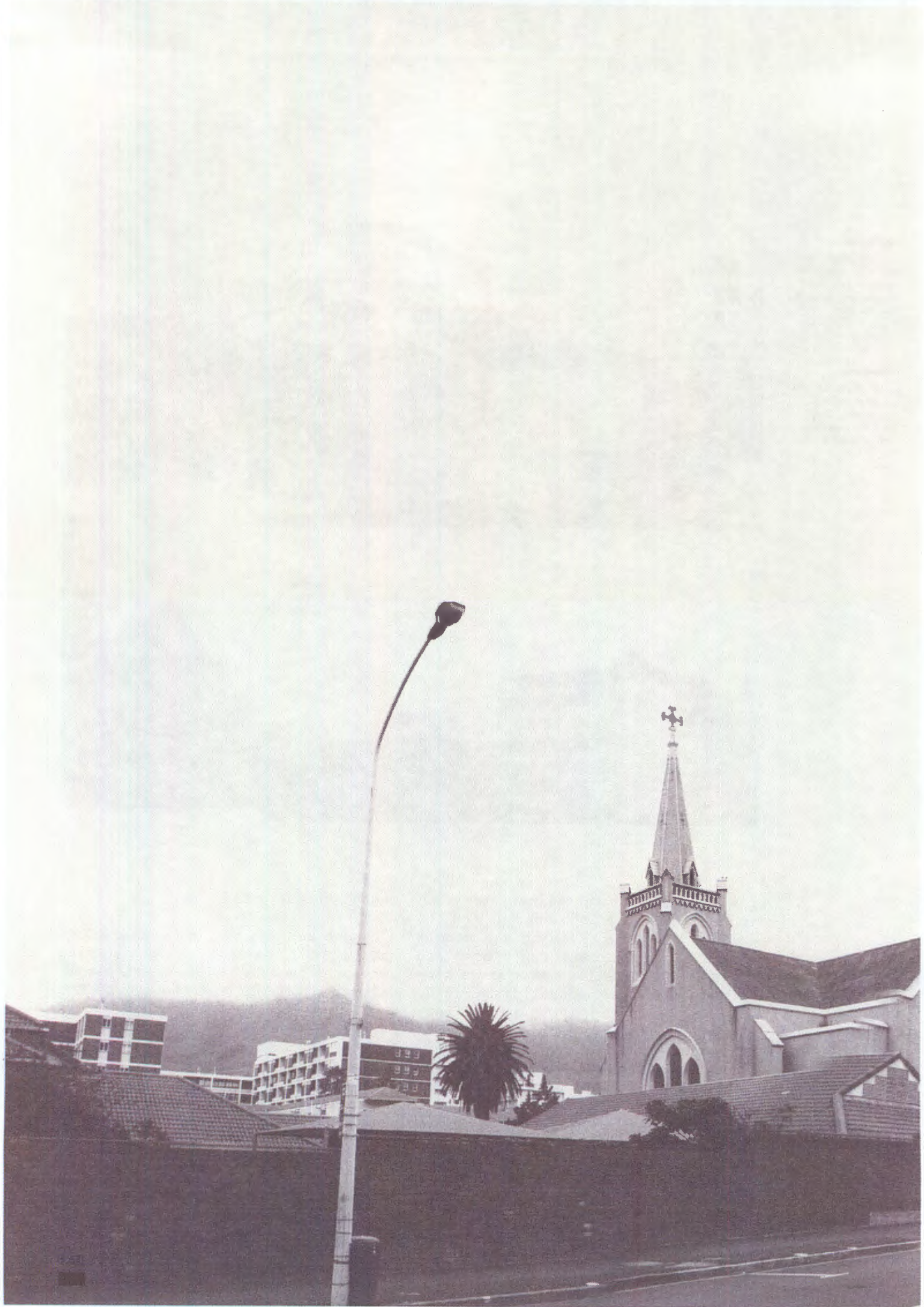


Fig. 145

Loop Street view
of church and
mosque.
Author's
picture.

Design Proposal

I propose a reinterpretation of the existing programme of the site in order to complement the surrounding urban dynamic. This will largely mean re-considering the detrimental changes made to the site in the 1980s.

The new site development will acknowledge and harness the significant public space at the top of Long Street and couple the existing social dynamic with the inherent but currently obscured place-making ability of the existing historic forms. I believe this will engage and reveal the previously obscured memory of the 'place'. Attention will be drawn to the passing of time and meaningful connections between new and old will be made.



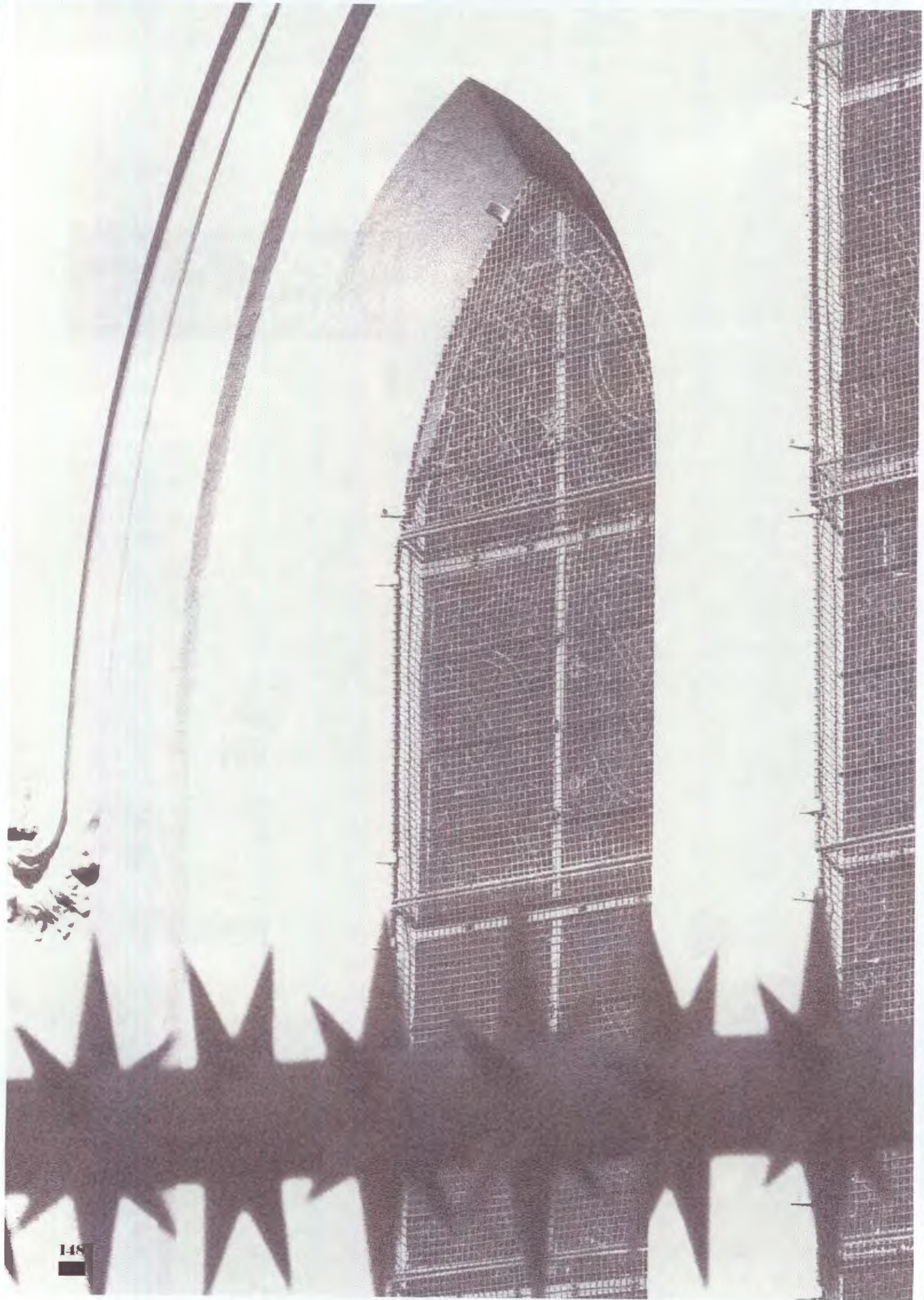


Fig. 146

View of church windows from Loop Street boundary. Author's picture.

Fig. 146

Conceptual sketch of wrap-around building and courtyard spaces adjacent to church. View from Long Street. Sketch by author.



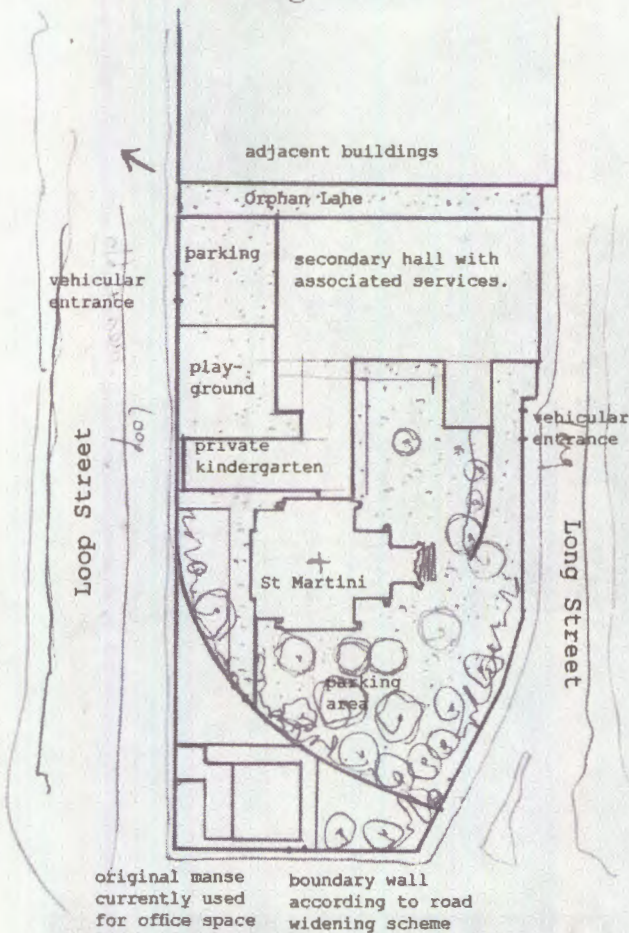
Programmatic Response

Cross Programming

I propose to re-programme the site to be mixed use rather than only private. This will greatly remedy its pathological state. New components to the design will consist of a mixed-use slab-like building, an open, public square, and a linear building that wraps around the historic buildings. The existing historic buildings will be incorporated into the new programme and their programmes adapted to work symbiotically with the new spaces.

Currently, the site's private pro-

Existing



Proposed

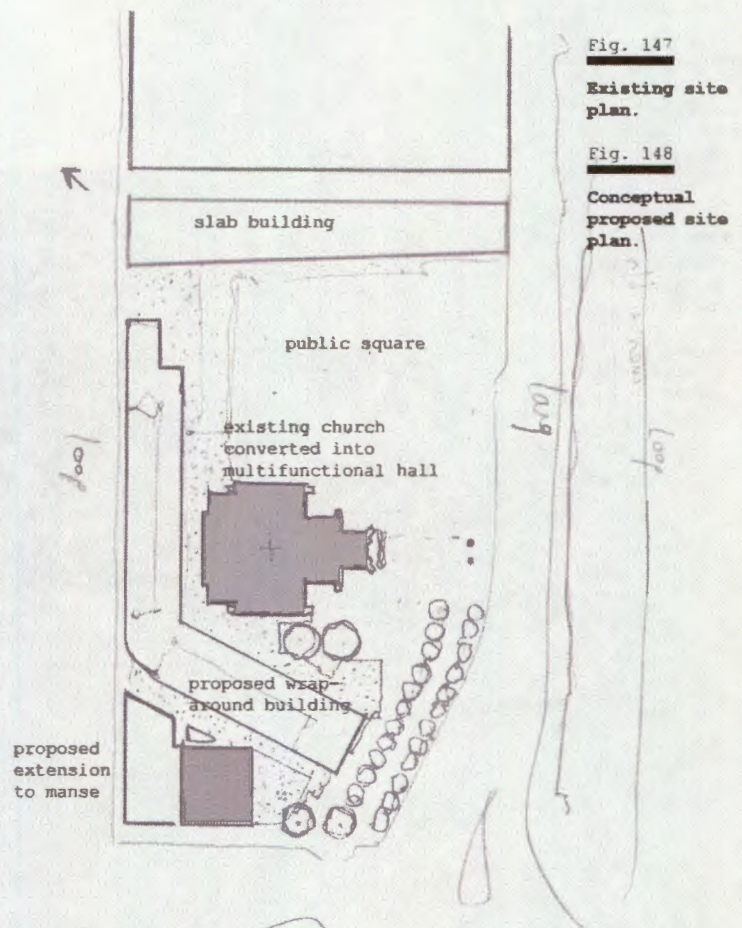


Fig. 147

Existing site plan.

Fig. 148

Conceptual proposed site plan.

programme consists of those things that the church needs to function: reception, library, meeting rooms, offices, storerooms, archives, toilets, kitchen etc.

I will introduce a public programme by equipping the existing church hall with corresponding service spaces that enable it to be multifunctional - these service spaces (including a kitchen, store rooms, change rooms, meeting rooms, waiting rooms etc.) will be linked with the church's private spaces with the options to be used both publicly and privately and be accommodated in the wrap-around building.

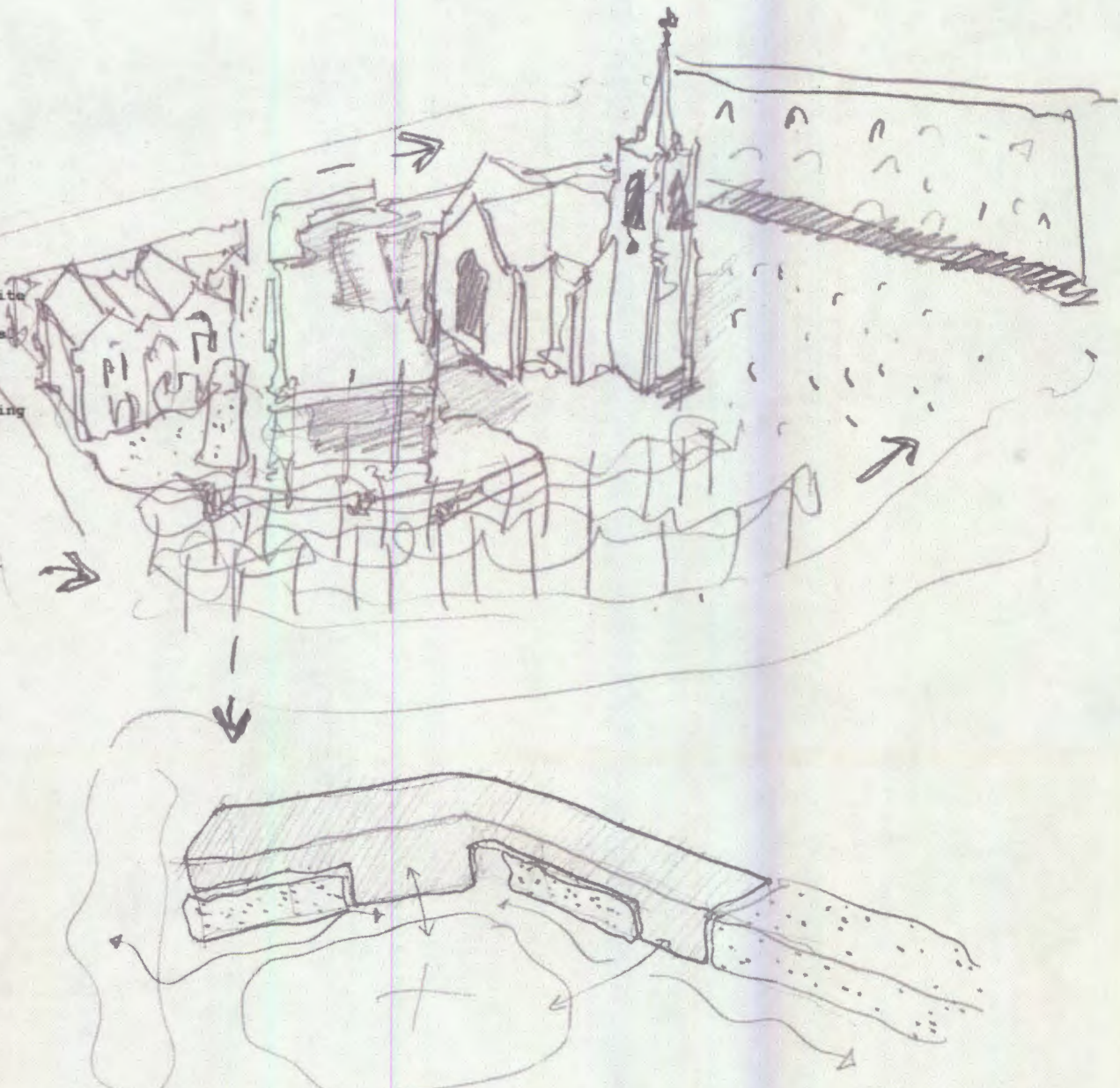
The church's specifically private functions will largely be accommodated on the first floor of the wrap-around building (discussed in the next section), but will also be mixed with the primarily public programmes on the ground floor. The majority of the ground floor spaces on the site will be for the public, including the hall space, retail/restaurant spaces, and public landscaped outside spaces. Private church space on the ground floor will occupy a relatively small area, between the surrounding retail spaces with access from courtyard spaces between the church and new buildings.

Fig. 149

Conceptual composition of buildings on site indicating movement routes.

Fig. 150

Cross programming in wrap-around building.



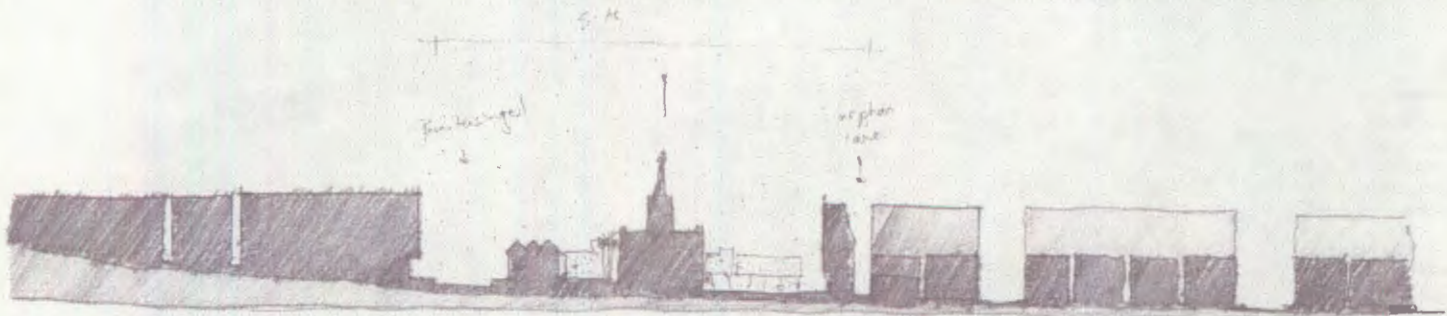
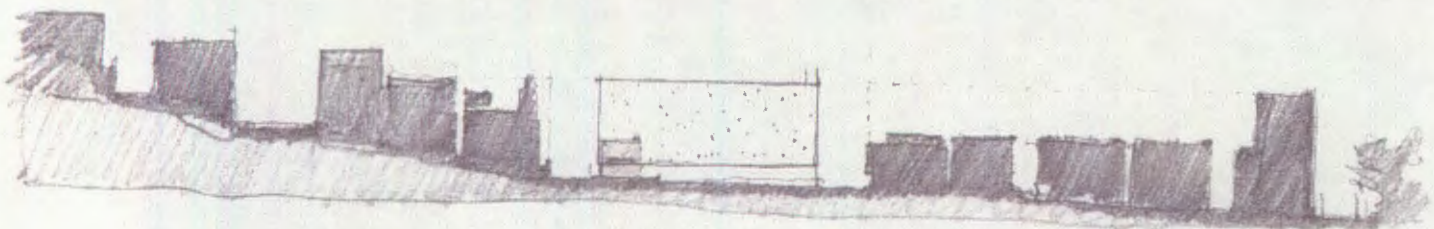
The functions accommodated by the slab building (discussed in the next section) will be public retail and restaurant spaces on the ground and first floors. Offices will occupy the second, third and fourth floors, and private residential will occupy the remaining three floors. Access to the upper floors of the slab building will be through two service cores from the ground floor.

The aim is for there to be a dynamic mix of private and public activities that energize each other, and bring life to the site.

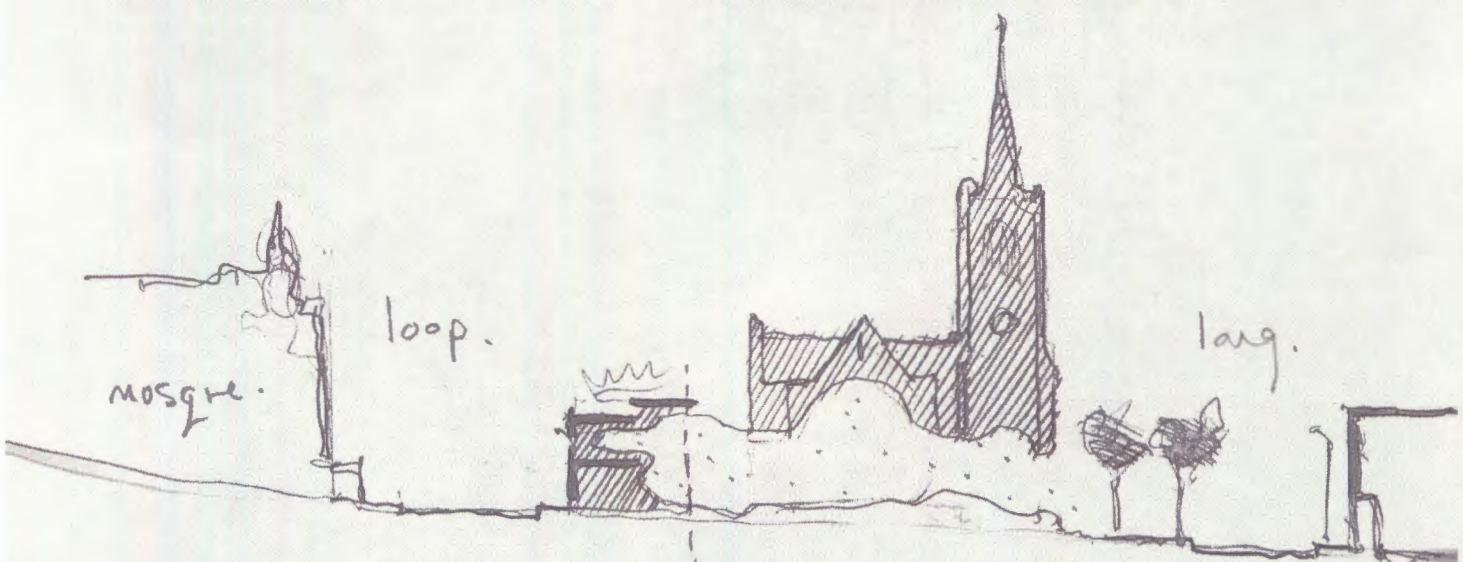
The urban agenda of the new site development is to draw the existing pe-

destrian movement of Long Street in through the site and around the historic buildings via small scale retail opportunities etc. which will encourage maximum movement across site. Long Street's scale (with its colonnades onto the street) and its rhythms are pulled back onto the site and these patterns will wrap around the square, the church and the manse.

The main access to the church hall will remain through the original entrance on Long Street, although access to the site will be open and no longer through the vehicular gate.



north south section through site (along street) site



SECRETARY LANE

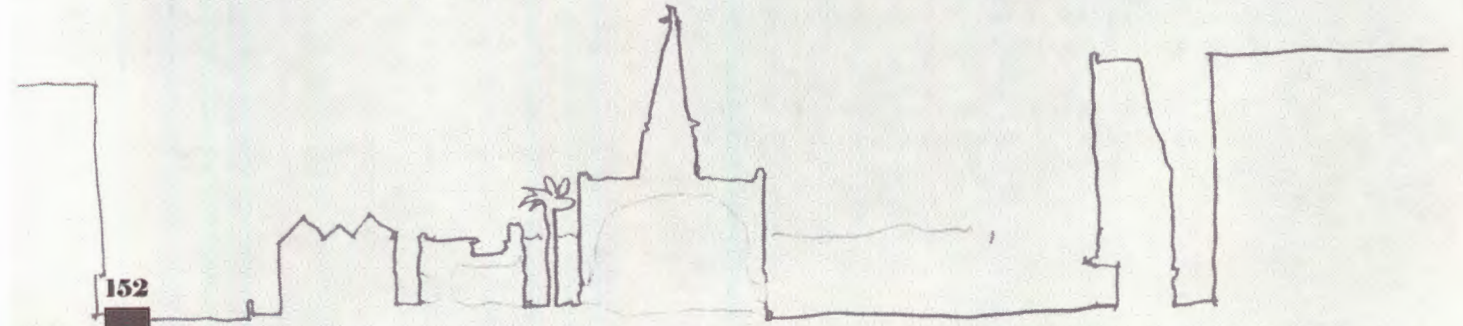
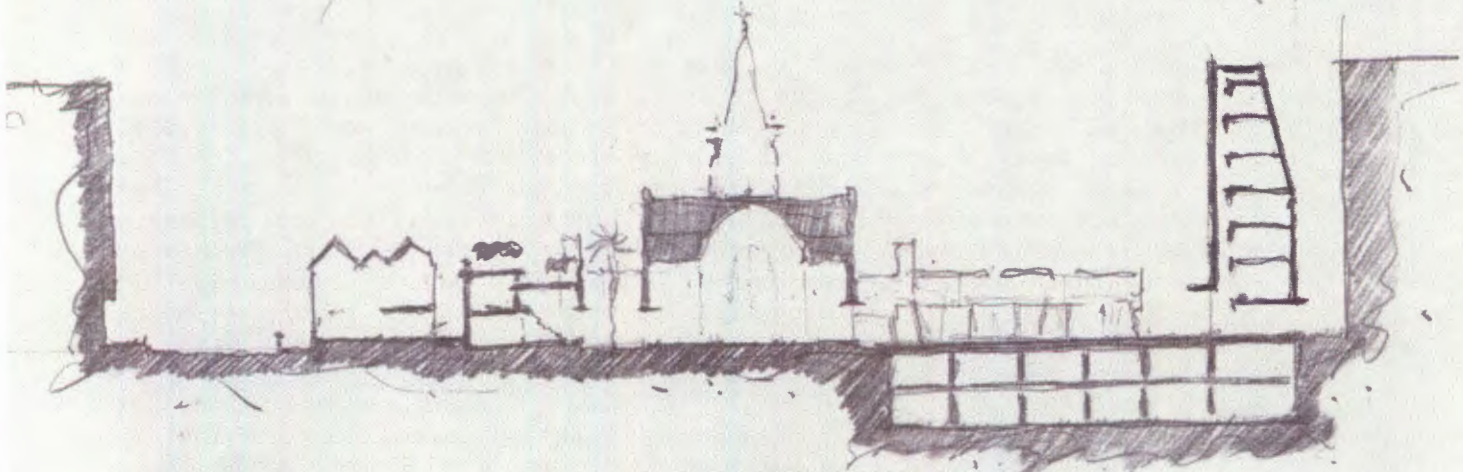


Fig. 151

West East section through public square.

Fig. 152

North South section through site

Fig. 153

Conceptual West East section through site showing spatial relationships.

Fig. 154

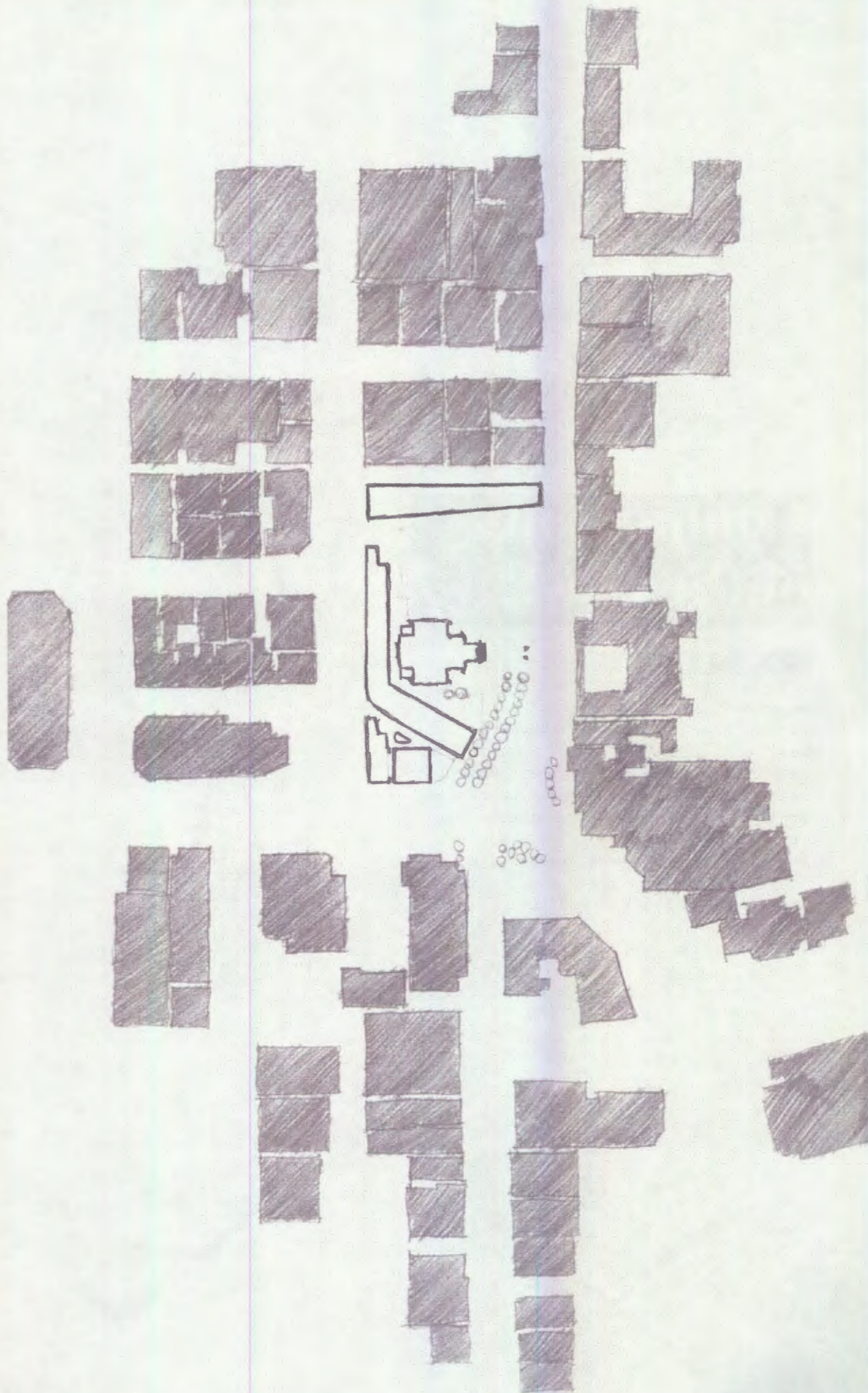
South North section through site.

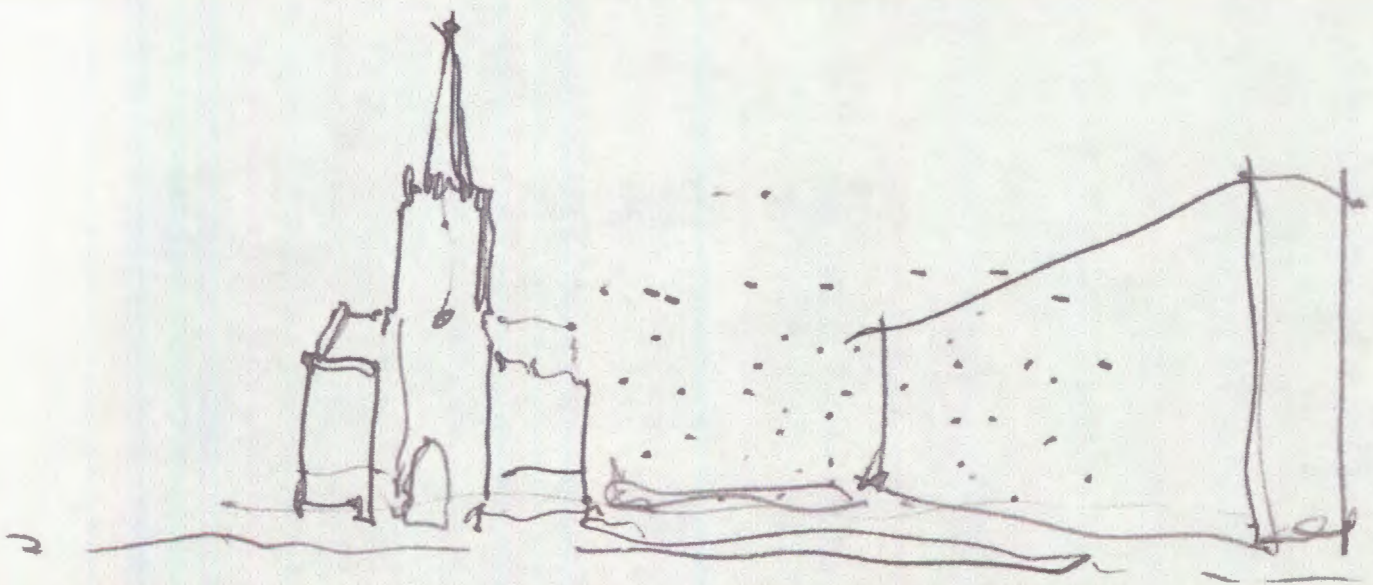
Fig. 155

Outline of South North section through site.

Fig. 156

Area map showing surrounding urban grain.

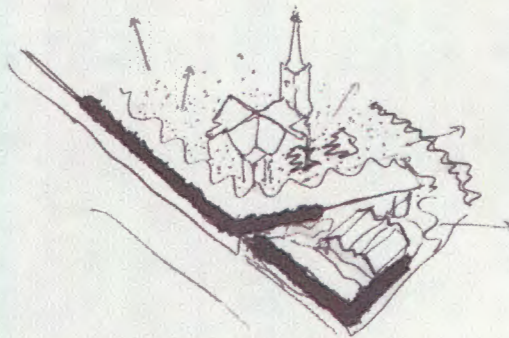
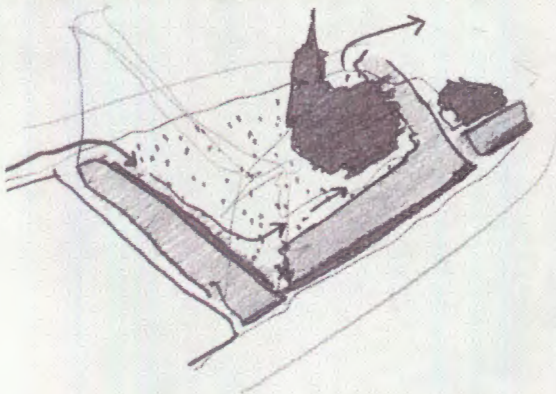
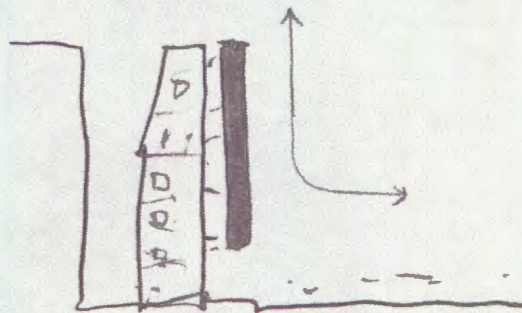
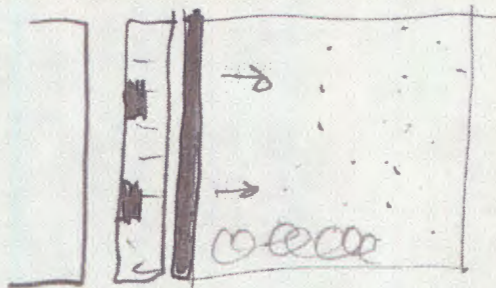


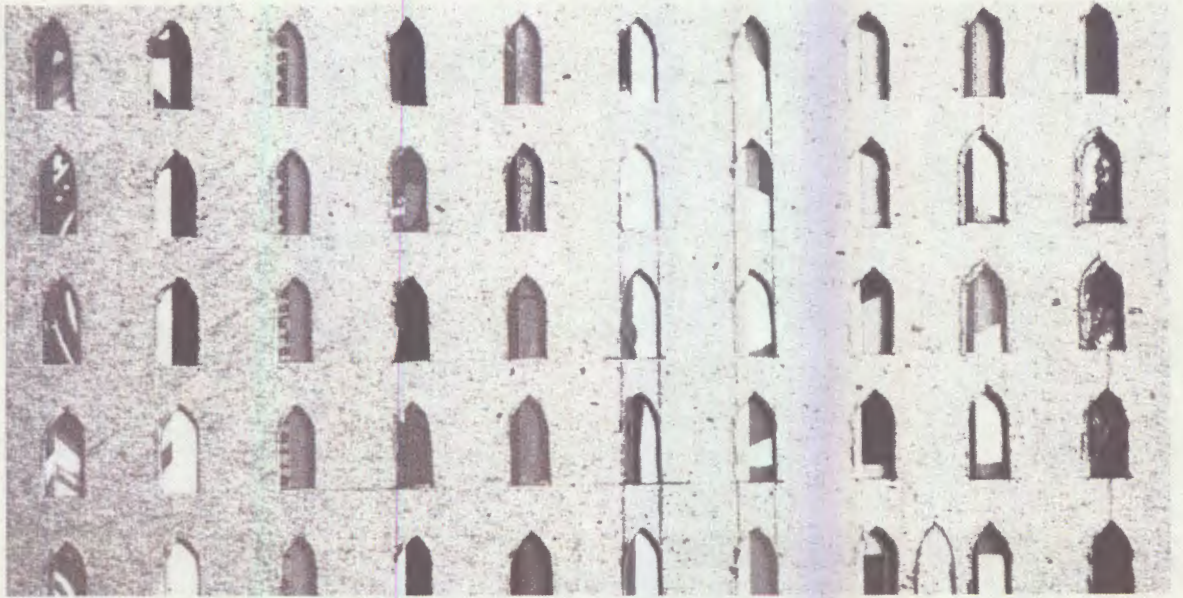


Components of the Design

1. **Public Square:** which will provide a public place that encourages maximum visual engagement with the historic buildings on the site. This will mean the removal of the secondary hall and its associated services, making allowance for these programmes in the existing Church and new buildings.

The square will be structured by the church on the southern side, with the new slab building and wrap around building on the northern side. It will parallel the orientation of the church, opening on to Long Street where most of the pedestrian traffic is, and it will enjoy a view of the mountain. This will create a well defined open public place next to the church.

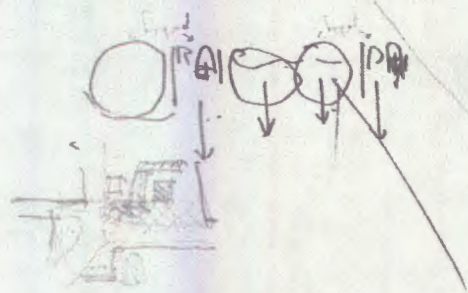
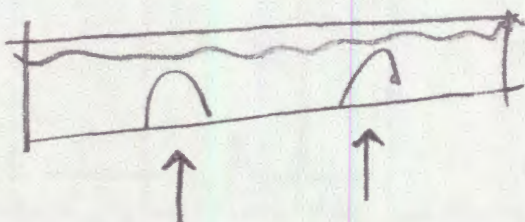
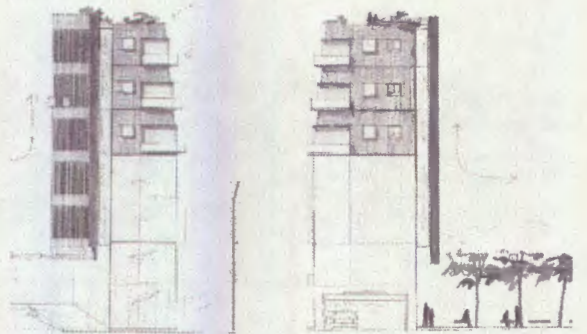
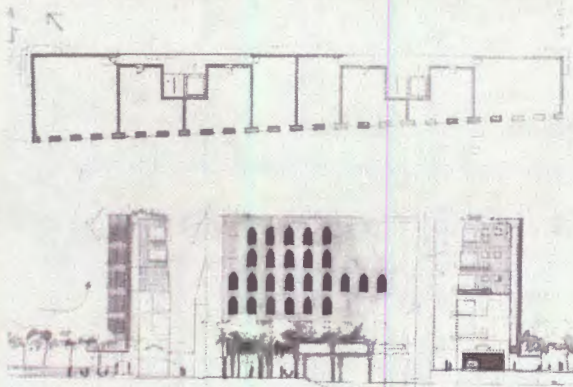


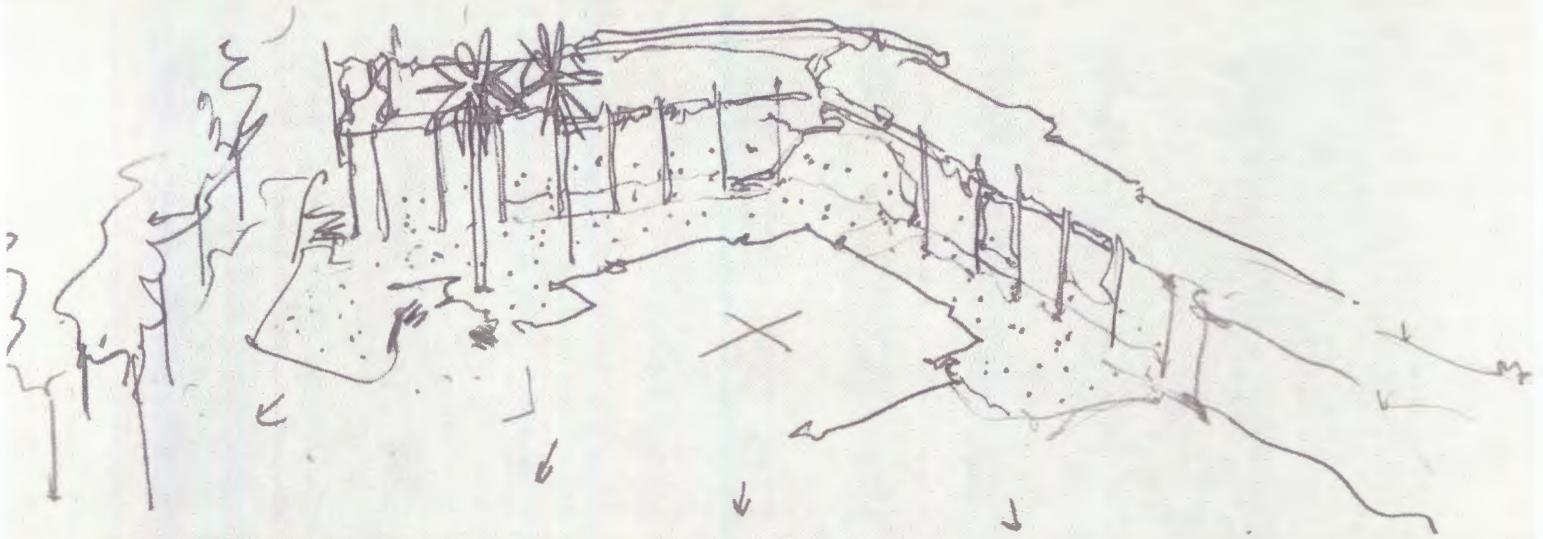


2. Mixed Use Slab building: seven storeys, vertical, slab-like and mixed use; the building will function as a book-end to the northern side of Long Street. This will face on to the public square and the existing church building. The slab will be slender with a hard edge onto the square to define the space between it and the church. Through its minimal, strong, flat façade, it will accentuate the dynamic form of the church and by making the programme more vertical, it will open up the square and give definition to it, also allowing for free movement across the site between Long and Loop. Symbolically, the façade

facing the square will reference symbols used in the church through decoration.

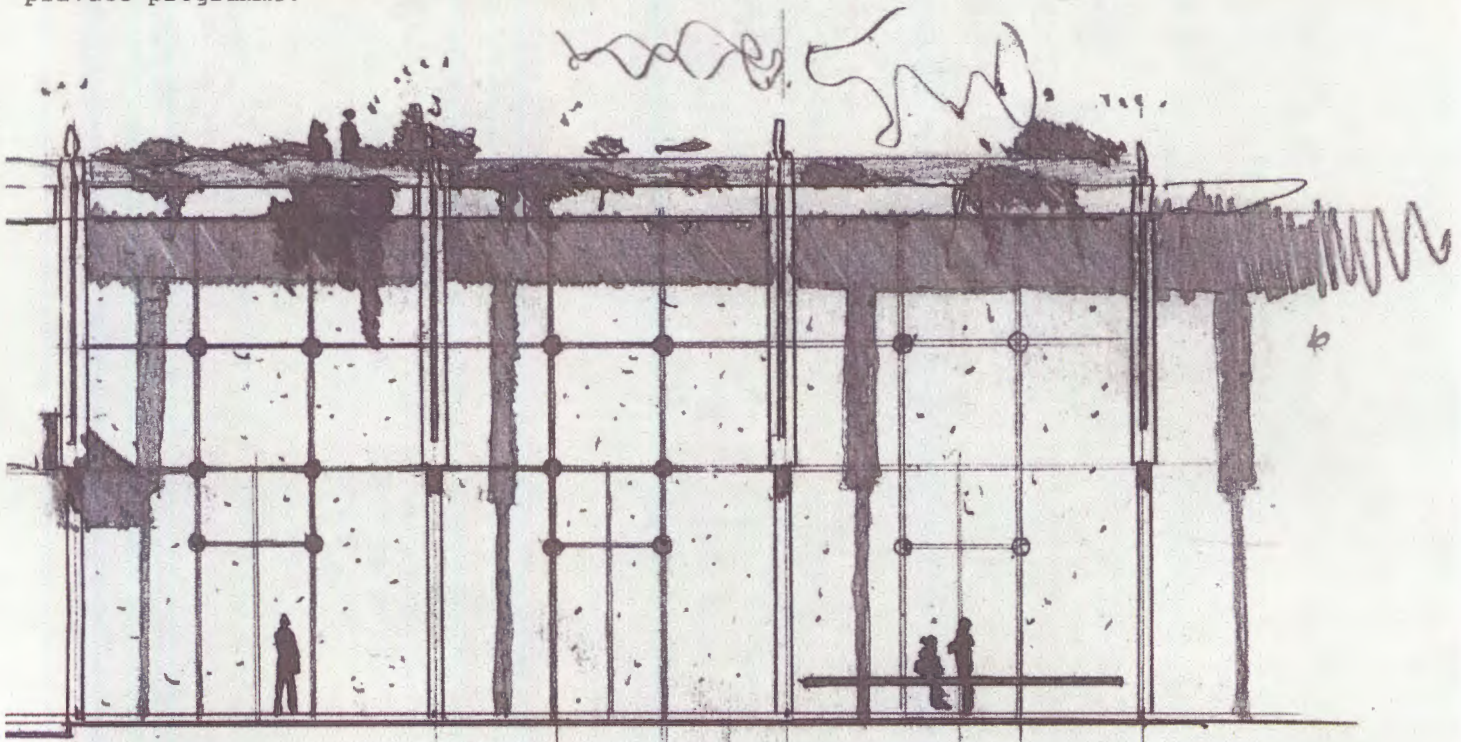
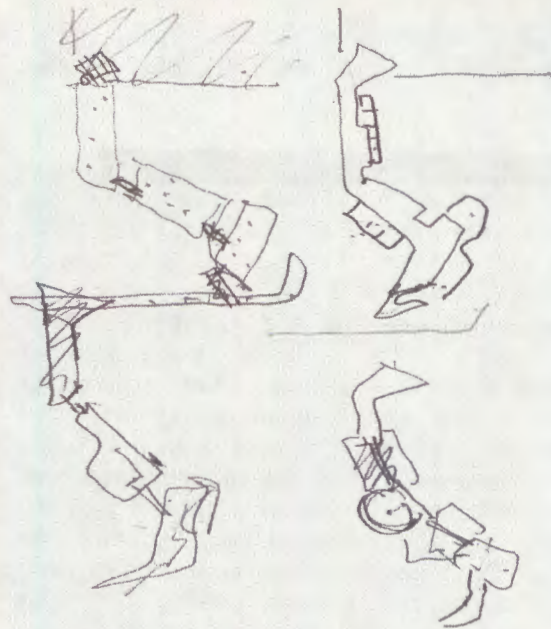
A colonnade on the ground floor of the slab building will extend the existing sidewalk condition of Long Street by drawing the sidewalk into the site, around the square and church and up to the intersection that leads to Kloof Street. This will make the site, which at the moment is completely privatized, much more public and will provide circulation across the site where previously there has been none.



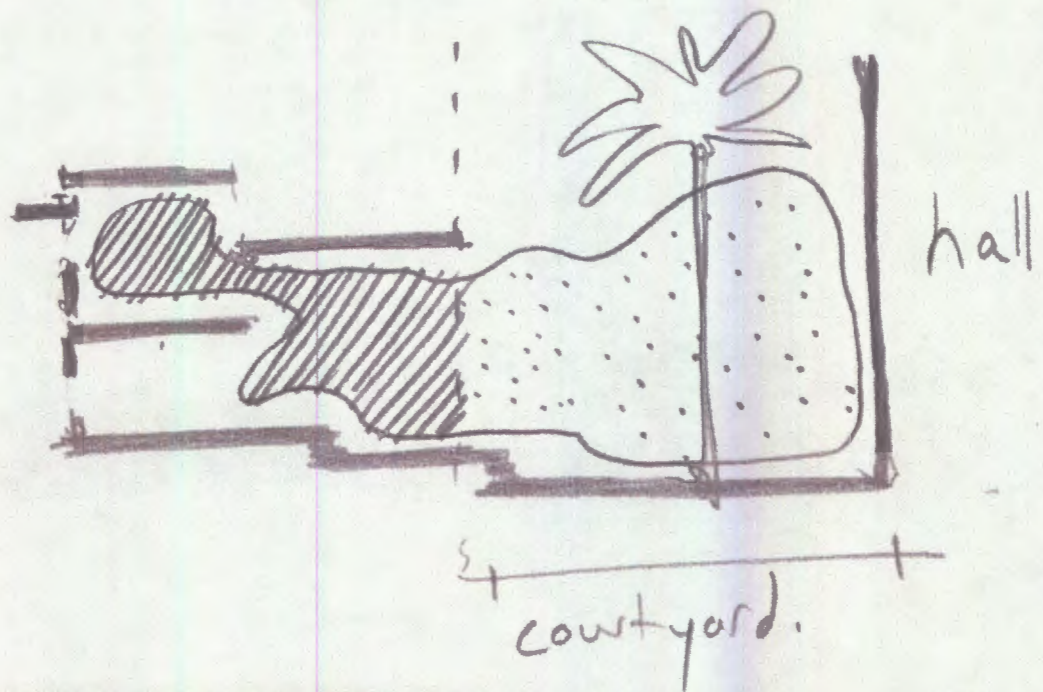


3. Linear Wrap-Around Building: a two storey building that twists in between the existing original manse and the church building, and in so doing creates courtyard spaces.

The ground floor will mostly be devoted to small-scale public retail and restaurant spaces in order to pull pedestrian traffic around the church building from Long Street. This northern side of the building will respond to Loop Street with a solid, hard edge in contrast to the southern side of the building which will have a soft, permeable edge, with a glass wall containing the double volume space that looks on to the courtyard. The first floor will be devoted to the church's private programme.

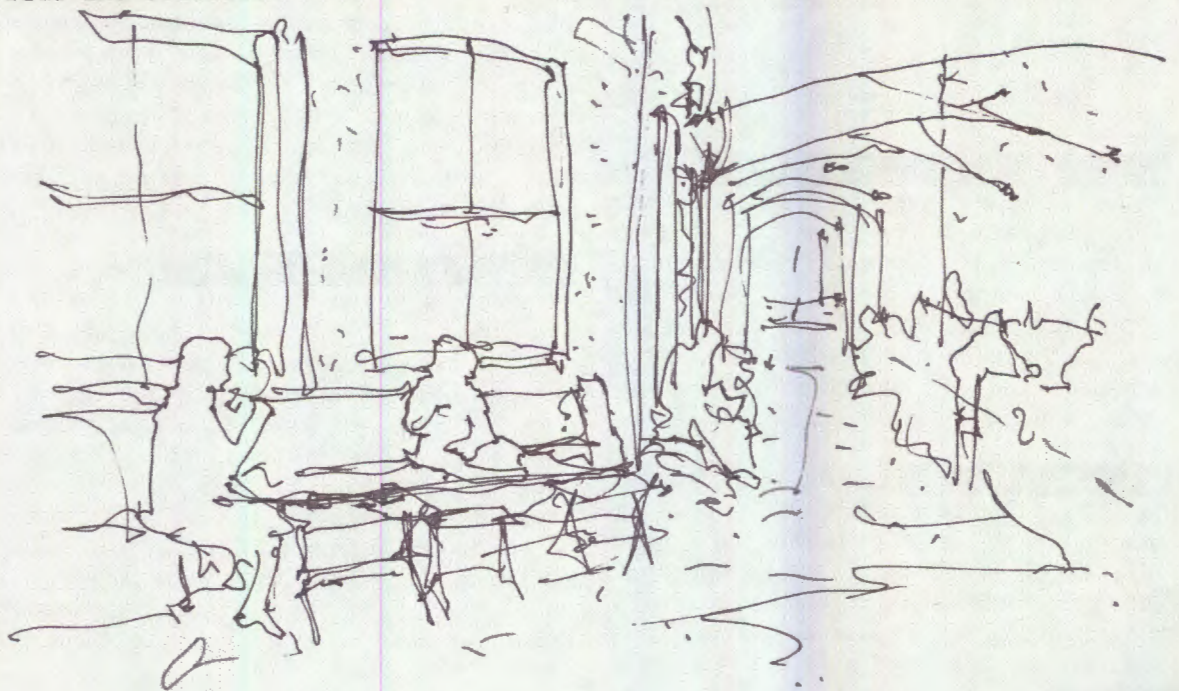
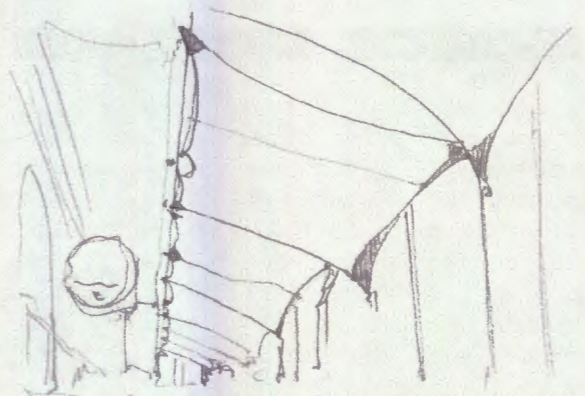


Courtyard facade



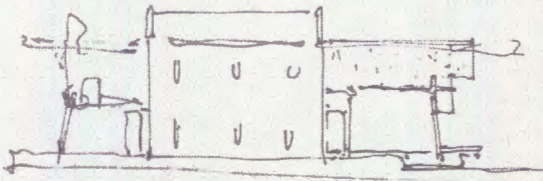
4. **Courtyard Spaces between New and Old:** a variety of outside spaces that hug the original buildings enabling a full appreciation of the historic forms and the memory embedded therein. The division between outside and inside will be blurred, making the courtyard spaces between the church and the new building function as 'internal' spaces.

Building materials and surface coverings (like flooring) will extend from outside across the glass skin to the interior. This will perpetuate the blurring of delineation between inside and outside.





6. Existing Manse and Additions: a large part of the manse will be converted into restaurant space that opens onto Long Street and the intersection. A section of the western portion of the manse will become part of office space that faces Loop Street. The connection between the new building and the manse will be through a double volume space. Access to the offices will be from Loop Street.



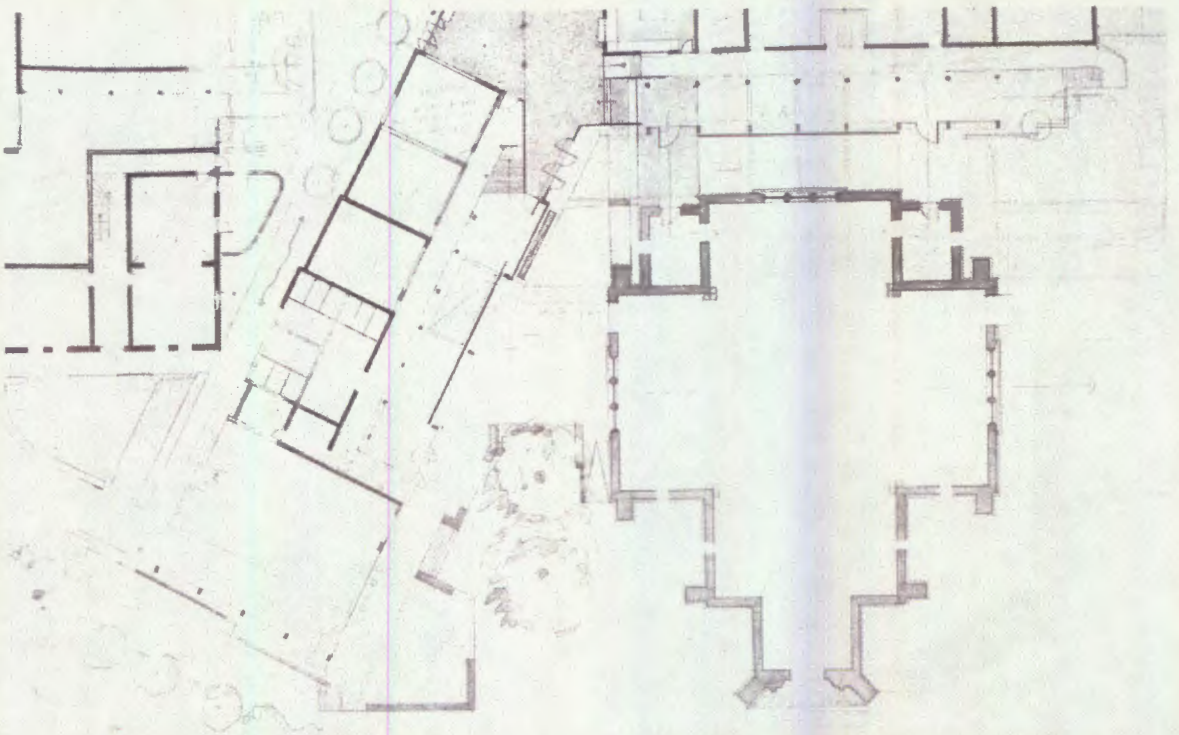
7. Long Street Landscaping: a widening of the movement route up and down Long and Kloof Streets. A lane of trees on the southern edge of the site will channel the busy pedestrian movement. This will also serve as a barrier between the traffic around the intersection and announce the pedestrian entrance to Long Street.

8. Church Hall: the existing church hall will be supplemented by service spaces in order for it to take on a variety of functions. While continuing to provide a place for worship, the new programme would allow the hall space to be utilized as a public hall, exhibition space, performance space

and for other miscellaneous activities. Service spaces will be housed in the adjacent linear wrap-around building with access to the church through existing storerooms that enter onto the stage. This hall space will continue to be managed by the church and provide additional income in its greater capacity to serve the community.

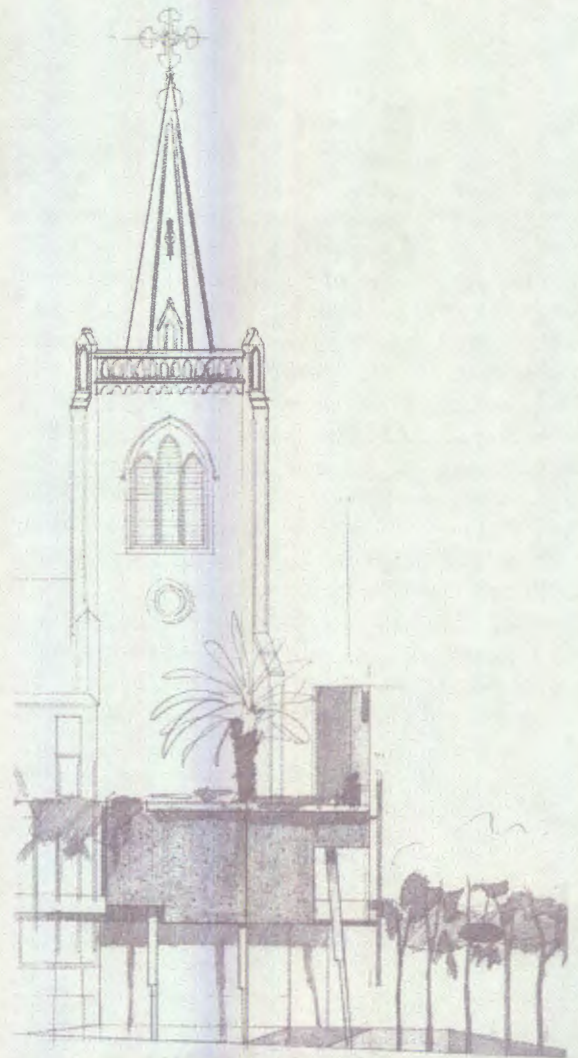
I propose the continued use of one hall instead of two in order to avoid the privatization of a larger space than necessary, in this vibrant, public place. Two halls are unnecessary if one stands unused and empty six days out of seven. The way in which the church hall is currently used is inefficient and it keeps the valuable architectural artifact from being appreciated by the larger public.

9. Underground Parking: will be taken underneath the square where approximately 200 bays will be provided for on two levels, to make more efficient use of valuable city space. Access from the parking to the ground floor will happen through the proposed slab building's service core. The vehicular entrance to the Parking will be through the ground floor of the slab building in Loop Street in order to cause the least disturbance to pedestrian movement along the site edges.

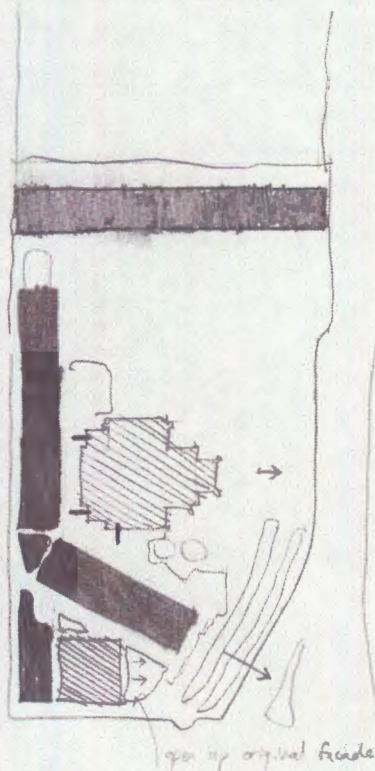


Formal Response

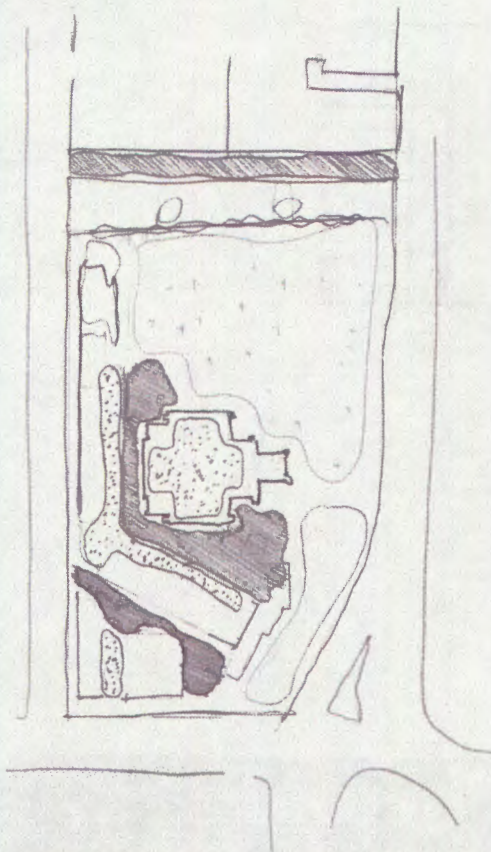
- The new buildings proposed will dialogue deferentially with older buildings, while strong and significant in their own right.
- The southern corner of the site will be densified, formally and programmatically, in order to clear the square for pedestrian use and to give it strong formal definition.
- Long Street's end and Kloof Street's beginning will be articulated so that the crossing of a threshold is experienced.
- Formal parallels will be drawn between the new and the old through vertical elements on linear, horizontal forms, and vertical elements will be used throughout the new buildings that speak to the vertical character of the historic buildings.
- Ornament will be used to reinforce historic association. Symbolism and decoration will be deliberately



formal composition



Courtyard spaces



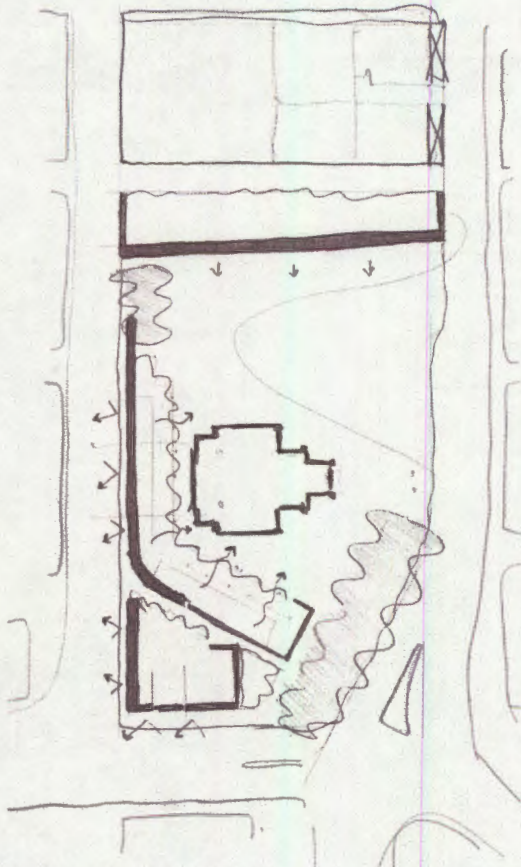
used to create mnemonic associations. Existing symbols will be respectfully referenced; stained glass, hard stepped edges, colors, subtle decoration such as variation in the plaster, vertical forms etc. Symbolism in the wrap-around building will be subtle, with form being the main communicative device between new and old. The use of symbolism will be bolder in the façade of the slab building. The structure of glass facades throughout the design will be sensitively decorated to make connections with the stained glass and other elements throughout the church. Repetition of symbols found in church such as the grouping of elements in threes, the pointed arch, the circles found on the steeple, stained glass windows

and the hard stepped edges.

- Different street conditions will be responded to appropriately; open, permeable spaces towards Long Street and strong, hard, edges on Loop Street and the western portion of Buitensingel Street.

- Materials (concrete, copper and glass) chosen for how they: are able to reflect a narrative about the buildings' age; are transformed through the events and activities that the buildings witness; encourage an awareness of and engagement with the passage of time; are able to resist the elements while still reflecting material change over time. A pallet of sympathetic colors and textures will be

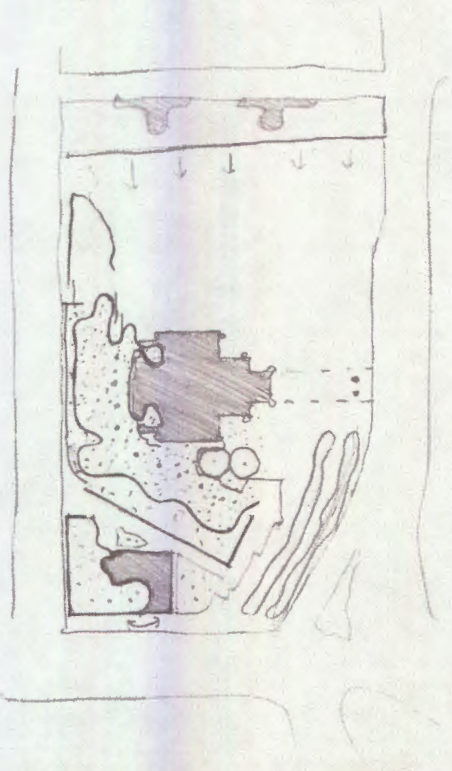
hard / soft edges.



used; light exposed concrete, glass and copper. Surfaces will be treated to correspond in some way to the existing surfaces through textures and colors.

- There will be visible formal and symbolic dialogue between new and old. The new buildings will twist in between the older buildings, forming vibrant courtyard spaces. New and old will draw attention to each other through contrast and similarity. The asymmetry of the wrap-around building will contrast with the historic forms. Existing vegetation will remain where possible. The new avenue of trees along Long street will be a composite of existing and new.

old vs. New

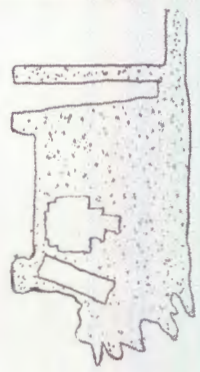


- Hard/soft: edge conditions on to Long Street will be soft and permeable. Buildings will back on to Loop with a harder edge. The contrast between heavy and light elements will be clearly expressed.

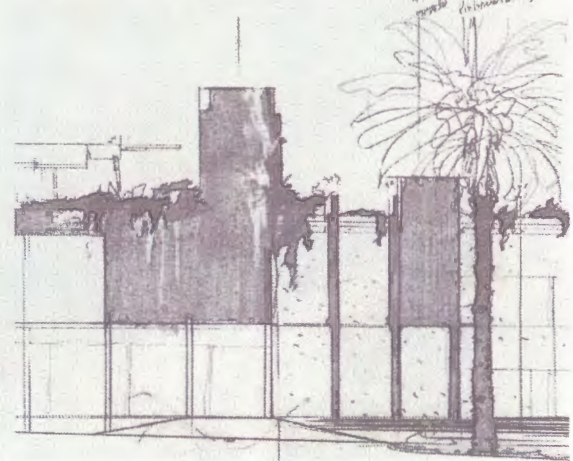
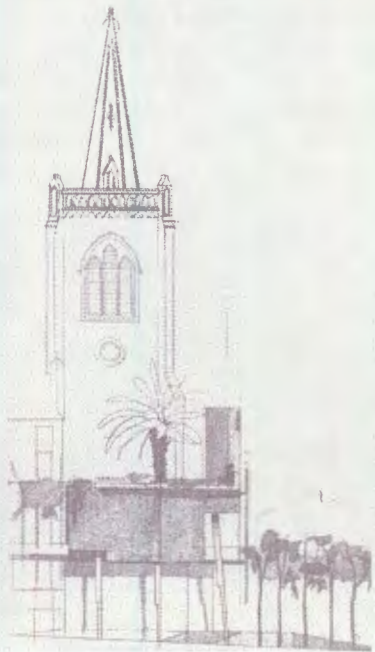
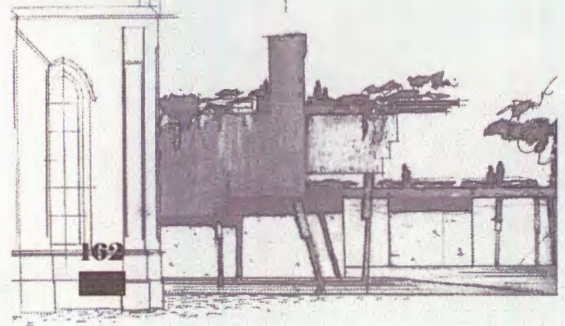
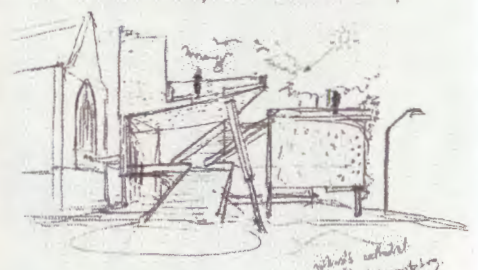
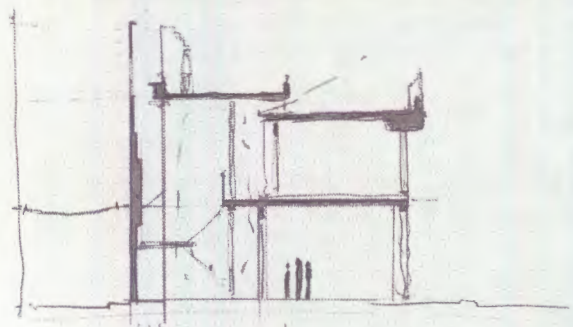
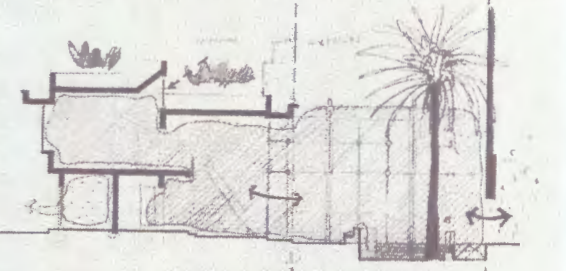
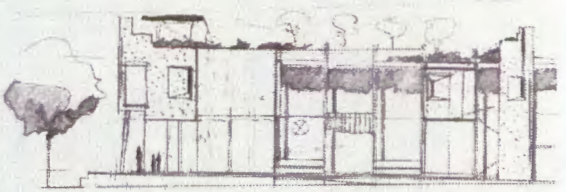
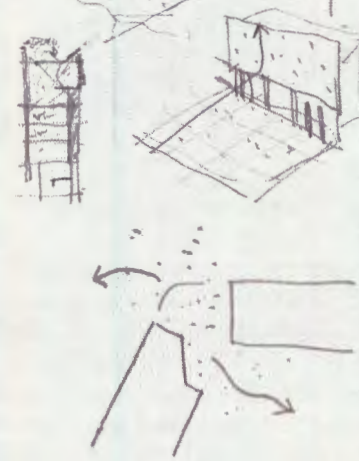
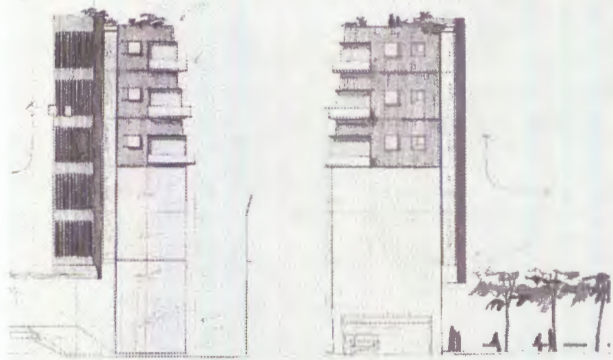
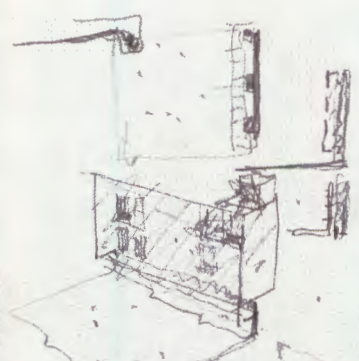
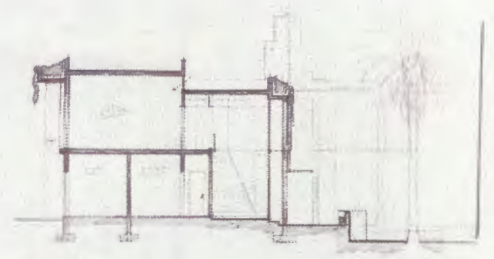
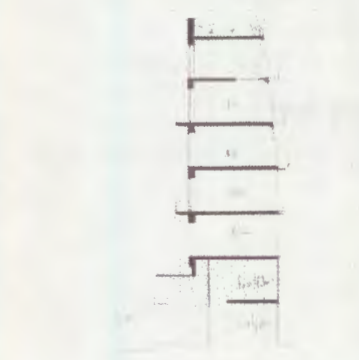
- The whole composition will be oriented to make best use of souther views of the mountain and surrounding landscape.

- Landscaping and vegetation will be used as building elements rather addendum. Vegetation will be used as part of the building's finish. Plants will be chosen that leave patterns and markings on concrete surfaces, which will make for ongoing decoration and variation in the building's surfaces.

REVIVAL



open space



Conceptual devel-
opment







E

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