Fig. 1.1

Fig. 1.2

Fig. 1.3

Fig. 1.4

Fig. 1.1-1.9: Site scenarios.

Chapter 01
The Brief

1.1 Real life problem statement

The existing student centre has, after 14 years of changing campus conditions, proven itself incapable of providing for the demands of its users. Although possibly appropriate at the time of construction, the rigid build form denied the possibilities of adaptation and today is ostracized by its social and physical context. The University of Pretoria took the decision to demolish the existing building which presents the opportunity to respond to the failures of the existing building while re imaging the larger site to become an event space capable of hosting any event on the social calendar of the University. The biggest challenge would be to ensure the longevity of the new intervention.

1.2 Main research question

With future development in mind, what must the urban square and student centre be in order to absorb the forces of change and future expansion, while providing a sustainable social environment? How can this new intervention stimulate coherency within a piecemeal development?

1.3 Sub research questions

First sub-problem: What aspects have to be considered in order to provide the building with a social function beyond its programme?

Second sub-problem: What new response would be appropriate and ensure an intervention that can withstand the forces of growth and future transformations to its context? What must a building be in order to become a force in itself and a custodian of its environment?

Third sub-problem: What can a new intervention (on urban- and building level) do in order to provide the necessary complexity and coherence, within a piecemeal development, in order to allow the user to experience the whole?

1.4 Assumptions

Assumptions have been made regarding to the political and socio economic situation within South Africa. Is of paramount importance that new interventions face up to the possibilities of the situation in South Africa where crime becomes a small scale difficulty. It is therefore assumed that in a few years time residents and students will be safe along their routes of travel and spaces where social activities takes place.

The assumption is made that the Heritage Committee will allow the upgrading of the Roper Street spine at the cost of some smaller Residential buildings to the north of Roper Street.

It is also assumed that collaborative funding (private and government) will be made

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Fig. 1.5   Fig. 1.6   Fig. 1.7   Fig. 1.8   Fig. 1.9

available for this project.

In this dissertation it is assumed that the existing student centre will be demolished, reasons for its failure will not be investigated.

1.5 Delimitations

Future growth and urban changes will be briefly discussed although the premise for the study would be to find ways of creating an intervention that becomes a pinnacle in the urban environment. The new development will become a force to respond to in future and therefore no calculations or possible future growth data will be used as a measure.

1.6 The client

The client for this project would be the University of Pretoria as a company since they own the land which is proposed to be developed. In this project the stakeholders would play a much bigger role. Stakeholders include the students, the general public and the University. The new development would be designed around the social needs of the students and the public,

1.7 Intervention

Building hypothesis
The social classroom

The opportunity presents itself to respond to the contemporary language of Old Duxburry Road. Responses can be formulated by looking at the new Lecture building and the new Law building. The street has the latent potential to become a contemporary edge to the historical precinct. Existing campus buildings relate in character through a distinguished architectural language that presents the opportunity of abstracting this language into a contemporary response that will strengthen the character relationship to campus architecture. The site requires a defined northern edge acting as a filter element drawing in pedestrians from the existing pedestrian system with an ambiguous definition between the dense urban side (north) and the open space (southern side).

Programmatic considerations:
The programme of the existing student centre with additional functions such as rentable office space for researchers etc. will be incorporated. The programme must be flexible in order to allow possible social events to occur. Promotion of these programmatic functions can happen on the northern facade facing the urban edge, being preamble to the 'new' character of the site. Socializing spaces ranging from quiet, more intimate, to buzzing vibrant, dynamic spaces are needed to comply with the demands of the social classroom.

The main function of the building will be to conduct a symphony of events happening in the new precinct while respecting the narrative of the site in a formalized manner. The building platform must function as a vantage point to the different stages and the open space as a whole. Formally, the complex fusion of grid systems, provide clues as to the appropriate footprint. Outside spaces should be pulled into the building and even spill over into the urban side. It will therefore be very important to consider microclimate as an organizing element for social interactive activities. ■

Chapter 02

Negotiating a Function beyond Programme

2.1 Introduction

The purpose of this section is not to find a definition for function, but to explore the possibility of separating function and programme in order to identify the performance of an intervention within its context. The understanding of performance will generate a concrete framework hosting the internal programme. By reinforcing this framework with appropriate responses, the intervention is expected to be more capable of sustaining its original programme and in the event of any change in programme; the building will still be able to perform optimally within its environment. In order to understand the logic and beauty of any urban environment it is necessary to employ function as a layering system. This system needs a clear hierarchy of issues in order to formulate an appropriate response. *"To construct the spaces in which we can abide and understand our world, we need to build in a sense of permanence, reality and revelation. Paradoxically, it may be those aspects of architecture that strike us as most old-fashioned, most restrictive and most elitist that might let this arcane profession perform a critical function in our society."* (Adigard, 2000:31)

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Fig. 2.1

Humanities Building:
Apart from functioning as a very prominent edge between public and student life it also forms a landmark assisting in campus legibility, regardless of programme.

2.2 Functional attitudes over time

There is no doubt that "function" suggest the programme build into any intervention or performing any part thereof. The question becomes a little more complex when defining the "role" of an intervention within a family of buildings or urban environment. In many instances the latter is downplayed at the cost of a building with the propensity to withstand change and growth.

One of the most anticipated attitudes towards function during the modern ethos and even today is programmatic utility taken up in the words of Louis Sullivan of the Chicago School: "Form follows function". This dialogue denies urban expansion due to the lack of coherence between the bodies that explain the whole (Alexander,1975:105). Many buildings portray a circulatory function with importance given to elements connecting programmatic spaces. "Charles Garnier's Paris Opera (1861-75) included large areas for circulation and milling around as he realized that seeing or being

seen was just as important as going to the Opera"(Barker, 2003:4). Other buildings making use of this attitude is the UCT Sports Centre by Roeloff Uytenbogaardt with its architectural promenade. Symbolic functional attitudes allow designers to present their buildings as mimicking an action relating to the programme.

"Eero Saarinen designed the Trans World Airlines, now Kennedy Airport which symbolically conveys a sense of flight" Barker, 2003:5).

Pieter Eisenmann believes form itself must be the generator of the architecture. It is self-referential, abstract architecture and his attitude is therefore a denial of function.

Steward Brand analysed functional attitudes in the following way. "The first, echoing the whole length of the 20th century, is 'form ever follows function.' Written by Louis Sullivan, the Chicago high-rise designer, it was the founding idea of

Modernist architecture. The very opposite concept is Winston Churchill's "we shape our buildings and then they shape us." "These were clairvoyant insights, pointing in the right direction, but they stopped there" (Brand, 1994:3). Brand continues with an attempt to finish their "incomplete" statements. According to him Sullivan misled a century of architects into believing that they could anticipate function. According to the current state of our cities the influences are still very evident. Brand reconstructed Churchill's passage to relate to the architectural profession's inability to provide suitable responses: "First we shape our buildings, then they shape us and then we shape them again –ad infinitum." (Brand, 1994:3).

The views illustrated in these passages state the importance of function as the performance of a building within a whole. The buildings around campus have outlived their programmes but still play an enormous

Fig. 2.4

role in the identity, character and memory of the environment.

Attitudes towards function over time mostly had formal or internal spatial connotations but hardly ever considered urban conditions. Bernard Tschumi began to explore notions of connections between programme and environment. Tschumi always searches for the "unprogrammed" spaces and their potential. His attitude towards function is founded in the choice of programme and relationships between them. Sometimes these programmes are in conflict and act as catalyst for unexpected happenings that he calls "the event" of a building or development. This attitude explores a connection between utilitarian and symbolic function that can become a force within an environment. The following section will explore ways to generate a functional attitude towards a building, seen as an edge to an urban space.
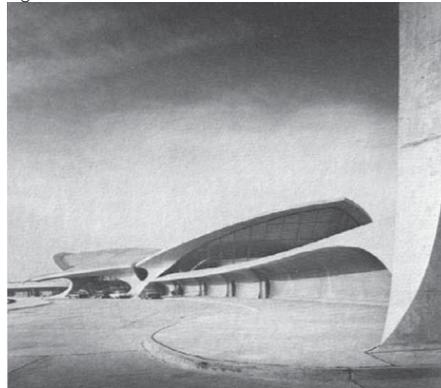
Fig. 2.2 (Right) Kennedy Airport, USA

Fig. 2.3 (Far Right) University of Cape Town Sports Centre, R. Uytenbogaardt

Fig. 2.4 (Top) Louis Sullivan, "Form Follows Function"

Building Edge and *b e y o n d*
2.3

Fig. 2.5

"We know that nothing exists in isolation and that everything is interconnected, but the way we approach design can often prevent us from addressing the complexity of environments in the broadest sense" (Righini, 2000:299)

The success of any public building is inherent within the space around it. Usually these spaces are in turn reliant on the method of definition for its vitality. There are many ways designers can make buildings that claim these spaces, but finding the appropriate response should be the biggest consideration. The following issues should be considered when designing functional edges and imaging public spaces in order to provide the building with the capacity to sustain a programmatic configuration and character.

2.3.1 Conceptual function

Building concepts often become known to architectural professionals and non-professionals depending on its successful execution. This generates a general understanding within the community about the architecture that makes up the fabric of their everyday lives. One local example is "Studente-Oord" Church. The architect used the concept of a bride to explain its form. The "bride" concept was executed quite literal and although visually understood by all its users forms an integral part of the religious believes as the main programmatic consideration. On a residential scale, the Weavers Nest residence in Higgovale, Cape Town, used the concept in a more functional way. The building expresses the way weavers safeguard their nests between the trees, while formally making use of timber walls that relates to the birds' nests.

2.3.2 Legibility of edge conditions

Edges must be programmed according to visibility. The programme of public buildings usually can be divided into groups of programme that require appointments and less exposure while others are dependent on publicity in order to function optimally. Circulation routes must be defined in order of hierarchy to avoid confusion. Services, like ablution, must be private although highly visible. The Walter Sisulu Square of Dedication in Kliptown, Soweto by StudioMAS Architects and Urban Designers (2006) is edged with two long buildings and a lot of effort went into legibility. "A coherent structure has been created that connects into the existing surrounding fabric. Legible elements with specific identities have been designed – landmark nodes, entrances and thresholds and paths of movement. On an urban scale, the square is identifiable as a symbolically significant site within the city.

Fig. 2.6

Fig. 2.7

Fig. 2.8

Fig. 2.9

Fig. 2.10

The Square itself is easy to interpret – the forms are derived from recognizable South African elements. "(Digest 2006/2007:22)

Edge conditions are highly dependent on the relationship between inside and outside. Ambiguous relationships unconsciously make the passer by part of the intervention or create awareness of more private areas. Blurred relationships create rewarding internal spatial experiences with prominent connections to external spaces. In the Western Cape there are three examples using this principal namely the UCT Sport Centre and Houtbay Library, both by Roeloff Uytenbogaardt and Beau Constance in Constantia Nek by Jon Jacobson & Anton Barnard. One example in Durban, the Durban Country Club, Half Way House by Stauch Vorster also incorporate this idea.

Fig. 2.5 Studente-Oord Church building, Pretoria

Fig. 2.6 Weavers nest, Higgovale, Western Cape

Fig. 2.7 Walter Sisulu Dedication Square.

Fig. 2.8 Beau Constance, Constantia

Fig. 2.9 Houtbay Library entrance

Fig. 2.10 Half Way House, Durban

2.3.3 Spatial or structural relationships towards the surrounding

New buildings do not only need to provide for the exterior spaces created solely by them but also for the spaces created between the new and the existing. These spaces become evident of the difference in edge conditions of the area. Ideally new buildings should attempt to give back to the buildings around it with the creation of positive usable space between new and old. Many designers prefer to use these spaces as service areas that limit potential positive connections. At the Institute of Infectious Disease and Molecular Medicine on the UCT Campus (2005) Gawie Fagan uses the space between the old and new building as circulation while emphasizing views of the mountain and the contrast between the old and new composition. Landscaping elements also plays an important part in knitting together the edifice and environment.

Attitudes towards this aspect can be mainly divided into two groups. Firstly, buildings using structure to abstract imitate the most important features of the landscape. This attitude is used in The Tree House, Higgovale, by Van der Merwe Miszewski Architects. Secondly, buildings can act as platforms from which the landscape can be experienced and provide the user with framed views of important features. Alberto Campo Baeza with the design of the Belvedere house, Spain (2000) outlined two attitudes to the experience of the landscape from inside a building. "Man in nature" and "nature at a distance". This is also the difference between a framed view and an underlined view.

Fig. 2.11

Fig. 2.13

Fig. 2.12

Fig.2.11 UCT Sports Centre (walkway)

Fig.2.12 Belvedere house: (Left) Man in nature and nature underlined.

(Right) Nature at a distance, nature Framed.

Fig.2.13 Belvedere house, Spain (2000) Alberto Campo Baeza.

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where programmatic activities meet performance activities

Bernard Tschumi in his Seminal, Event Cities, explain how manipulation of programme can benefit the unexpected event, the importance of this is duly noted although his explanations only place emphasis on the programme and do not place it in context with the physical build. The success of his theories depends greatly on the pillars that connect to the internal programme and the external performance event. These pillars can be described as services, spaces or circulation that is not exclusively assigned to the internal programme. In some situations expressed building skin and structure can promote the idea of event. The importance of these events (as positive building blocks for urban vitality) becomes clear when decisions are made concerning changes to surrounding spaces. It is a known fact that existing buildings respond to new interventions, whether it is by increased security, or more positively by allowing the buildings to learn from its positive environment (Brand, 1994:33)

The initial event can be sparked by responding to human emotion and rest or movement.

Architecture has the ability to entice human emotion. The effect of this can be experienced around museums and memorial sites where users interact with a lot more freedom. Emotion can also be triggered by the physical attributes of architecture, like light, colour, texture, scale and expressed structure. Movement can be easily manipulated by the expression of circulation routes and spaces where these intersect. Vertical circulation becomes a multipurpose device that can break the boundaries of programme and form part of the performance of the building. Staircases and landings generate opportunities for unexpected interactive activity.

2.4 Negotiating narrative complexity and meaning:

"...places saturated with meaning. Densely imagined through overlapping histories and intersecting current events, they resist being turned into 'cleared' sites, that is, sites 'received as unoccu-pied, lacking any prior construction and empty of content.' A multitude of stories compete for attention, and do so with conflicting story lines. These are anthropological places whose occupants live in history, whose identity has not been formalized, and whose intellectual status is ambiguous" (Burns & Kahn, 2005:39).

It takes years for the formation of complex memories on a site while new intervention can separate the narrative from the build environment and limit the history to the archives. It is very important to understand a site and its history in order to use architectural space to commemorate the past. Apart from the site it is also necessary to look at the building type in the South-African context. Abstract responses to narratives can be used as the glue that holds together the site and the program while underpinning the performance of an intervention.

"The new Constitutional Court is a remarkable realization of the essence of small narratives. It incisively suggests South African past requires inverse narratives. It takes the South African Judiciary's collective view expressed in the competition brief as absolute architectural value. Urban Design, planning, architecture and interior architecture are not seen as separate processes but as one single unified process" (Digest, 2006:221).

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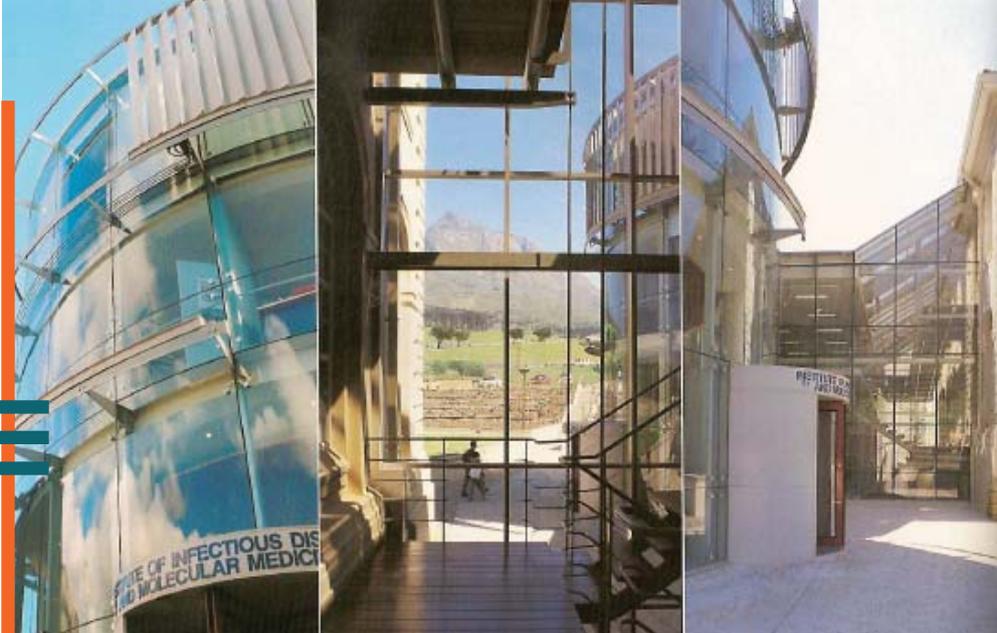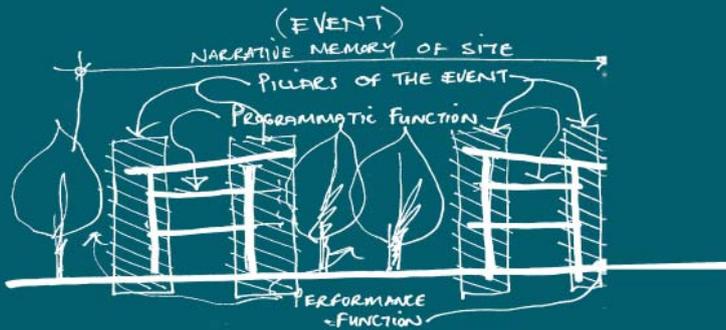
Fig. 2.16

Fig. 2.15

Fig. 2.14

Fig.2.14 Event Pillars as building facade.

Fig.2.15 Event Pillars as edge

Fig.2.16 Institute of Infectious Disease and Molecular Medicine on the UCT Campus (2005) Gawie Fagan.

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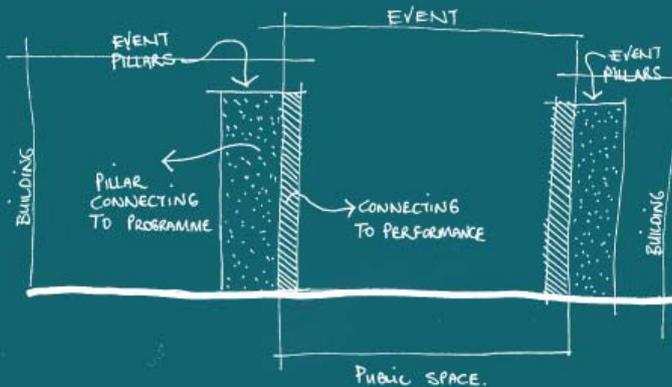
2.5 Conclusion

In the past function were more involved with responding to program than a conscious deliberation of the environmental issues that inform the design process. A paradigm shift is needed to produce buildings capable of offering much more richness and layering systems to a complex society. Richness in concept and a general understanding thereof positively contribute to the sense of place while becoming the unwritten communication between architecture and user.

Legibility optimizes circulation and building usage while insuring a stimulating user experience. During the design process the user community of a building is often limited to the people committing to entry. Surrounding buildings host the custodians of the previously 'empty' site and including them into the design will strengthen community bonds.

By formalizing the existing narrative of a site it opens a new book with a rich preface iconic to previous users of the site. This formalization colour-code the building as a historical icon while taking contemporary to new heights.
Responding to programme will always be very important, but shifting the focus can make timeless functional buildings. ■