

7.0 DESIGN APPROACH

7.1 ARCHITECTURAL IDEAS

SENSE OF PLACE

In addressing the problem statement in the Introduction (Chapter 1:4) there is a need to create the sense of place at the intersection. The ideas of Christian Norberg-Schultz are relevant in trying to establish just what is needed to achieve this.

Norberg-Schultz (1980) argues that Modern settlements of which Mamelodi is an example, lack spatial enclosure and a good building density. Buildings are freely placed within open space. Nodes, paths and districts have lost their identity and the landscape has become deprived of meaning. Character is needed in an environment to create a sense of place.



Fig.57: The present buildings of University of Pretoria do not relate to the main roads and the public in the areas (author).

The built environment should regain urban foci as places for common living and communal gathering. Buildings need to be meaningful sub-places that relate to the landscape and the urban whole. A characteristic environment must be established in the city with a clear distinction between the public and the private domains.

The qualities that gave buildings character in the past have to a large degree been lost. Modern buildings exist in a nowhere that space flows freely between the buildings. True urban 'insides' are lacking in our cities.

Spatially, the modern city is based on a confusion of scales- a pattern valid on one level has been transferred to another where it is less successful. Qualities of Modern buildings such as open flowing space and geometric minimalism work on a building scale but should not be transposed to the urban scale. The subtle interplay of forms becomes sterile monotony (Norberg-Schultz, 1980:195). Although the intentions of the Modernist were good, the built environment really fell short of what they aimed for.

The indiscriminate application of Modernist ideas on a city scale has led to many monotonous new developments. The essence of settlements is gathering but modern city design aimed for openness which neglected the notion of gathering. The direction architecture should take **now is architecture as the recovery of space as it will be the case at the intersection.** The concept of place unites contemporary architecture with architecture of the past, and this will bring us back to the reality of **things.**

Man must be able to dwell poetically to make his life more meaningful. Rich stimuli, in a meaningful environment possessing a character of its own, have stimulating effects on people (Norberg-Schultz, 1980:202) as the Centre's buildings are planned to have on the local community. Pictures showing examples of Charles Correa's work that evoke a feeling of place:

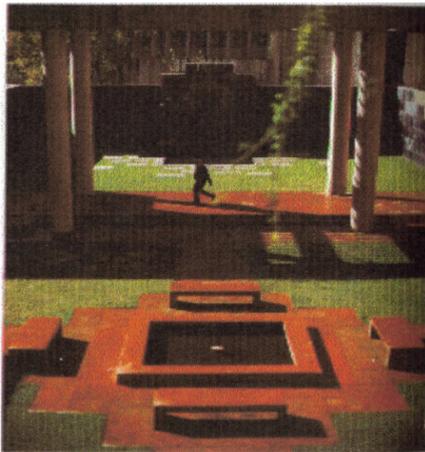


Fig.58: (Framton, 1996:188) showing outside working area with colonnade of columns.



Fig.59:(Framton, 1996:188) showing the corner of the building



Fig.60: (Framton, 1996:188) showing the courtyard with pergola and open to sky.

CRITICAL REGIONALISM

In his essay "The status of man and the status of his objects", Kenneth Frampton speaks of the modern public building as having been atomised into a network of abstract institutions; what can be viewed as the dissipation of the "agora".

"The world has lost its power to gather people together, to relate and to separate them " (Framton, 1996:188).

Modern planning is monotonous and lacking in character. Suburbia speaks of individualism with the private homes on private plots of land that don't relate to the street. The private realm has been placed above the public realm in importance to the in modern design, but both are needed. Modern buildings have turned their backs on the public realm offering little interaction with pedestrians on the street level. The emphasis now is on the individual in his apartment or office high above the street level activity, leaving the street edges sterile. The Centre will enhance the public and private interaction of spaces within the centre and at the intersection.

In the essay "Critical Regionalism", Frampton writes that what makes architecture regional is the vernacular style of the area, the climate, available materials and craft associated with the people living in the area. There is a "tension between universal modernization and the idiosyncrasy of rooted culture." There should be a "concentration on issues which relate directly to the specific place while adapting methods and approaches drawn from outside".

Points of discussion drawn from the paragraphs above will specifically be addressed in the design of the Centre:

- awareness of the place
- open to the sky spaces
- the tree as symbol of a place
- spatial enclosure-containment-urban insides
- character in the development
- sense of space – buildings a sub –spaces

- gathering points needed in the urban environment
- distinction between public and private domains
- creating a stimulating environment
- sense of place as a meaningful social 'inside'
- Education through architecture.

7.2 DESIGN INFLUENCES

ALVAR AALTO AS A CRITICAL REGIONALIST

The work of Alvar Aalto is a very good example of critical regionalism. Aalto worked in the Modernist tradition but included cultural and climatic characteristics in the design of his buildings. His buildings are very definitely site specific with great care given to the positioning of the building on the site and how it connects with its surroundings. The landscape and nature are integrated into the designs and building landscape work together in harmony.

Aalto's use of materials is particularly influential on the design of the Centre's buildings in this thesis. In his brick buildings, Aalto expresses the decorative and textural qualities of the brick. The Brick is used in innovative ways that enhances the visual effect of a wall or plane. The effect that light can have on such surfaces is exploited, making light an important participator in the overall effect of the design, and allowing it to bring out the sensual qualities of the materials.



Fig.61: (Weston, 1995:115) an outside wall of a house by Aalto with brick and tiles used to create a very decorative effect.

CHARLES CORREA'S WORK

The buildings of Charles Correa are responsive to the environment, specifically the climate. The climate in India and South Africa allows the exterior spaces connected to the building to be open to the sky. These spaces become important in the everyday lives of the inhabitants and around which many activities revolve.

In many of the buildings, Charles Correa uses a single roof in one plane that covers the building, uniting different spaces and elements under one roof. Open courtyard are shaded and thus assist in the natural cooling of internal spaces

A strong influence in this thesis is Correa's design of courtyards. They are well proportioned and scaled relative to the interior spaces and mass of the building. Interior spaces open out onto the courts, which are always paved and shaded, and defined as enclosed spaces. Other architectural characteristics influencing the Centre's design:

- the order, axes and pathways created by circulation routes
- natural lighting through skylights {see Fig 62(3)}.
- solar control through the use of concrete or wooden fixed louvers, or steel or bamboo rods performing the same function
- light revealed as a tectonic element by the patterns of shadows cast by shading devices onto floor and wall planes (3)
- the vibrant use of rich colours either through the use of paint or brightly coloured materials
- the simplicity and minimalism of the designs
- technology and materials are suited to the context in which the building are constructed.
- public buildings are open on the ground floor level and easily accessible (2)
- buildings are simple but very successful.
- the sensual quality of the buildings
- material use: rough concrete and face brick, coloured natural stone, painted plaster (5).

- the relationship of the buildings to nature and outside spaces
- the spatial hierarchy within the building ranging from large-scaled semi-public/public circulation spaces to small private spaces



Fig. 62. Space relationship and characteristics at Construction Centre (author).

In Correa's buildings, external spaces don't exist as placeless open courtyards; rather they possess an intense feeling of place and meaning. It is hoped that the same quality will be achieved in the design of the Centre.

BALKRISHNA DOSHI

The successful application of modern building methods in a developing country illustrates how foreign trends can be successfully assimilated into a local context. Balkrishna Doshi's buildings in India are in the Modernist tradition but in keeping with the vernacular style of the context. Cultural references in the buildings connect them with the past, and the resulting style is contextual. Some of the characteristics of his design which the Centre will apply in its design are:

- the use of concrete and brick together, expressing the concrete as a structural frame and the brickwork as infill panels
- material use: rough concrete and brickwork which are robust materials needing minimal maintenance
- inexpensive materials suited to economic climate and the local labour force
- simple building forms in the Modernist tradition
- the order of the plans: buildings are organized around the main circulation routes

7.3 CRITICAL REGIONALISM IN THE TARGET AREA

Relevant architectural design must take its clues from the local topography and natural or manmade parameters of its surroundings. In the design of this Centre a relevant aesthetic can evolve from a closer integration of art and architecture. An integration of art and craft into architectural design supports local talent, increases the uplifting character of architecture and provides opportunities for members of the community to become creatively involved

Relevant and functional architecture will also be applied with regard to site and local climate. Most of the buildings around Pretoria are what is called Pretoria Regionalism or Third vernacular. With this as guideline the centre will make economic use of locally/naturally

available and industrially produced materials with an empirical response to climate, all of which tempered the emergent tenets of the Modern (Fisher 1998:123):

“It could be argued that regionalist architecture will be generated by the designer directly responding to the following aspects in a place specific way: climate, materials, site, defence, economics and religion. To this could be added the particular cultural expression of the community” (Fisher 1998:123)

Pretoria Regionalism is characterized by deep shaded eaves and verandas, low pitched roofing sheets where possible, sun-shy windows and sensitivity to landscape and land features. As Pretoria has an established brick aesthetic, bricks are used where possible whether plastered or un-plastered. Natural locally produced materials will be used as far as possible, supporting local business.

7.4 SUSTAINABLE BUILDING DESIGN

“Sustainable development is development which meets the needs of the present without compromising the ability of future generation to meet their own needs.” (W C E D. 1987:4).

The principles of sustainable building design were applied in a general and specifically to selected buildings. The proposed buildings were designed as

new and healthy entities. The buildings have to be an integral part of the site. Buildings are positioned with regard to the site's form and orientation.

Use of local materials from the vicinity supports local businesses, facilitates transportation arrangements and contributes to sustainability in the wider sense of the word. It is expected that the materials used are energy efficient, using minimum energy in production, transport and use. The materials chosen are durable, long lived and easy to maintain and repair.

A loose fit approach was taken in regard with the design to ensure that the buildings could be adaptable for future use, as well as for prolonged life. Individual spaces might accommodate a variety of uses, some not foreseen in the original design.

7.5 CONCLUSION

The General CONCEPT of the design will be that the buildings should be designed in such a way that it the construction uses local skills and unskilled labour, supporting the idea that the community should be actively involved in the construction of the facilities. In helping with construction of the Centre, a sense of community pride and social upliftment is achieved, making them feel needed and creating a sense of ownership towards the facility in general.

"...One must look at the way people build shacks and say 'its not an ideal unit of accommodation and one is not legitimising that kind of poverty, but in fact what people are doing is they're taking action for themselves and creating something and that, surely ,is the beginning of

something'. That attitude started to become the basis of my approach to design (Joe Noero, architect, in an interview with ADA magazine).

In conclusion, the character of the design for the Centre will be of richly coloured and textured enclosed and interior with inside and outside spaces connected and able to function together or separately.

On the street edge the building will present a city scaled façade, robust but inviting pedestrians off the street. The roof will facilitate a transition of scales from the street façade to the lower smaller scale of the interior courtyards.

The building will be legible, with clearly defined main pedestrian entrance at the main entrance to the campus and the intersection corner. Some of the circulation routes will be visible from the streets.

The materials used will be readily available in the local context; steel and concrete will be used for structural frame and brick /concrete brick for wall in-fill panels with steel roof structure. Flooring in public parts of the building will be textured natural stone or brick.

People will be able to orientate themselves in the building around the walkway spaces and as many rooms as possible will have a view out onto the courtyard.

Using the above architecture ideas as basis for design, the following design guidelines will be followed:

- The connection between **interior and exterior** will be a basic design principle to influence the design of the centre. The spatial relationship between the various elements should be experienced as a whole.
- The climatic experience of the centre is very important. The climatic **passive design principles** will play an integral part in the individual buildings, as well as the centre as a whole { see Fig 62 (3)}.
- The centre will enhance the aesthetic quality of the area. **Bright colours** will be used to create this effect {see Fig 62(6)}.
- It will be important for the community to be able to **identify** with the Centre and to perceive it as a vehicle for personal and communal improvement and a gathering place {see Fig 62 (6 and 2)}.
- The centre will be designed in such a way that it will become an object of **beauty** within the community – a place that inspires a community's pride {see Fig 62(2)}.
- The architectural language should reflect the richness of combining both **AFRICAN AND WESTERN CULTURES** acknowledging the contrast, yet celebrating the unification thereof.
- Mono-pitched roofs with deep eaves {see Fig 62(7)}
- Modular and structural frame with infill for easy adaptability and flexibility {see Fig 62(4)}