



## CHAPTER 3: PRECEDENT STUDIES



# CHAPTER 3: PRECEDENT STUDIES

## 1. INTRODUCTION:

Besides the theoretical framework, practical guidelines are also necessary for the design of the proposed empowerment centre.

Therefore, precedent studies addressing urban regeneration, tropicalism and tectonics, tropicalism and place-making, as well as community empowerment are investigated in this chapter.

Urban regeneration is needed in Hell Ville because of urban sprawl and degradation of built and natural environments. The city of Curitiba in Brazil has experienced a very successful urban regeneration programme as demonstrated in the first topic.

In the second topic, Contemporary Australian Tropical architecture is investigated. This architecture offers a range of domestic and institutional typologies, relevant to the proposed empowerment centre's urban and tropical contexts.

Thirdly, Geoffrey Bawa's architecture is one of the most successful ones in terms of spatial organisation and hierarchies in a tropical setting. Some of his spatial principles are investigated in this section.

Finally, community empowerment is also investigated, from community projects to community centres, in order to understand the different processes undertaken to uplift the community members both socioeconomically and spatially.



## 2. URBAN REGENERATION PRECEDENT STUDY: CURITIBA, BRAZIL

Urban regeneration is needed in Hell Ville because of urban sprawl and degradation of built and natural environments.

Curitiba offers holistic examples on how little can be done to achieve major positive transformations in a city, with the cooperation of all stakeholders including the citizens and authorities. The urban initiatives undertaken in the 1960's, facilitated by its then-Mayor Ivo Arzua with Jamie Lerner, the urban planning team leader, consisted of small catalytic and holistic transformations, such as the creation and adoption of a new urban policy, which involved the promotion of public transport, pedestrianizing main vehicular and activity strips, giving away free bus tickets in exchange of sorted waste, placing appealing yet functional and very comfortable bus stations at interchanges, placing sorting and recycling bins in the streets, etc. Consequently, the huge transformations created by these small changes are translated through the mingling of low and high income groups enabling better security in public places and re-integrating all social groups into the city life.

The relevancy of the Curitiba small but considerable initiatives can be transposed in the Hell Ville urban regeneration. As a first step for urban regeneration programme, environmental issues are to be adopted by adopting a cleaning and landscaping agenda in parallel with a recycling plan in the streets of Nosy Be (see Fig. 81). The next steps shall address public transport, like the Curitiba's catalytic bus station (see Fig. 82 & 83).

FIG. 80: AERIAL PHOTO OF CURITIBA CITY (PHOTO: [HTTP://EN.WIKIPEDIA.ORG/WIKI/IMAGE:CURITIBA\\_SEEN\\_FROM\\_ABOVE.JPG](http://en.wikipedia.org/wiki/Image:Curitiba_seen_from_above.jpg)).



FIG. 81: URBAN COLOUR-CODED SORTING REFUSE BINS: BLUE FOR PAPER, RED FOR PLASTICS, YELLOW FOR METAL, GREEN FOR GLASS AND BOTTLES, AND BLACK FOR ORGANIC WASTE (PHOTO: HAJA RASAMBAINARIVO, MARCH 2006).



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FIG. 82: A CURITIBA BUS STATION (PHOTO: HAJA RASAMBAINARIVO, MARCH 2006).



FIG. 83: ANOTHER CURITIBA BUS STATION (PHOTO: HAJA RASAMBAINARIVO, MARCH 2006).



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## 3. TROPICALISM AND TECTONICS PRECEDENT STUDY: CONTEMPORARY AUSTRALIAN ARCHITECTURE IN THE TROPICS

The architecture of this specific region offers a range of domestic and institutional typologies, relevant to the proposed empowerment centre's urban and tropical contexts.

The followings are the different projects investigated in terms of tectonics relevant to tropicalism:

- Pee Wee Restaurant in Darwin, by Troppo Architects (see Fig. 84)
- Rozak House in Noonamah, by Troppo Architects (see Fig. 85)
- Sunshine Coast University Library, Queensland, by Bligh Voller Nierl in association with John Mainwaring and Associates (see Fig. 86)
- Kangaloon House in New South Wales, by Glen Murcutt (see Fig. 87)
- House and Studio in Taringa Queensland, by Rex Addison (see Fig. 88)
- Olympic Archery Building in Sydney by Stutchburry and Pape (see Fig. 89)
- Reeves and Hunt House in Sydney by Stutchburry and Pape (see Fig. 90)

From studying the Tropical Australian Architecture, the following relevant guidelines have been extracted to be implemented in the design of the empowerment centre in its hot and humid context:

- The structures are mostly frame typologies of concrete or steel, which in turn support lightweight roofs (timber or steel).
- Piloti structures seem very appropriate in a highly humid context, adaptable on any slope with minimal site destruction.
- The roofs are mono-pitched. Some of them change slope to maximise the south light and the surrounding views while keeping away heavy rains.

. The roofs are finished with corrugated steel sheeting to reflect heat and radiation, as well as to carry through the airiness and lightness perception.

. If pavilion structures are used, they would express themselves as independent entities with similar spatial frameworks and proportions in relation with the users and their activities.

. The circulation space in all the schemes is the most important feature since it is the element that ties the project together into a whole. It also maximises the views to emphasize its importance.

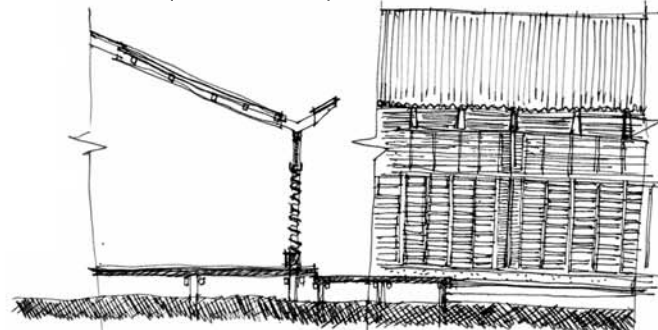


FIG. 84 : INTERPRETATIVE SKETCH OF THE PEE WEE RESTAURANT (AUTHOR, 2006).

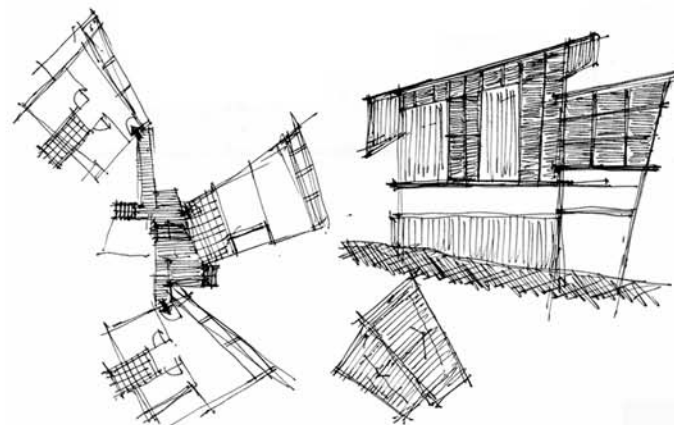


FIG. 85: INTERPRETATIVE SKETCH OF THE ROZAK HOUSE (AUTHOR, 2006).

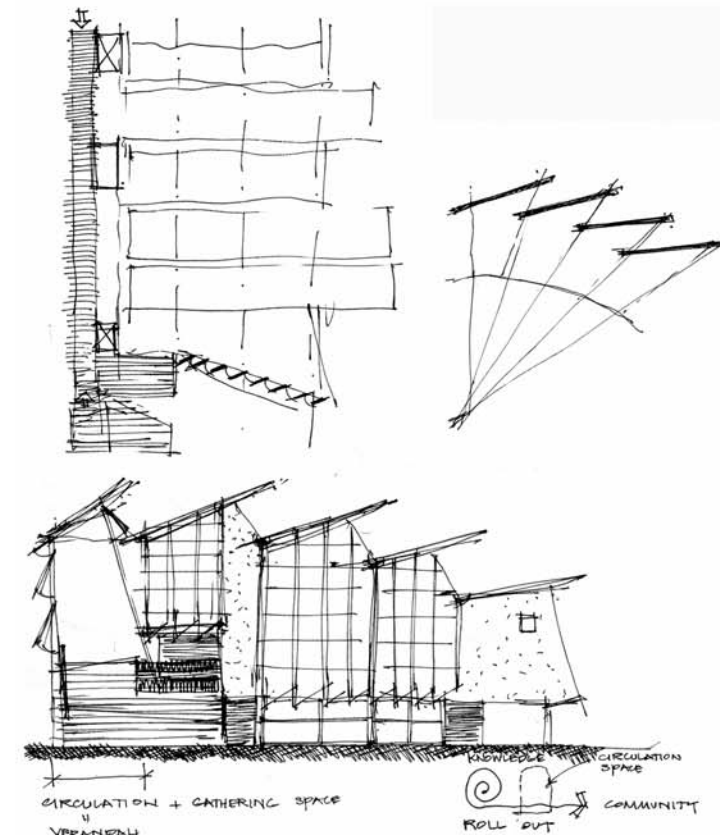


FIG. 86: INTERPRETATIVE SKETCH OF THE SUNSHINE COAST UNIVERSITY LIBRARY (AUTHOR, 2006).



FIG. 87: INTERPRETATIVE SKETCH OF THE KANGALOOD HOUSE (AUTHOR, 2006).

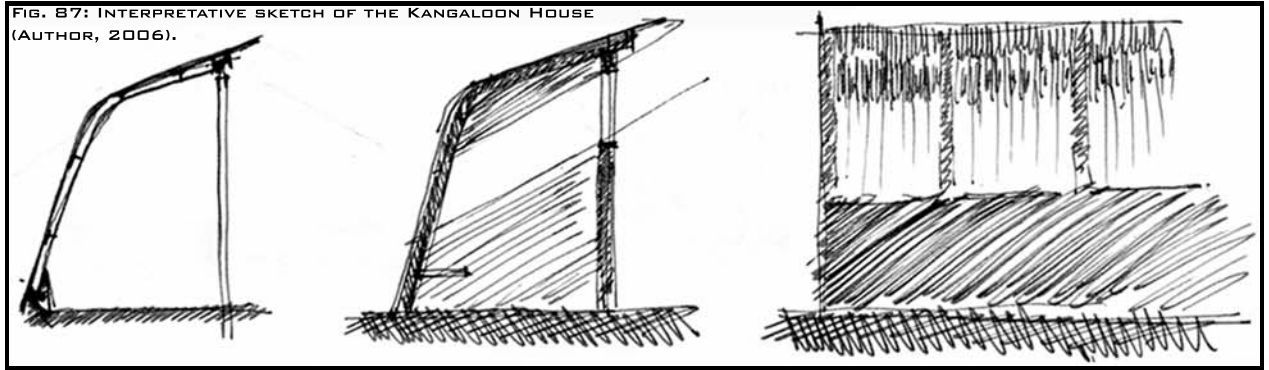


FIG. 88: INTERPRETATIVE SKETCH OF THE TARINGA HOUSE AND STUDIO (AUTHOR, 2006).

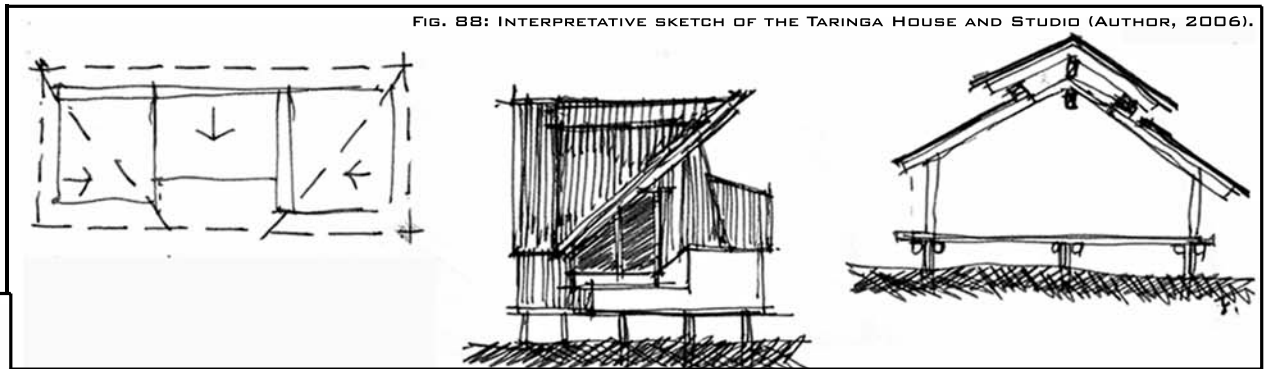


FIG. 89: INTERPRETATIVE SKETCH OF THE SYDNEY OLYMPIC ARCHERY BUILDING (AUTHOR, 2006).

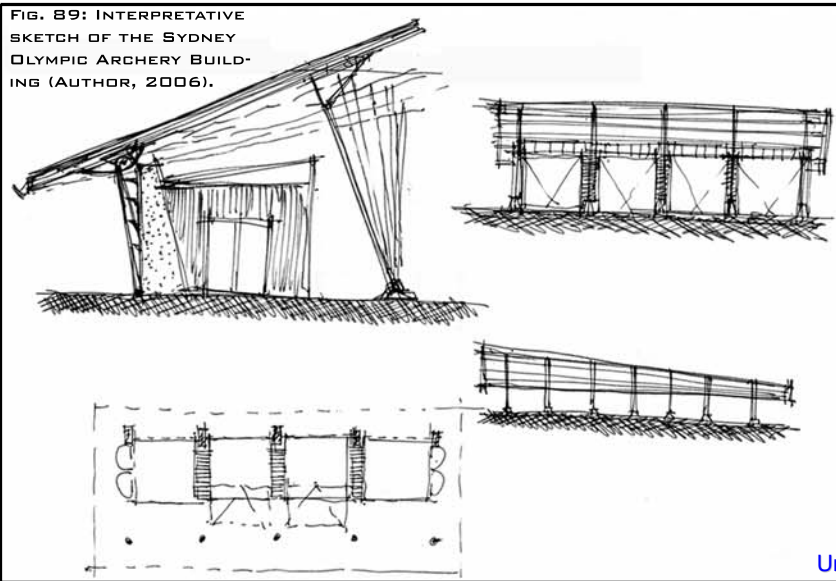
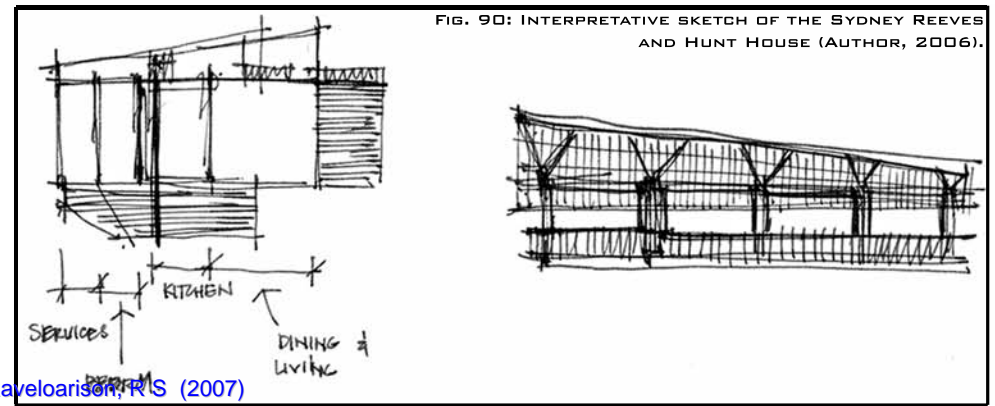


FIG. 90: INTERPRETATIVE SKETCH OF THE SYDNEY REEVES AND HUNT HOUSE (AUTHOR, 2006).



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## 4. TROPICALISM AND PLACE-MAKING PRECEDENT STUDY: SRI-LANKAN ARCHITECT GEOFFREY BAWA

Geoffrey Bawa's architecture is one of the most successful ones in terms of spatial organisation and hierarchies in a tropical setting.

The Sri-Lankan architect gives examples of ways to deal with a site's geography – topography, vegetation and climate – together with the clients' needs and space requirements. Most of his designs are driven by legitimised traditional precedents; they are "in and of the landscape" (Taylor. 1986: 11), translated by the introduction of public and/or very private courtyards – left natural or landscaped – in the interiors. The interiors are generally contained in walls and/or roofs – the main architectural element throughout his projects.

- In short, Geoffrey Bawa's architecture consists of:
- in and of the landscape (see Fig. 91)
  - in very close relationship with the geography of the terrain, whose characteristics are the topography, vegetation, vistas/views, light and shadow, and finally the climate (see Fig. 91 & 92)
  - fusion of man-made (building and artefacts) with nature
  - paradoxical
  - revisionist approach and use of very refined as well as legitimised references

Therefore, the significant elements to test in the empowerment centre in order to bring the Hell Ville *ethos* are the following:

- . the circulation routes in relation with the outside linkages - physical and visual (see Fig. 93 - 96)
- . materiality (see Fig. 97)
- . the inside-outside interdependencies (see Fig. 91 - 96)

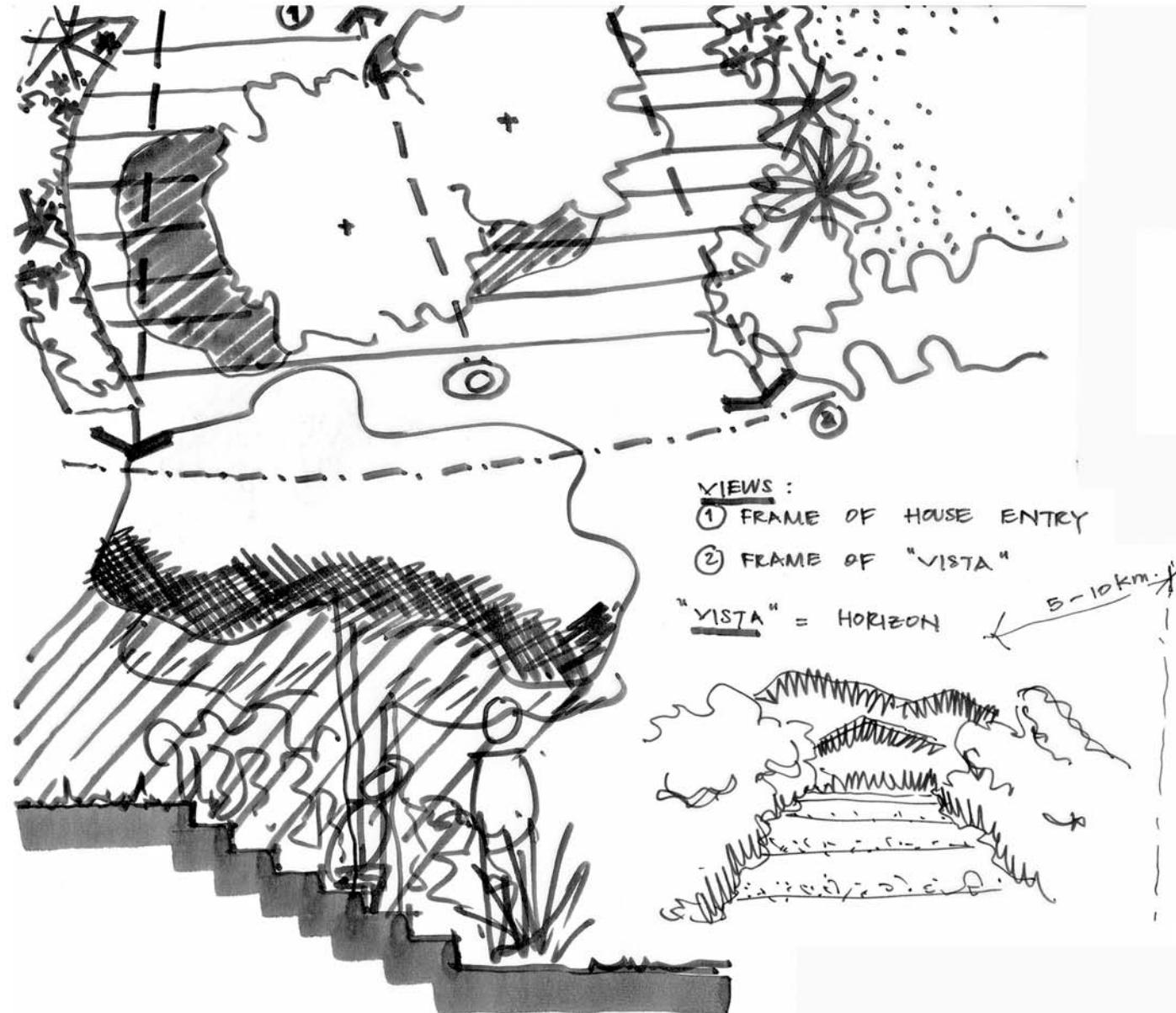




FIG. 92: INTERPRETATIVE SKETCH OF GEOFFREY BAWA'S DE SILVA HOUSE IN COLOMBO (AUTHOR, 2006).

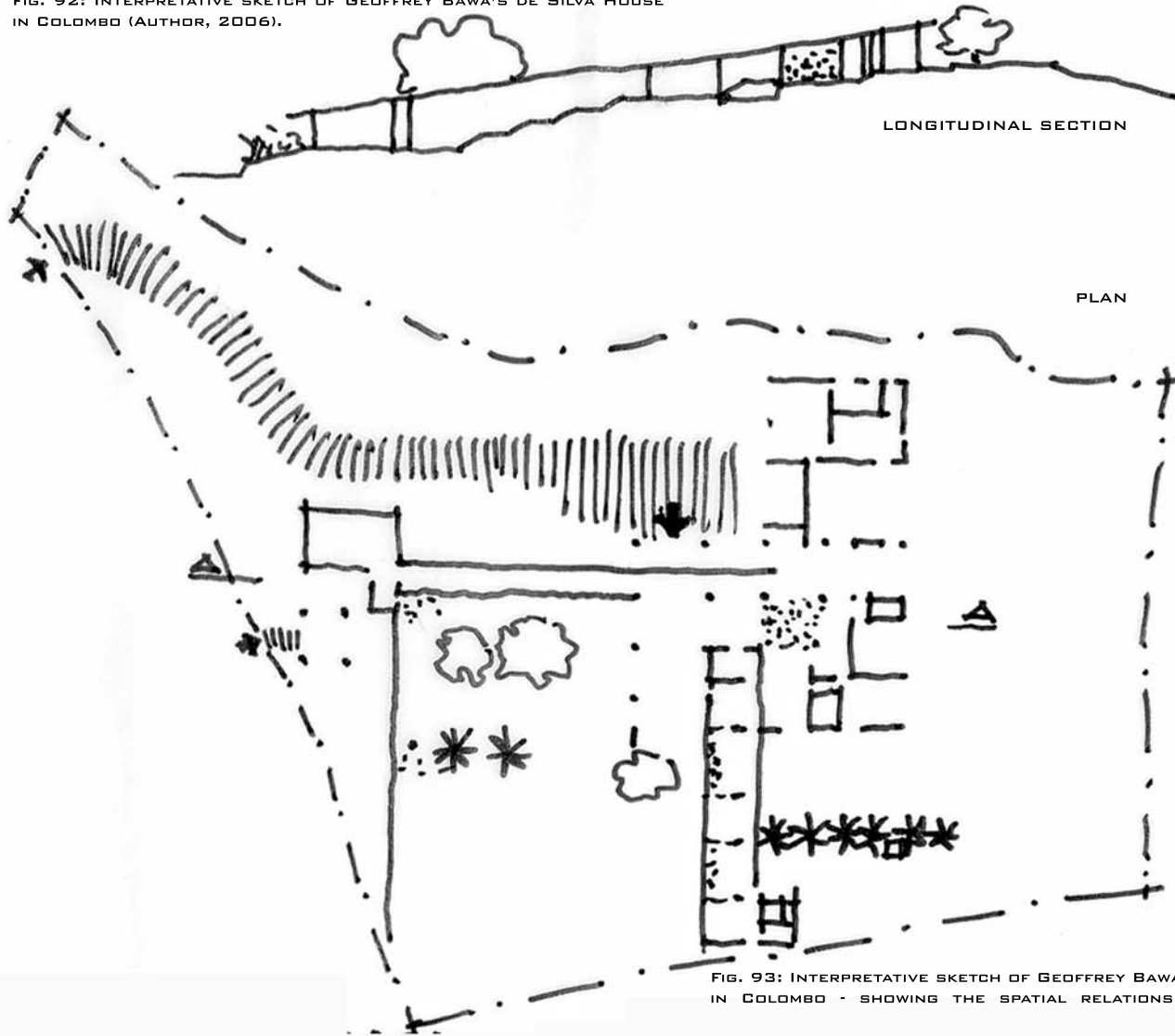
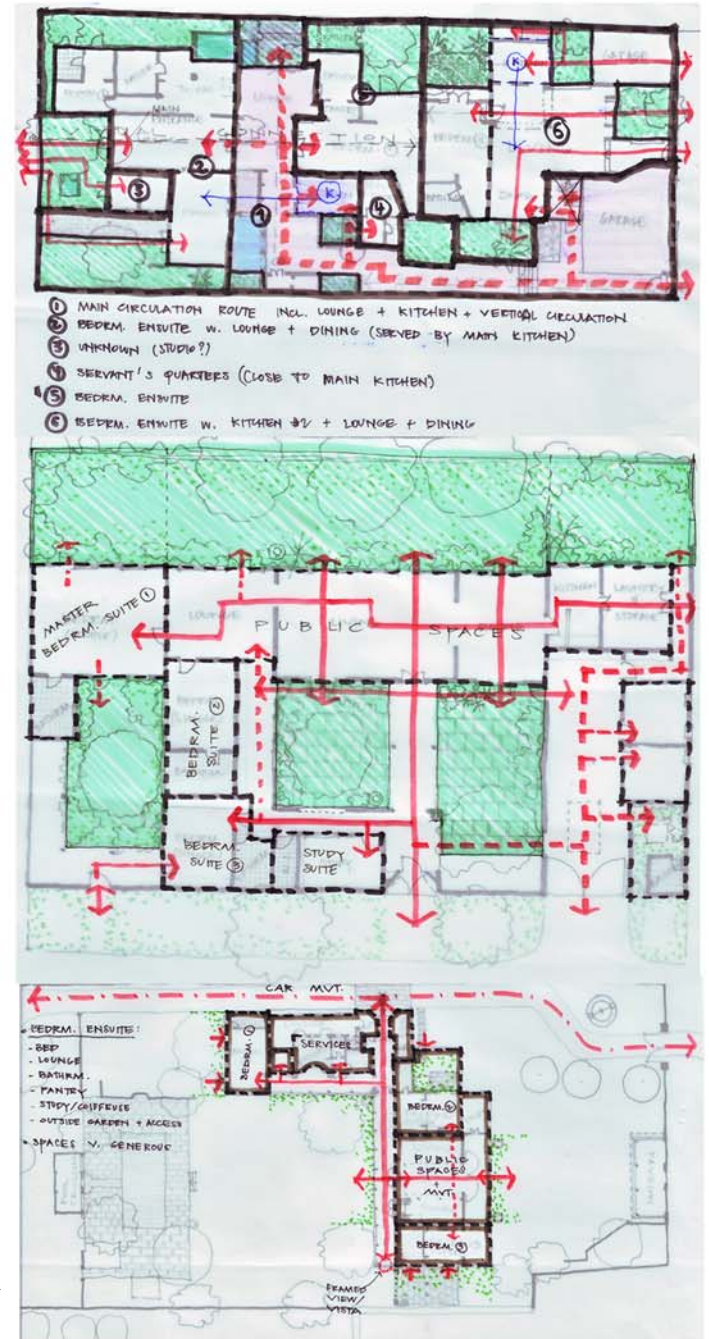


FIG. 93: INTERPRETATIVE SKETCH OF GEOFFREY BAWA'S OWN HOUSE IN COLOMBO - SHOWING THE SPATIAL RELATIONSHIPS (AUTHOR, 2006).

FIG. 94: INTERPRETATIVE SKETCH OF GEOFFREY BAWA'S STANLEY DE SARAM HOUSE IN COLOMBO - SHOWING THE SPATIAL RELATIONSHIPS (AUTHOR, 2006).

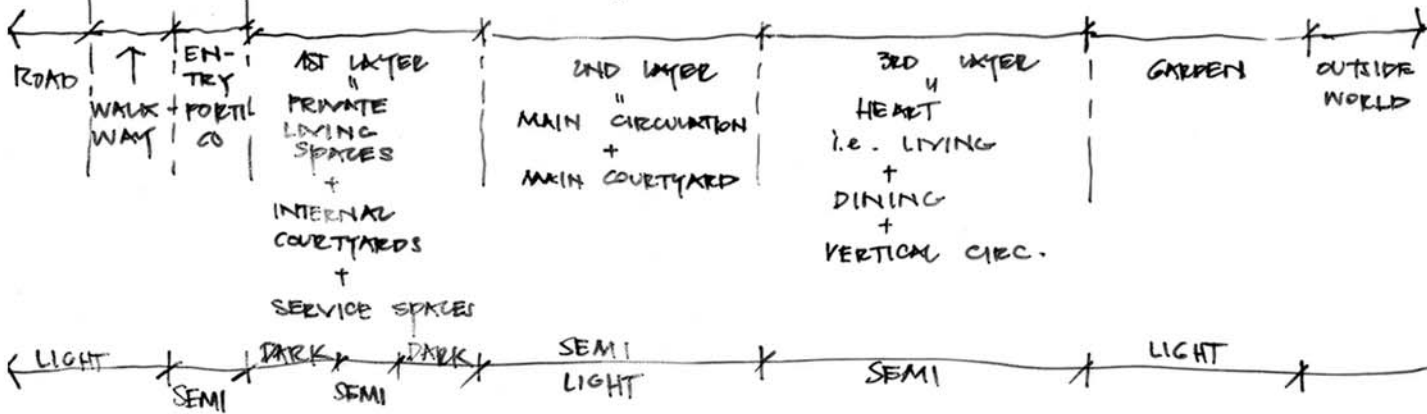
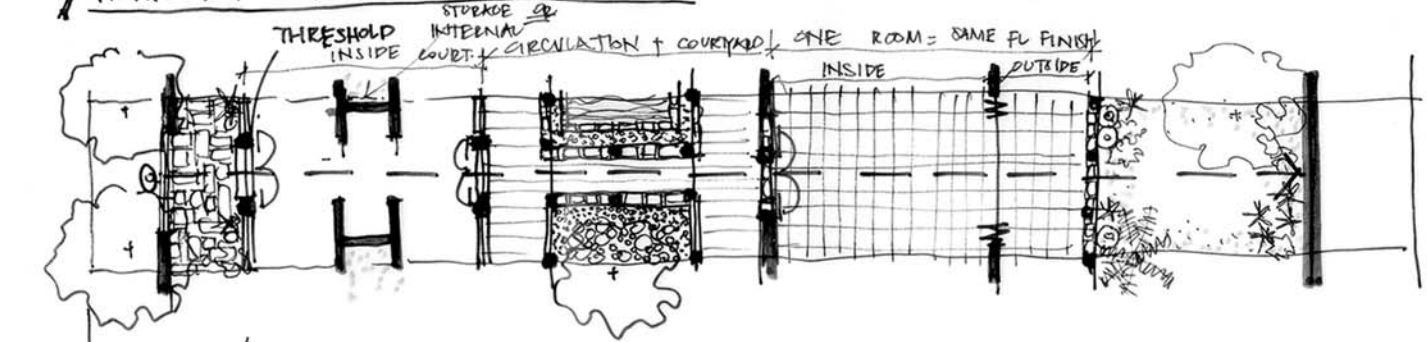
FIG. 95: INTERPRETATIVE SKETCH OF GEOFFREY BAWA'S SUNETRA NANAYAKARA HOUSE IN HORAGOLLA - SHOWING THE SPATIAL RELATIONSHIPS (AUTHOR, 2006).



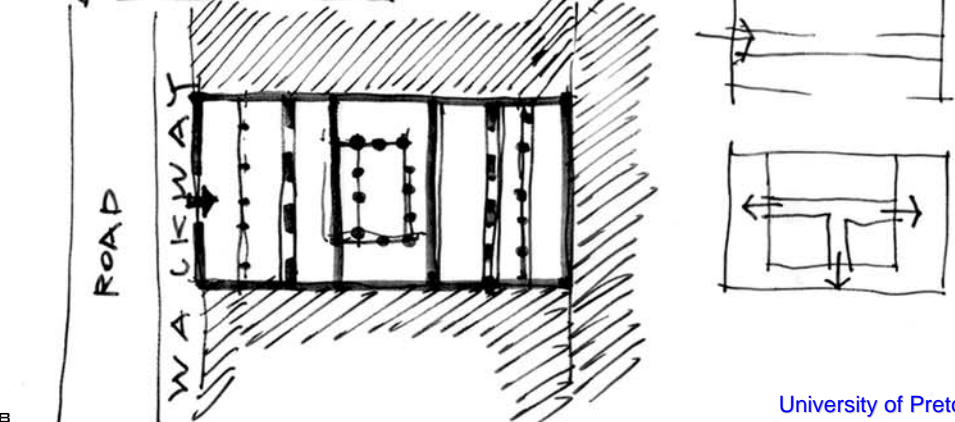
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## MOVEMENT + VISUAL LINKAGE

### HORIZONTAL (> 10 BAWO) PROCESSION



### MOVING AROUND:



## VISUAL RELATIONS

### BEDROOM SUITES

#### BEDRM (VS) COURTYARD

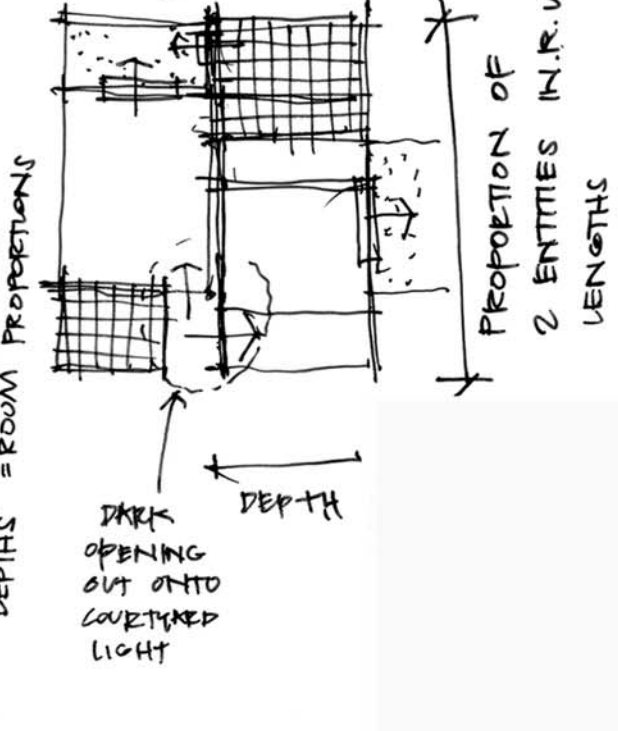
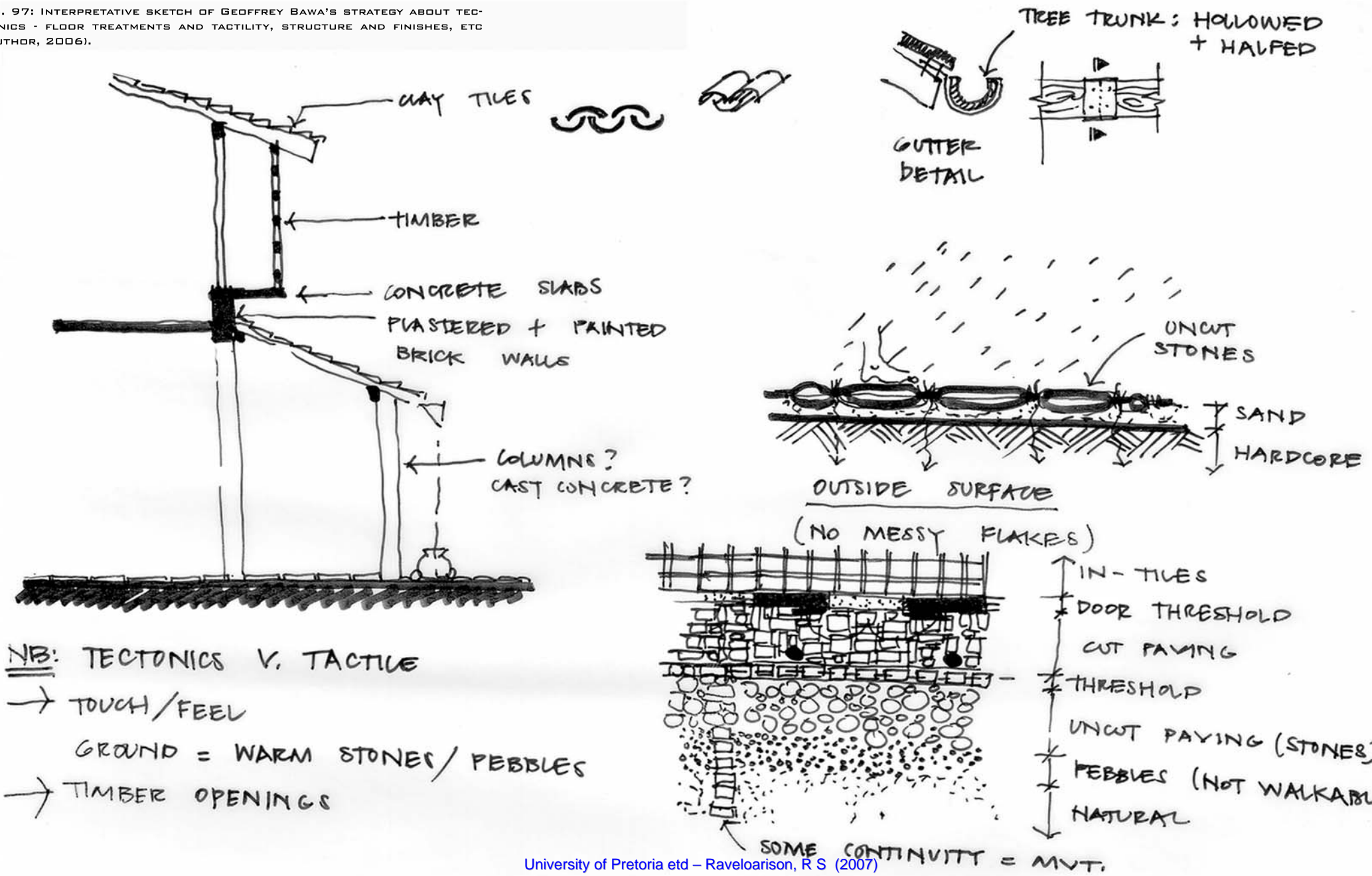


FIG. 96: INTERPRETATIVE SKETCH RECAPITULATING GEOFFREY BAWO'S PLACE-MAKING FRAMEWORK AND STRATEGY - SPATIAL HIERARCHIES, INSIDE/OUTSIDE RELATIONSHIPS, ETC (AUTHOR, 2006).





FIG. 97: INTERPRETATIVE SKETCH OF GEOFFREY BAWA'S STRATEGY ABOUT TECTONICS - FLOOR TREATMENTS AND TACTILITY, STRUCTURE AND FINISHES, ETC (AUTHOR, 2006).



NB: TECTONICS V. TACTILE

→ TOUCH/FEEL

GROUND = WARM STONES/ PEBBLES

→ TIMBER OPENINGS

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C  
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L  
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G



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## 5. COMMUNITY EMPOWERMENT PRECEDENT STUDIES:

### a. COMMUNITY PROJECTS:

#### i. Mbila community in Maputaland, Kwa-zulu Natal (van ROOYEN, 2003):

Community participation is an active involvement of the members who take initiatives, become social actors in the development process, and who mobilize their own capacities. They are then given more opportunities through education and training to enhance those capacities, hence make decisions and control activities in relation to their environment and their lives. That way, the development becomes an enhancement of the community's well-being in terms of income, personal growth, self-reliance, identity and values. Therefore, that process of organised efforts reinforces the community's control over their own resources.

However, community participation is a long process, whereby interviewing the concerned groups is not just enough. What would be more adequate is to run community participation in parallel with the project – taking part in the different sociocultural, economical and environmental programmes, as well as the building of the structures - from conception to post-construction. This way, the people and/or their representatives actively participate in the making of a place that they share in, will be using and will be responsible of. The spaces and the project as a whole will have a meaning to them, and they will be able to take benefit from it, not only economically but also spiritually and physically.

As a result, in the context of the Hell Ville empowerment centre, if the project went forward to be realised, it would have to be completely revisited from the beginning, where a community committee would be chosen, formed and agreed by the Nosy Be municipality, the authorities, the related non-governmental organisations and investors, as well as the international aid agencies. This committee, in partnership with representatives from the government and the foreign organisations, together with the design

team, would then work hand in hand, on site, during the whole process of construction until the project is handed over to the community.

#### ii. The Kebkabiya project in the Western Sudan - (STRATCHAN, P & PETERS, C. 2001)

In this case, the applicable lesson is the necessity of forming an executive committee representing all stakeholders.

Drought and famine are major issues in the Western Sudan. Therefore, international agencies, together with the authorities and the villages formed an association

### b. PROGRAMME PRECEDENT STUDIES: COMMUNITY CENTRES:

The following community centres' programmes and related spatial organisations are investigated:

- . Children's Retreat in Sohna Haryana, India, by The Architecture Alliance (see Fig. 98)
- . Rufisque Women's Centre in Senegal, by Hollmen, Reuter, Sandman Architects (see Fig. 99)
- . Eestinmetsa Community Service Centre in Espoo Finland, by Arkktehtitoimisto Lahdelma and Mahlamaki (see Fig. 100)
- . Hadsten Community Centre in Jylland Finland, by Sobyte and Toustrup Arkitekter (see Fig. 101)
- . Neighbourhood Centre in Kobenhavn Denmark by Dorte Mandrup Arkitekter (see Fig. 102)
- . Sundpark Kindergarten in Kobenhavn Denmark, by Norh and Sigsgaard (see Fig. 103)

In any community centre, the following are necessary accommodations:

- . Service spaces that need to cater for public toilets adjacent to the large halls, accommodating all genders and the disabled; main horizontal and vertical spaces according to safety requirements especially regarding fire regulations to assure the users and the building's security; storage spaces for electrical, electronic, mechanical, and ventilation speciality equip-

ment and inside/outside maintenance.

- . Main activity spaces to be easily accessible and readable by the users throughout the centre. They need to include one or more information counters to assist the users; multipurpose and flexible inside and outside spaces - transformable from a large hall to medium spaces to smaller rooms depending on the types of activities and the number of users; and most community centres studied in this chapter have educational rooms, very important in the making of a successfully happy community.

- . A central organizing and circulation space to order the different functions which needs to be constantly adjoined to the main activity spaces, or at least their lobbies, as well as to the vertical movement devices such as the ramps, stairs, lifts and elevators.



FIG. 98: INTERPRETATIVE SKETCH OF THE SONHA HARYANA CHILDREN RETREAT - SHOWING THE PROGRAMME COMPONENTS AND THEIR SPATIAL ORGANISATION (AUTHOR, 2006).

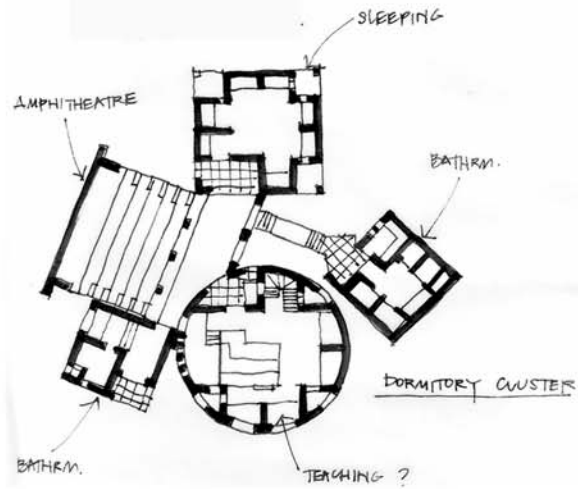


FIG. 99: INTERPRETATIVE SKETCH OF THE RUFISQUE WOMEN'S CENTRE IN SENEGAL (AUTHOR, 2006).

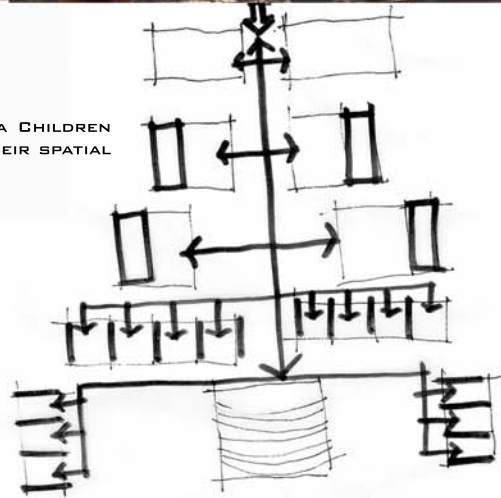
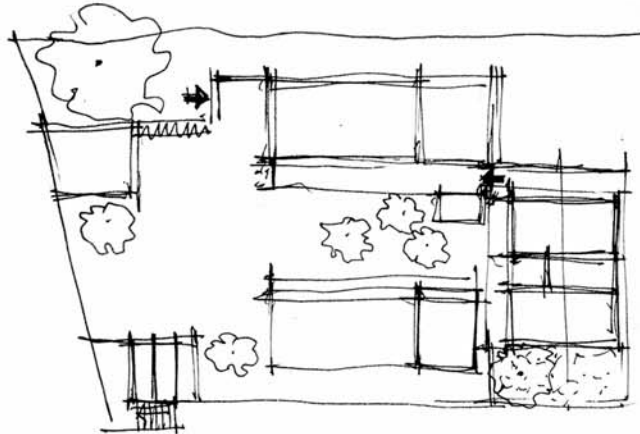
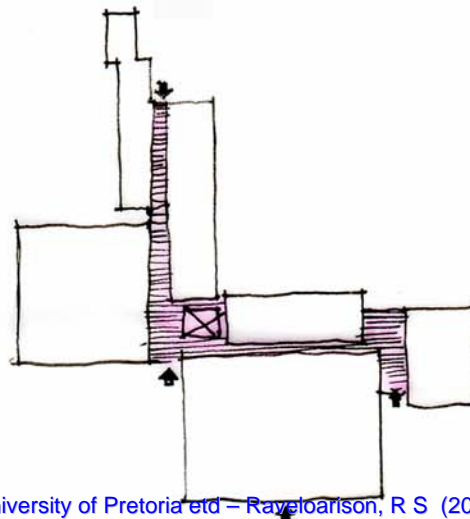


FIG. 100: INTERPRETATIVE SKETCH OF THE EESTINMETSJA COMMUNITY SERVICE CENTRE (AUTHOR, 2006).



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FIG. 102: INTERPRETATIVE SKETCH OF THE KOBENHAVN NEIGHBOURHOOD CENTRE (AUTHOR, 2006).

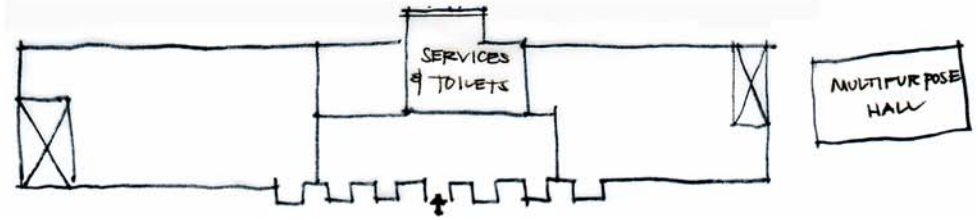


FIG. 103: INTERPRETATIVE SKETCH OF THE SUNDPARK KINDERGARTEN IN KOBENHAVN (AUTHOR, 2006).

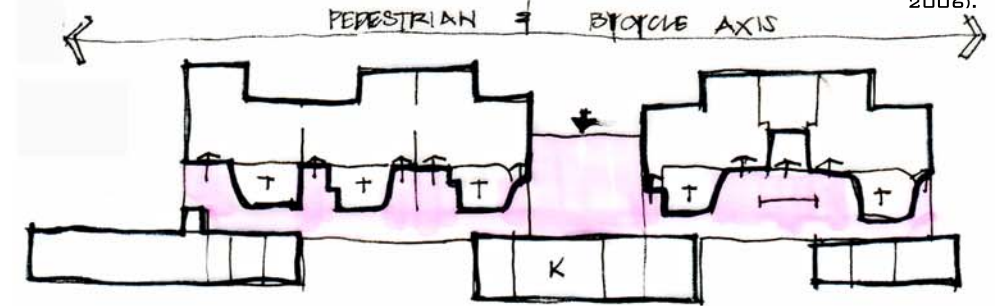
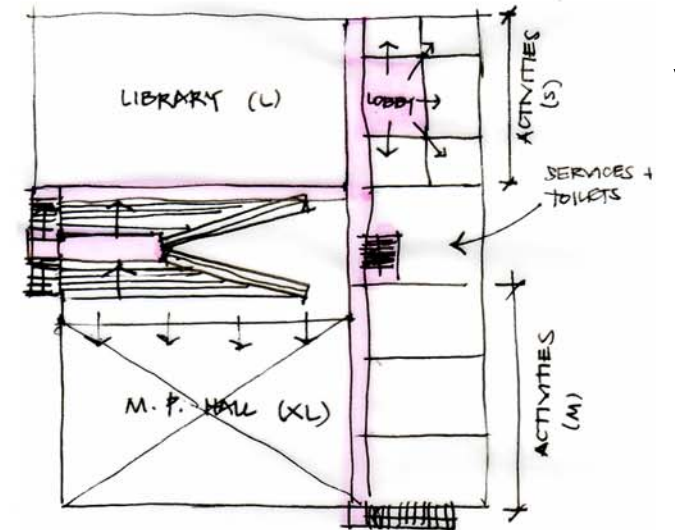


FIG. 101: INTERPRETATIVE SKETCH OF THE HADSTEN COMMUNITY CENTRE (AUTHOR, 2006).



COMMUNITY EMPOWERMENT

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## 6. PRECEDENT STUDIES CONCLUSION:

After investigating the above-mentioned case studies, the following principles can be extracted and implemented in the design of the proposed empowerment centre:

. In terms of urban regeneration, as a first step of the programme, environmental issues are to be adopted by adopting a cleaning and landscaping agenda in parallel with a recycling plan in the streets of Nosy Be. The next steps shall address public transport, like the Curitiba's catalytic bus station.

. Concerning tropicalism and tectonics, here are some guidelines:

a. The structures are mostly frame typologies of concrete or steel, which in turn support lightweight roofs (timber or steel).

b. Piloti structures seem very appropriate in a highly humid context, adaptable on any slope with minimal site destruction.

c. The roofs are mono-pitched. Some of them change slope to maximise the south light and the surrounding views while keeping away heavy rains.

d. The roofs are finished with corrugated steel sheeting to reflect heat and radiation, as well as to carry through the airiness and lightweightness perception.

e. If pavilion structures are used, they would express themselves as independent entities with similar spatial frameworks and proportions in relation with the users and their activities.

f. The circulation space in all the schemes is the most important feature since it is the element that ties the project together into a whole. It also maximises the views to emphasize its importance.

. Addressing the issues of place-making in a tropical context, in order to bring the Hell Ville *ethos* are the following:

a. the circulation routes in relation with the outside linkages - physical and visual

b. materiality

c. the inside-outside interdependencies

. In terms of community empowerment, in the context of the Hell Ville empowerment centre, if the project went forward to be realised, it would have to be completely revisited from the beginning, where a community committee would be chosen, formed and agreed by the Nosy Be municipality, the authorities, the related non-governmental organisations and investors, as well as the international aid agencies. This committee, in partnership with representatives from the government and the foreign organisations, together with the design team, would then work hand in hand, on site, during the whole process of construction until the project is handed over to the community.

Furthermore, it is necessary that the proposed empowerment centre addresses the following guidelines in order to convey community upliftment:

a. Service spaces that need to cater for public toilets adjacent to the large halls, accommodating all genders and the disabled; main horizontal and vertical spaces according to safety requirements especially regarding fire regulations to assure the users and the building's security; storage spaces for electrical, electronical, mechanical, and ventilation speciality equipment and inside/outside maintenance.

b. Main activity spaces to be easily accessible and readable by the users throughout the centre. They need to include one or more information counters to assist the users; multipurpose and flexible inside and outside spaces - transformable from a large hall to medium spaces to smaller rooms depending on the types of activities and the number of users; and most community centres studied in this chapter have educational rooms, very important in the making of a successfully happy community.

c. A central organizing and circulation space to order the different functions which needs to be constantly adjoined to the main activity spaces, or at least their lobbies, as well as to the vertical movement devices such as the ramps, stairs, lifts and elevators.