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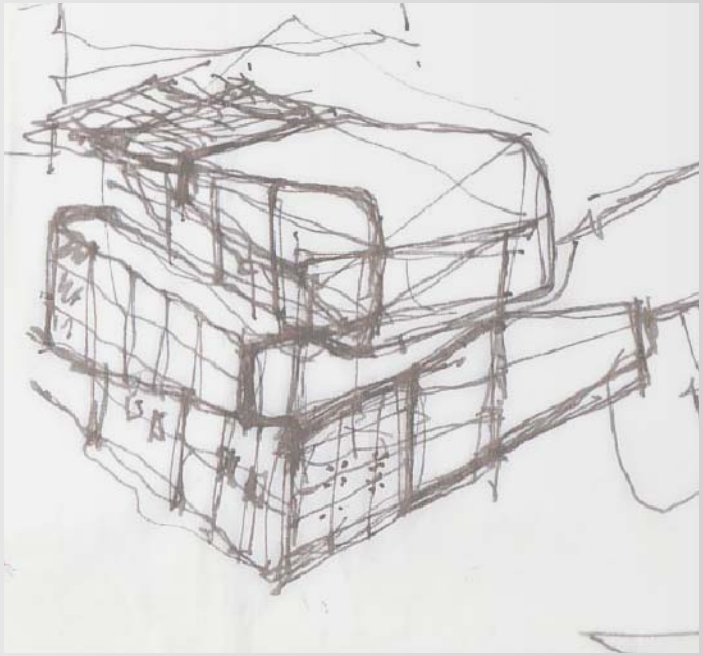
CHAPTER 2



APPROACH TO DESIGN DISCOURSE:

Auto [self] – **Poeisis** [making]
Autopoeisis **-** *The 'self-making' pattern of organization of living systems.*

The concept of Autopoeisis is the philosophical anchoring of the concerned dissertation. The concept was first introduced by Fritjof Capra in the book *Web of Life* in 1996. Autopoeiseis entails a network wherein the function of each component is to participate in the production or transforming of other components within the network, such a network is self-sustained, by virtue of a continuous closed cycle. (Capra 1996).

The Pretoria Station Interchange can be viewed as the equivalent of a living system. Its very existence is to provide the shelter and infrastructure for a functional network of inter-modal public transport system to exist. It is 'selfmaking' in the organization and relation of its vital functions. The balance between the static and the transitory, the African and the European, the private and the public, the street and square, the structure and the large human traffic it accommodates validifies the interchanges necessity and maintains the closed cycle system, consequently, rendering it self-sustainable.

PROBLEM IDENTIFICATION

The Pretoria station is faced with the task of reorganization into a coherent and legible intermodal transport node. There exists a need for a new Taxi rank, designed to cater for the New Taxi Vehicles and to uphold the Department of Transport's quest to improve the image of public transport throughout the country. The introduction of the taxi rank enhances the intermodality of the station precinct. Metrorail trains already stop at the station, the proposed new luxury liner terminus is located in the same precinct, and the Gautrain Rapid Rail Link is proposed within the same vicinity.

To fully understand the crucial role that stations have potential to play in our cities, we need only shift focus to first world cities like Paris, London, New York, and so forth. The convenience of an organized public transport in First world cities has fostered a new perception of city '*gateways*.' The stations (subways) have for the most part replaced the traditional motor-route defined gateways. In the developing country of South Africa, we could soon see a similar trend, with the scheduled Government regulation of the public transport system, and the implementation of the Gautrain. Hence the design for future stations needs to anticipate such possibilities

We live in a network of dynamic actions and reactions; there is an almost tangible tension between the fast-paced free movement of the citizens against the backdrop of the static formal city layout and built form. The extremely transitory nature of our city life is largely supported by the city's public transport system.

A large population of the city of Tshwane's workforce, in sectors not regarded as '*professional*', rely on public transport to reach work, and to return home daily on a daily basis. As a result of the ever increasing usage of public transport by pedestrians and the ever increasing traffic load by cars on our roads, it has become apparent that we need to reconsider, or restructure the current public transport system, firstly to be more organized and efficient, secondly, to comfortably cater for a broader variety of social class, and lastly, to be easier accessible to all forms of access (foot, car, wheelchair). If we are to create the spirit of a pedestrian friendly city, much attention should be focused on the revival and regeneration of the city's stations. The philosophy behind local transport interchanges requires a deviation from the conventional, purely pragmatic consideration to a more socially interactive outlook. Transport interchanges need to be more than just a monotonous boarding and climb-off act, but rather a pleasant en-route experience towards a destination. It needs to be the place where the homeliness [comfort] of home fuses with the business [energy] of the work environment translates into a continuous experience.

The Pretoria station is one of the few large scale inter-modal transport interchanges in the city. Its location, function and history suggest that it should be considered as the heart of the city's network of public transport system. There arises a need to clearly define, in a coherent manner, the capital city's main station. It is from here that public transport commuters and visitors will get a first impression of the city, hence the need for a grandeur structure, reflective of the city's capital status.

AREAS OF CONCERN

Currently the Pretoria station is victim to poor planning, albeit by default. The current situation was brought about by the development around the precinct which has evolved throughout a century from the initially planned requirements as a result of the city's expansion from just the sole need of a railway station.

The planning layout around the station has become incoherent and disorientating, it has lost its visual appeal. With its location, the station building maintains a prime visual linear to Church square, and vice-versa. The growth of the city resulted in the fragmented development of the station precinct. There are various buildings, all together servicing various modes of transport, but as a whole, unstructured.
The result is that commuters walk distances of up to 370m, one way, from one form of transport mode to another.

The folowing areas need urgent attention:

There is no clearly legible pattern of movement to guide boarders/commuters.

The public space is infringed upon by car parking.

The Bosman street taxi rank arose purely out of need, in the absence of logical planning, subsequently; it lacks basic public amenities, and sufficient roof covering.

The sunken garden is poorly-maintained and under-utilized.

Generally there is too much vehicular traffic, too close to the buildings on the site.

No public amenities catering for the square.

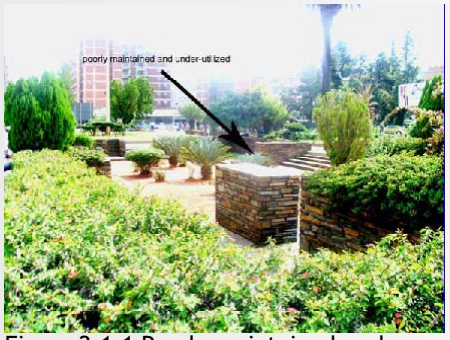


Figure 2.1.1 Poorly maintained sunken garden

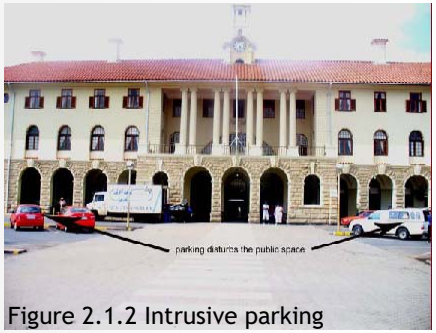


Figure 2.1.2 Intrusive parking

Figure 2.2.1 Constitutional Hill (Aedes 2005)

Figure 2.2.2 Walter Sisulu Square (Aedes 2005)

Figure 2.2.3 Apartheid Museum (Aedes 2005)

Figure 2.2.4 Freedom Park (www.freedompark.co.za)

CONTEMPORARY MOVEMENT IN ARCHITECTURE

Contemporary trends in global architecture favour, the move towards *'green'* or *'sustainable'* architecture, that is, architecture that is sensitive to the ecology of its context, and employing a cognitive awareness in the use of natural resources towards arriving at a resource efficient product. Sustainable architecture must among other considerations, drastically reduce the emissions of greenhouse gases especially carbon dioxide. (The Digest of South African Architecture 2002: 161). Lately, South Africa subscribes to such a movement, but moreover, seeks to find an architecture that reflects this country's diverse cultures, expressing and reconciling its rich turbulent history.

The search for such architecture of identity remains a hotly disputed issue within the architecture fraternity in South Africa. Such a quest informs the social, cultural, philosophical and functional base, but the real challenge lies in the interpretation and implementation of such findings into self expressive built form.
Examples of this quest of an architecture of identity, in public buildings are to be found in projects such as the *Constitution Hill, Apartheid Museum, Freedom Park, and Walter Sisulu Square*. South Africa is experiencing a phase concerned with defining a regional architecture (architecture of identity), that is, an architecture that is responsive to its context, resource efficient, and culturally and politically appropriate.

However, this situation is parallel to the current international tug of war between the idea of Global and Regional architecture respectively. On the one hand architects advocate standardized methods of construction globally; globalism; on the other hand, architects promote the concept of regionalism, which is informed primarily by culture, tradition, local materials and skills, all of which will be unique to a particular region.

The problem with global architecture is that it seems to produce edifices that look alike, hence surrendering an opportunity of considering an individualistic context unique appearance.
Notably, common to both global and regional architecture concepts is the idea of sustainability, though interpretation may differ slightly, for example global architecture attaches sustainability merely to the mitigation of the impact of the building on the environment, from the construction process through to the maintenance thereof. Regional architecture encompasses the aforementioned and further includes aspects specific to the particular region, such as climate, culture, and heritage. Regional architecture is prioritises focus on a common humanism, opposed to a common technology.

"*A recognition and a celebration of the natural, cultural, and historical uniqueness of different places and times.*" (Dewar and Uytenbogaardt 1991)

University of Pretoria etd, Tshombe MX (2007)

AUTOPOEISIS AND ITS RELATION TO GLOBALISM AND REGIONALISM

In relation to people, the social philosophical concept of Autopoeisis is manifested through communication. Human societies in their variety are a reflection of culture, notably, culture is rooted in the identification or communism based on language. From this we can deduce that language is synonymous with culture.

"*It is certainly true that the social system is an organization like the individual that is bound that is bound together by a system of communication...*" Nobert Weiner (Capra 1996:62).

Since cultures define societies it is inevitable that the structures (habitat) that people erect to satisfy their functional needs will simultaneously reflect that particular culture's beliefs. It is at this juncture that the issue of regionalism and globalism surfaces.
On the one hand, civilisation has the technology and ability to create a *'universal'* architecture, or architecture of a similar language across the globe - Globalism. On the other hand, there is the reality that the world is a conglomeration of different cultures located in their specific context, and that architecture should be representative of the particular culture and context it addresses - Regionalism.

GLOBALISM

The industrial revolution of the late 19th Century initiated the manufacturing process of mass production, through the introduction of factories. Coupled with that were great advances in technology. The modern movement in architecture capitalised on the potential of the abundant new technology and possibilities of mass production, by steering towards standardization and modulation of building components. The objective of this approach would be the ability to design and construct a structure, based on standardized norms anywhere in the world, without the limitations of availability of materials in the particular context. This would yield a universal method of construction and to some extent a uniform appearance of buildings.

The concern however, is the lack of investigation into the contextual qualities and values such as culture, climate tradition and heritage. Paul Ricouer in *Universal Civilization and Cultures* of 1961 writes that "Universalization constitutes a sort of subtle destruction of traditional cultures." (Frampton 1980: 313).
The height of the modern movement as envisioned by Ron Herron's *Walking Cities* in 1964, although intended as the reconstruction after a nuclear war aftermath, reveals a disturbing alienation from the conventional 'on the ground' interaction of society. The structures are designed to adapt to various ground conditions but still remain visibly alienated and disconnected to context. Similarly, free-standing buildings advocated by Le Corbusier, one of the pioneers of the modern movement are attacked by both Roger Trancik and Edmund Bacon in *Finding Lost Space (1986)* and *Design of Cities (1967)* respectively, for being isolated to the landscape, street, and people.
Such a future in architecture appeared at the time to be quite fragmented and defiant of the very essence of social beings, which is interaction and contact.

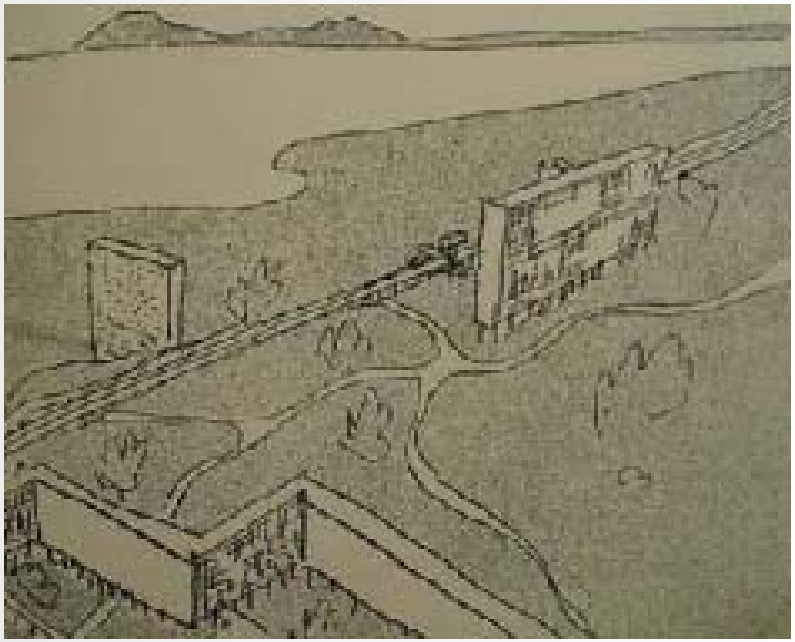


Figure 2.2.5 Free-standing buildings by Le Corbusier (Bacon 1967:217)

Figure 2.2.6 Walking Cities by Ron Herron (Frampton 1980:281)

REGIONALISM

The aspiration to manifest cultural, economic, and political independence constitutes regionalism according to Kenneth Frampton in *Modern Architecture a Critical History (1980)*.

Regionalism in architecture is most commonly associated with vernacular architecture. An analysis into vernacular architecture reveals that that the generative concepts are rooted in the culture of the particular region. Anthropologist Hauser Schaublin echoes this point in the statement "*Building traditions are as much a specific cultural heritage of a group as is language and perhaps music*" (Capra 1997).
Language and region which translate into culture and context that define the concept of '*vernacular*' however, the realisation of the concept into structure is partly governed by the availability of materials and construction technology. The infusion of context (topography and climate), technology (materials), and tradition (language and culture) define the '*Style*' of a particular type of vernacular architecture.

'It could be argued that a regionalist architecture will be generated by the designer directly responding to the following aspects in a place specific way: climate, materials, site, defence, economics, religion. To this could be added the particular expression of the community.' (Frampton 1980)

Professor Roger Fisher in the article titled *The Third Vernacular: Pretoria Regionalism-Aspects of an Emergence*, concedes that the factors of the afore-mentioned quote as generators of form and style of the vernacular house, can be adopted to any building type which have a regionally specific character. According to Fisher (1998), the term '*vernacular*' is awarded to a tradition of a particular architecural expression when it becomes endemic.

It is worthy to remain cognitive of the fact that cultures although relatively autonomous, employ a constant gradual evolution, influenced from time to time by other cultures. In this way cultures constantly renew and reorganize themselves in a similar manner to an autopoeisistic system. Frampton (1980) concedes that "*Culture is transient, not static, and since ancient times has been defined and influenced by other cultures.'*

Within the context of Africa, cultural evolution and inter-influenced is best described by the 'Triple Heritage Concept.' The Triple Heritage Concept is the illustration of the three prevalent or dominant socio-cultural influences in African culture, namely; Indegenous, Islamic, and Western, introduced by Professor Ali Mazrui and described in the book *African Architecture Evolution and tradition by Namdhi Elleh (1997)*.

The cultures in the regional context of South Africa have largely been influenced by Indigenous and western principles. South African society's perceptions and values are governed by two cultural spheres respectively; namely the African and the European.
Let us briefly summarise the two influential principles namely, indigenous and western, respectively.

INDIGENOUS INFLUENCE-UBUNTU

PHILOSOPHY

The South African cultures can be broken down into various clans and their traditions, but central to all, is the philosophy of *Ubuntu*. The spirit of humanness, respect, hospitality, order and of community is embraced by all indigenous clans in African culture. This spirit has been constant throughout the chronology of development of African cultures.
In this context African culture represents the core principle of any African tradition that is: *Ubuntu*.

Ubuntu embraces the notion of interdependence between people, and further extends this interdependence to the relation between people and their environment, whole-ness. In the realm of *Ubuntu*, Ramosi [1999] concedes that "*Humanness regards the being or the universe as a complex wholeness involving the multi-layered and incessant interaction of all entities.*"

The maxim *umuntu ngumuntu ngabantu* (Ramose 1999), loosely translated meaning: '*no man is an island*,' is evidence to the interrelation and interdependence between people. The whole-ness outlook to existence encompassed in the philosophy of *Ubuntu*, underpins the interdependence between human beings and physical nature. It becomes justifiable to suggest that the concept of *Ubuntu* exhibits characteristics of ecosystemic and autopoeisistic thought.

The following statement by SITE architects [1980] unwittingly makes reference to the notion of *Ubuntu* "*...if architecture is to regain its status as a meaningful public art, it should be questioned in most of its prevailing definitions in order to become more responsive to the diversity, complexity, and subconscious motivations of our pluralist society.*"

The fundamentals of *Ubuntu*, when appropriately translated into architecture, have the potential of promoting the realisation of a regional architecture.

Figure 2.2.7 Pedi village isometric
(Architecture SA May/June 2006:43)

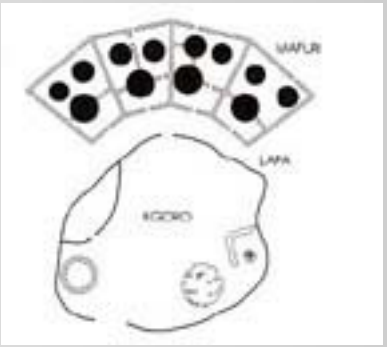


Figure 2.2.8 Pedi village plan
(Architecture SA May/June 2006:43)

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PLANNING PRINCIPLES

Traditional vernacular settlements of South Africa are characterised by a similar planning layout. This layout which is synonymous with Bantu homesteads consists mainly of the following spaces: huts, cattle kraal, granaries of a man and his family, family dependants and followers. (Denyer 1978).

The typical homestead layout follows a circular form. The entire homestead is usually fenced-in for security and accessible from one point. The point of access is located directly opposite to the man' s hut 'great hut.' Between the great hut and access point lies the centrally-placed cattle kraal. The development or addition of more huts for additional wives or children occurs in a semi-circular arrangement flanking the great hut on either sides. The cattle kraal is seen as the core communial centre of each homestead, and its centrality is defined by the arrangement of huts around it.

These homesteads are security conscious through the employment of one entrance, and locating the cattle kraal (family wealth) centrally, where it can be easily watched by all members of the family. This system operates along similar lines as the idea of common land as defined by Christopher Alexander in the book *A Pattern Language*.
The architectural quality of these otherwise austere structures was enhanced through decorative finishes of various textures, patterns and colours.

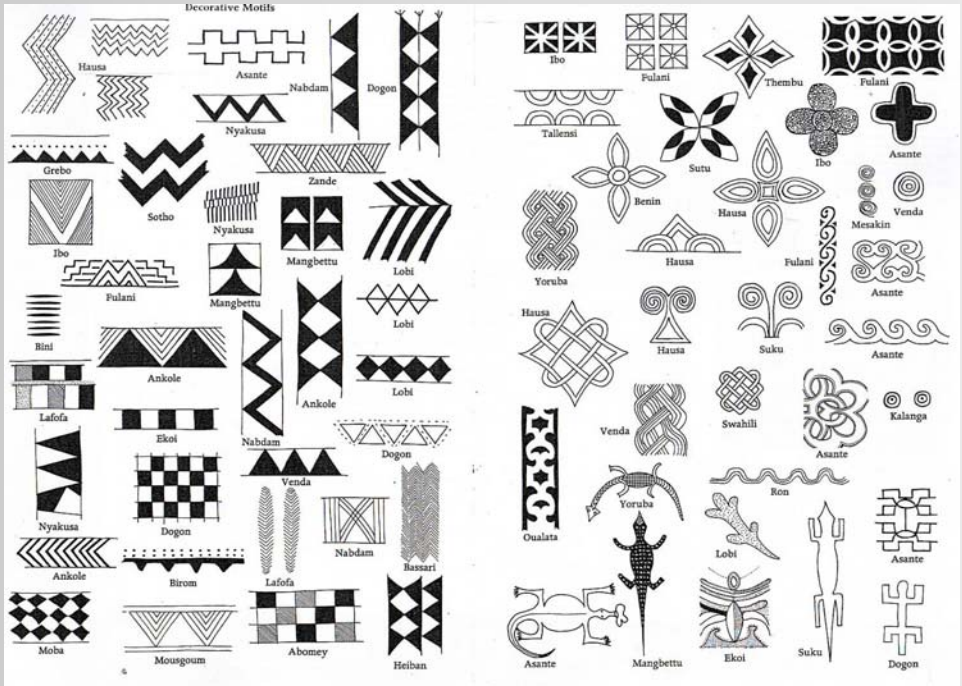

Figure 2.2.9 Decorative motifs (Denyer 1978:121)

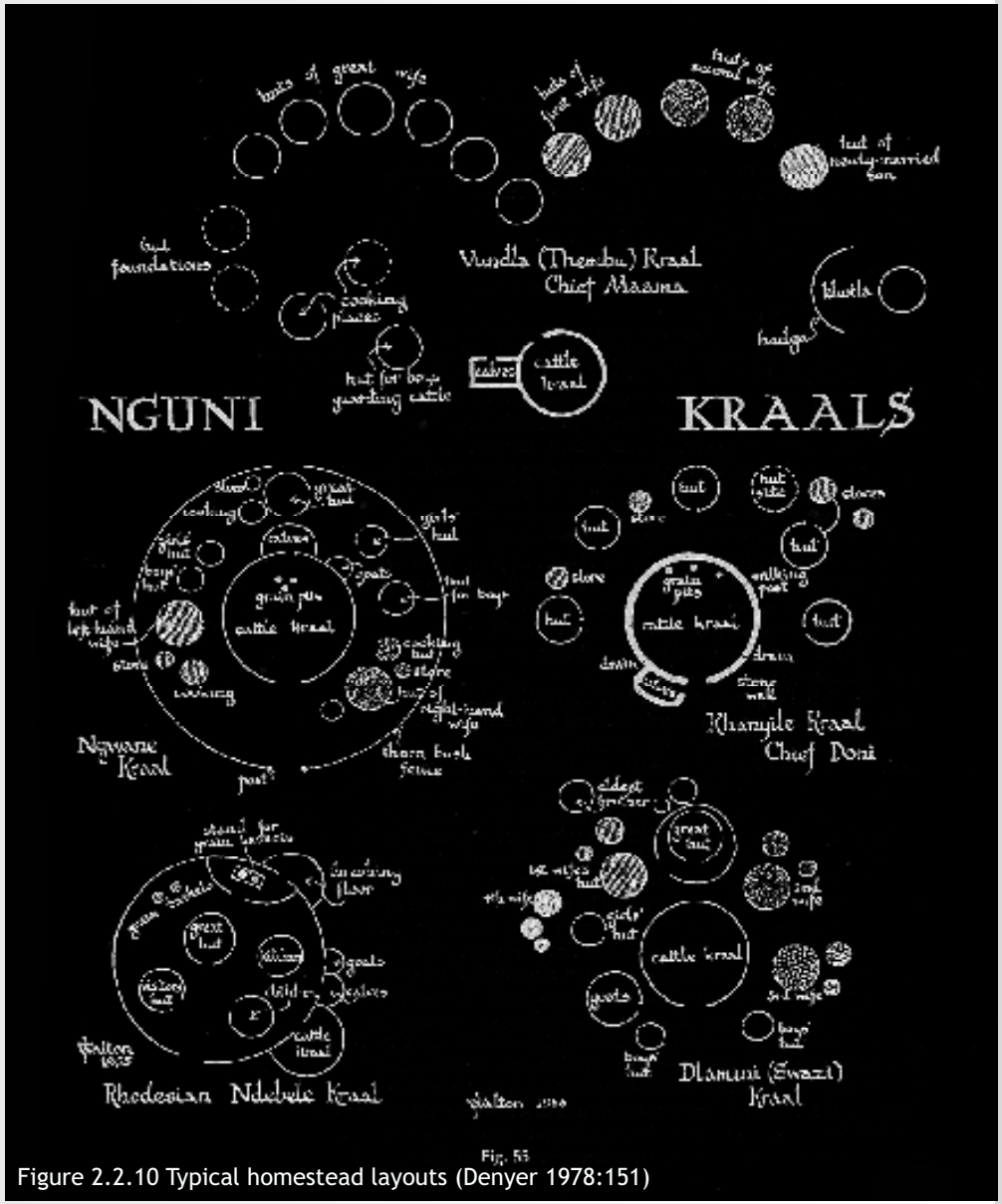

Figure 2.2.10 Typical homestead layouts (Denyer 1978:151)

Figure 2.2.11 Typical Zulu village layout (Denyer 1978:113)

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WESTERN INFLUENCE-URBAN PLANNING THEORY

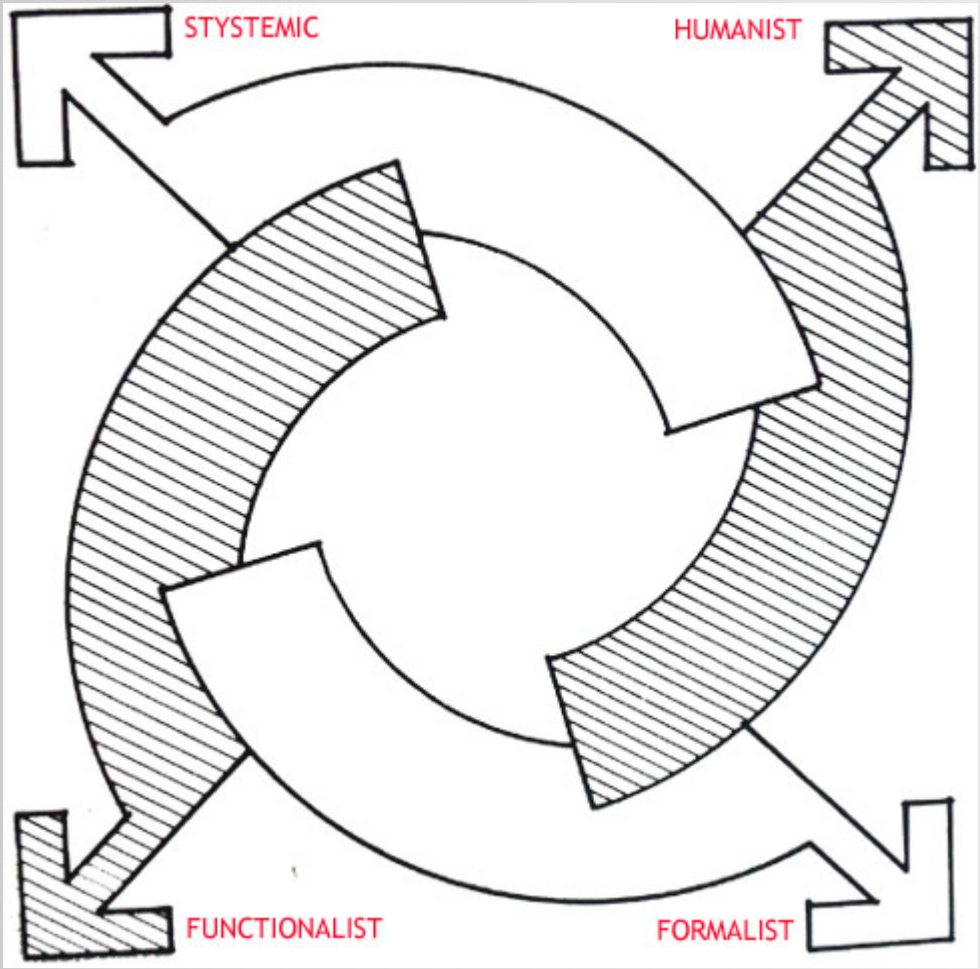

Figure 2.2.12 Urban planning diagram (Attoe and Logan 1989:17)

Generally, urban planning philosophy is outlined by four key principles, namely : Systemic, Functionalist, Humanist, and Formalist.

Systemic

Manifests a cognitive understanding of social systems at play, and recognizes the existing patterns as cues for further development.

Functionalist

Concerned with the establishment of the city core and furthermore, civic interaction within such a core. Advocates the preservation of historically significant fabric for educational purposes.

Humanist

Endeavours to prioritise the social domain within architecture, promotes the process of development that is dictated by the user's needs. The humanist use the past as a point of reference, and not replication.

Formalist

Promotion and understanding of the timeless qualities of culture and urban heritage. Principles based upon axial planning to achieve order and hierarchy.

CONCLUSION

Through the medium of architecture, principles of urban planning theory shall be balanced with the fundamentals of *Ubuntu* in order to arrive at an eco-systemic, and sustainable end product. People relate better to elements that they can identify with, hence in South Africa, where we have citizens of both African and European origin, it is crucial to strike a balance between the cultural inclinations of both spheres. In many regards there exists parallels between the philosophy of *Ubuntu* and the urban planning principles, which makes it easier to infuse elements of the one into the other and vice-versa.

Notably, vernacular architecture has not been used at a scale beyond the residential compound and village, however the principles of spatial hierachy and climatic understanding can be extended to large scale design such as a transport interchange. Since urban planning is mostly used large scale planning such as city layouts, it is here where the elements will be merged and the result will be both micro and macro factor analysis and understanding.

The architecture that is surfacing recently in South Africa seems to be primarily defined by colour and texture, maybe that could be an area of attention.

RELEVANT PRECEDENTS

The analysis of precedent studies shall focus on a balance between international and local examples. Valuable lessons can be learnt from how the international community dealt with similar challenges, however local examples provide for better information by virtue of a closer and relevant contextual relation. The selected precedents attempt to explore the positive qualities of both intermodal transport interchanges and public spaces.

INTERNATIONAL PRECEDENTS

LUCERNE STATION, Switzerland 1983-1989, Santiago Calatrava.

Lucerne station is a 109 x 14 x 19m altogether new virtually freestanding hall addition to an existing bulding by Calatrava. The original structure was built in 1896, and later modified in 1975. The design explores the limits of tension and compression, combined with the extensive use of glazed curtain walling and suspended roof. The result is a structure characterized by a colossial concrete cantilever roof, spanning the entire length of the building, furthermore gigantic 14m concrete columnar elements support the roof in an order that makes reference to the neo-classical character of the neighbouring buildings, in a modern way.
Although visible distinct from the original structure, Calatrava's intervention remais sensitive to scale, it is visible, but it does not supercede the existing building.
The selection of materials is undeniably modern: concrete, glass, steel, and the effect is a structure that permits sufficient light through the glazed curtain walling, and suspended glass roof, all tied together with meticulous details.
The structure is a visual marvel.

A few similarities exist between the Lucerne station and the Pretoria station. The Pretoria station is a modern addtion in a precint anchored in heritage value, thus the need for sensitivity towards the heritage fabric of the precinct exists. lessons of appropriate scale can be drawn from the Lucerne station. The techtonic resolution of the glazed curtain walling provides ideas as to resolving similar situations at the Pretoria station. Lastly, the quality of light can be drawn upon, and the tact to create a seemingly light structure.

Figure 2.3.1 View of main facade (www.vitruvio.ch)

Figure 2.3.2 View of main facade (www.vitruvio.ch)

Figure 2.3.3 Roof detail (www.vitruvio.ch)

Figure 2.3.4 entrance (www.vitruvio.ch)

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NORTH GREENWHICH TRANSPORT INTERCHANGE, JUBILEE LINE EXTENSION, UK 1998, Foster and Partners

The interchange is located right next to Millenium Dome, and forms part of the regeneration of the Northern Greenwhich peninsula. Positioned directly above the North Greenwhich Underground station, the station is characterized by the 160m wide semi-circular roof which shelters arriving and departing passengers. The roof is divided into two by a centrally placed waiting room, the one end of the roof hosts the drop-off point for taxis and cars, the other end houses the bus arrivals and departures. Essentially, this development is a taxi and bus mode addition to an existing rail subway. The ground circulation follows the curved shape of the roof, and is simple and clearly defined. Techtonically, the roof canopy is perforated to allow daylight to illuminate the deepest spaces, while specially designed lighting units suspended from the ceiling can both project light up to the reflective aluminium ceiling panels and spotlight area immediately below (Phaidon 2004).
The examplary aspects of this structure lies in the effortless planning and subtle seperation of the bus area to the taxi area, and how the space in between conveniently houses the waiting rooms. Furthermore, the simplified vehicle circulation route.

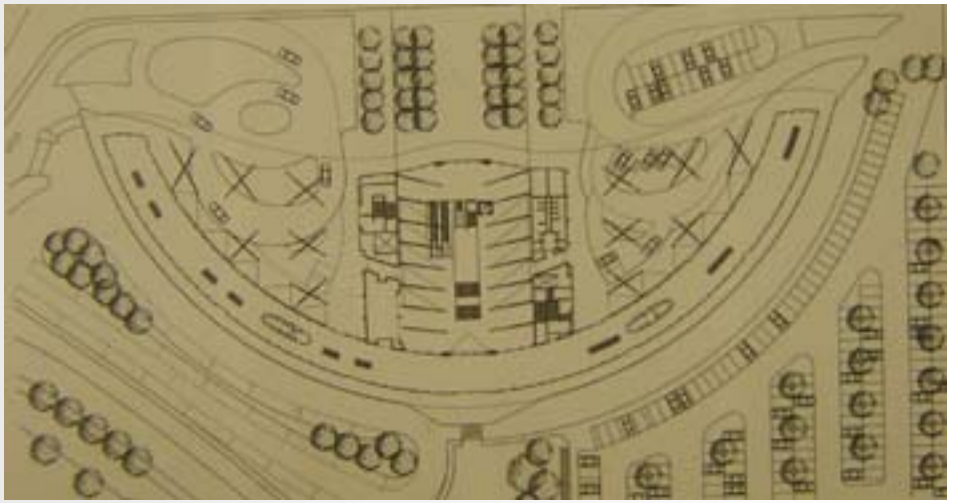

Figure 2.3.6 Plan (Phaidon 2004:300)

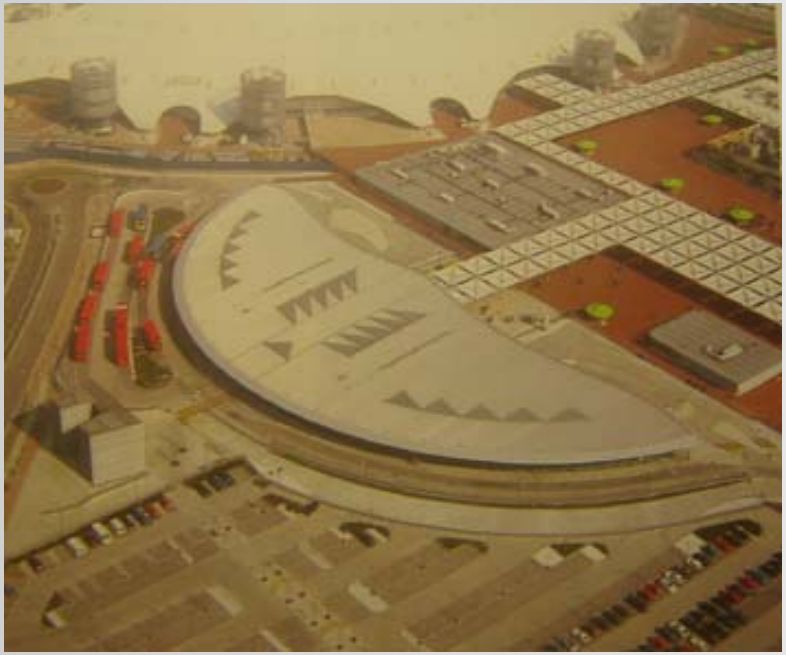

Figure 2.3.5 Interchange aerial view (Phaidon 2004:300)

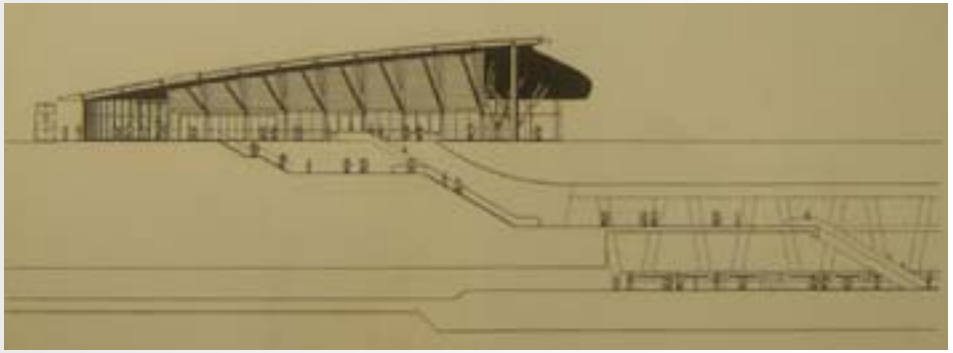

Figure 2.3.7 Section (Phaidon 2004:300)

THE SOUTH AFRICAN EMBASSY, BERLIN, Germany 2003, MMA Architects.

The Embassy is located in Tiergarten Park, an embassy district in Berlin, exactly where the original building had been bombed during WW2 (Architecture SA November/December 2004). The building is designed around a central 4 storey atrium with the activity spaces located around the periphery. The design teams philosophy was to conceive a building that would explore the identity of the new South Africa.
To achieve this quest, the selection of materials reflected South Africa's building tradition, namley: stone, plasterwork, metal, wood and wattle. The exterior skin of the structure is clad with honey-coloured sandstone quarried from Limpopo, and black granite used in the building is imported from Zimbabwe.
Although the layout is a rather modest rectilinear plan around a central atrium, the character of the building and 'identity' is manifested through the detailing. The interior is detailed in elements that are reminiscent of South African vernacular architecture, for example the balustrades have a grab rail that makes reference of Ndebele beadwork. A 14m high panel of plaster work, modelled on the traditional *litema* was crafted by local artist on site, and so was a panel of woven art hung in the atrium. The sculptures in the building were created by local artists.Located in the rear garden is a column also treated in a *litema-like* finish. (Architecture SA November/December 2004)
The exterior is characterized by bands of horizontal aluminiun elemnets that conceal the cladding joints, and help reflect the sun.

The building provides an example of the simplicity and elegance of a rectilinear form around a central court, and how local materials can be used in a modest yet strikingly appealing manner. Lastly, the value, aesthetically and practically of showcasing the work of local artists and how such a gesture could grow to be synonymous with local architecture.

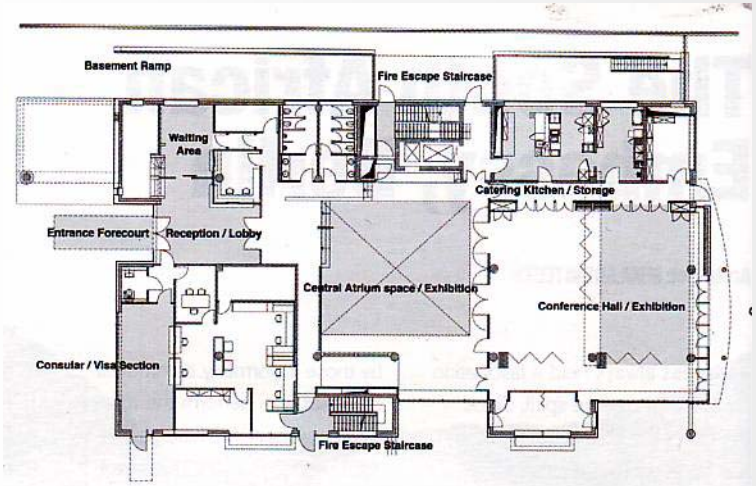

Figure 2.3.8 Ground plan (Architecture SA November/December 2004)

Figure 2.3.9 Building detail.
(Architecture SA November/December 2004)

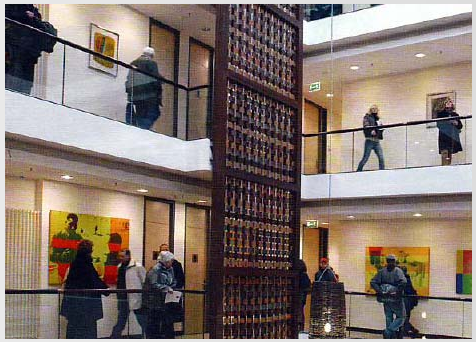

Figure 2.3.10 Atrium.
(Architecture SA November/December 2004)

Figure 2.3.11 *Litema* plaster panel.
(Architecture SA November/December 2004)

Figure 2.3.12 Rear garden.
(Architecture SA November/December 2004)

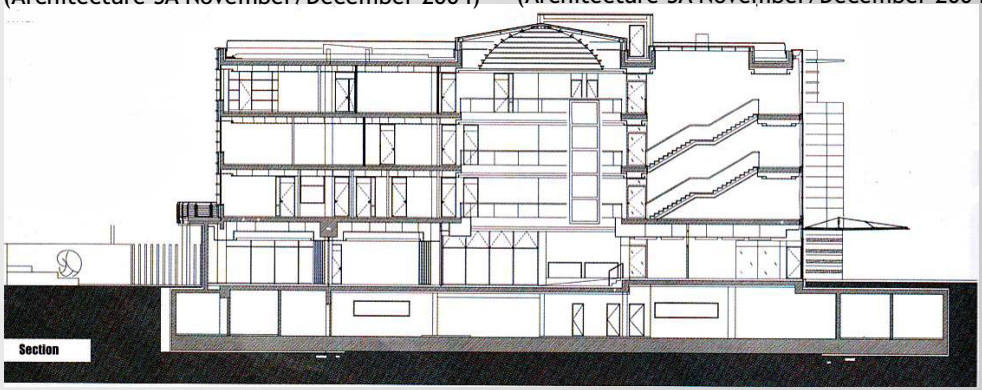

Figure 2.3.13 Section.
(Architecture SA November/December 2004)

FEDERATION SQUARE, Australia 1997, Lab Architects and Bates Smart Architects.

The development of Federation Square essentially began in the mid 1990s as part of the Jolimont Rail Yard rationalisation project that reduced the railway lines running parallel to the Yarra River from a total of 53 lines to 12, an initiative made possible by improved railway technologies and the relocation of space consuming shunting operations to more outer-lying locations in Melbourne. (www.federationsquare.com)
During the project, the Victorian state government in association with the Melbourne city council initiated an international design competition to design a square over the existing rail lines, and remove two eyesore buildings, namely the 'Gas' and 'Fuel' towers.

Lab architects design philosophy was to make the square the new centre of cultural activity for Melbourne, under the theme: 'Independent identities combining for a larger whole.' (www.federationsquare.com)
The development is bordered on one end by the Yarra river, adjacent to that side lies the Princes bridge. the layout is anchored around an irregular shaped 20 000 people capacity public square bordered by a series of buildings, almost all of which open up directly to the square. The surrounding buildings are multi-use in function, ranging from a national art gallery, covered public spaces, indoor auditoriums, offices, cinema complex, a cathedral, and about 15 restaurants, cafe's and bars.

Federation Square is Melbourne's meeting place and a unique cultural precinct. (www.federationsquare.com)
Distinct similarities can be drawn between Federation square and The Pretoria station. Both these areas have a history attached to the rail development of their respective cities. The development of Federation square was succesful attemt of regenerating an area with the emphasis on civic activity and upliftment, in a similar way that the Pretoria Station interchange attempts. Again, federation square, similarly to the Station interchange anchors around a multi-use public square, with multi-function buildings anchored around it.

Federation square sets the precedent on how to create a civic environment that the users can relate to.

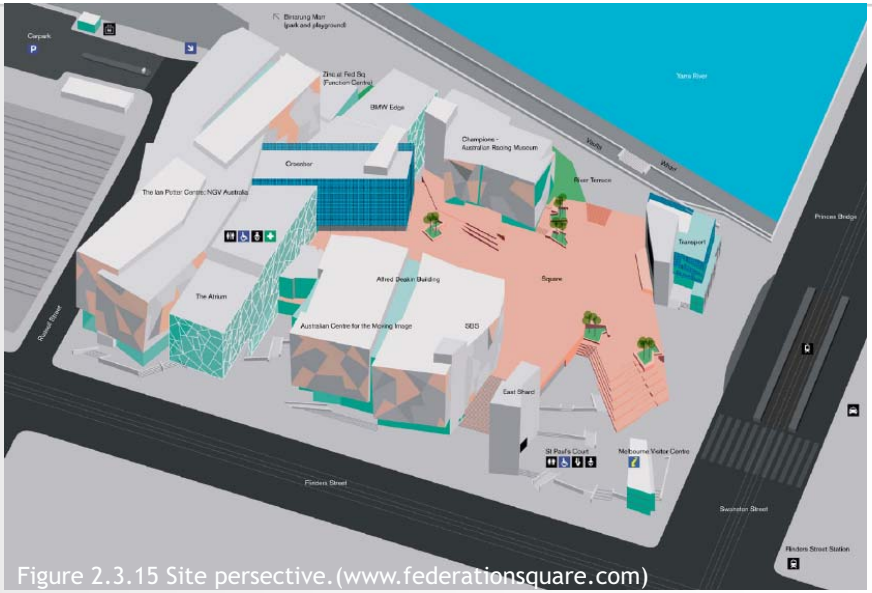

Figure 2.3.15 Site persective.(www.federationsquare.com)


Figure 2.3.16 Live events. (www.federationsquare.com)

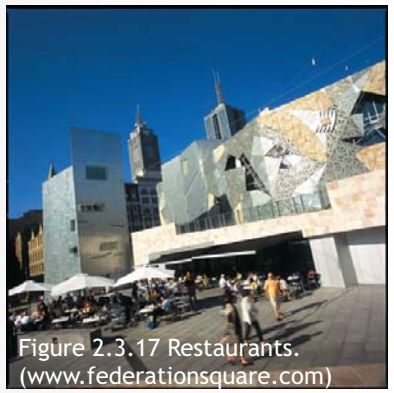
Figure 2.3.17 Restaurants. (www.federationsquare.com)


Figure 2.3.14 Night panorama.(www.federationsquare.com)


Figure 2.3.18 Site panorama.(www.federationsquare.com)

LOCAL PRECEDENTS

METRO MALL, Johannesburg 2003, Urban Solutions.

The Metro Mall is a mixed-use intermodal development incorporating buses, taxis, retail, offices, restaurants, and informal trade. The development is located in the hub of one of Johannesburg's prime regeneration areas: Newtown.
Metro mall accommodates 25 buses, 2000 mini-bus taxis, 800 merchants, and is used by over 100 000 people daily.
Essentially the development is two similar buildings on seperate adjacent blocks handled in a similar fashion. The one structure serves Lenasia taxis, and the other, Soweto taxis. The taxi loading zones act as high volume centralized courtyards, bordered by shops, and hawker stalls located on the periphery.
The planning is based around public and private streets. The building front faces Bree street which is a an extremely busy one way street. Most of the buildings retail areas are placed along this front, and restricted entirely to pedestrian activity. A buffer zone of hawkers exists between the street edge and the taxi loading zones inside the structure. Parallel to Bree street is Gwingi Mrwebi street, the more private and quieter street that is used for the taxi and bus entrances and exits. This is viewed as the back of the building, where pedestrian movement is discouraged.
The ground floor of this development is designed to be the main public/pedestrian level, with the shops, restaurants,and hawker space placed on the level, including the taxi loading zones. The Basement houses the buses. The levels above the ground floor are more private, with the driver recreational facilities, storage for hawkers, management offices, and taxi parking.
The building remains contextually and functionally appropriate through the use of commonly available yet robust materials. The facades are characterized by red brick (common in Johannesburg), and concrete. The use of concrete and brick provides for a robust feel. The entrances are accentuated by the addition of tall towers, decorated by a local artist's steel work, to orientate and celebrate entry. More sculptural elements are littered throughout the structure, done by local artists.The planning is functional and quite legible.
Similarly to Station Interchange, Metro mall is situated right in the city. The mall is a good local example of how to deal with high traffic volumes in a practical manner, and how robust materials can be used to have aesthetic appeal. Lessons on how to plan around the public private relation using varioius levels are valuable, futhermore, how the entrances are defined is exemplary.

Figure 2.3.18 Facade treatment.

Figure 2.3.20 Entrance treatment


Figure 2.3.21 Entrance tower sculptured steel work


Figure 2.3.22 Plans. (Urban Solutions)

UNIVERSITY OF PRETORIA LAW FACULTY BUILDING, Tshwane 2004, Kruger Roos Partnership.

The layout is a simple rectilinear structure oriented predominantly in an east-west axis. This simple rectilinear structure contains 'green pockets' in the form of two uncovered tree-lined courtyards, around which lecture facilities are arranged. The courtyards feed off from the main walkway that spans the length of the building. The entrance is defined by a visual continuation of an existing avenue of trees, and is accessible from both the north and south.
The planning is such that major public traffic is restricted to the ground floor, where the lecture venues, library and auditorium. The upper levels are dedicated to more private areas like the study areas and offices.
The techtonical approach to the building sees the south facade completed in glazed curtain wall, that invokes a sense of transparency. The glazing is recessed to reduce the amount of heat load on the surface. The south facade transmits light into the interior, gives a feel of lightness to the structure. The north facade comprises of a solid wall punctured by various sized windows, in a strip or vertical orientation.
The design takes advantage of passive means of climate control, through the entire-building-length-spannning main walkway (gallery) that is outside but covered on all four levels.

The handling of uncovered courtyards and their relation to the adjacent covered spaces provides positive lessons. The building is designed to around a simple, rational, and higly legible circulation pattern. Another fine example is how the public activity is limited to the ground and first floors, while the upper floors are dedicated to more private activities. (Architecture SA November/December 2004)

Figure 2.3.23 Ground Plan. (Architecture SA November/December 2004)

Figure 2.3.24 South east view. (Architecture SA November/December 2004)

Figure 2.3.25 Library interior. (Architecture SA November/ December 2004)

Figure 2.3.26 Facade detail (Architecture SA November/ December 2004)

Figure 2.3.27 North east view. (Architecture SA November/December 2004)

MARY FITZGERALD SQUARE, Johannesburg 2000, GAPP Architects and Urban designers

The square is located right in the hub of Johannesburgs cultural precinct of Newtown. Originally the square was a wagon site called Aaron's ground and later renamed Mary Fitzgerald in 1939 to honour the first woman trade unionist who played a key role in the 1910 miner's strike. (www.joburg.org.za)

The square takes up an entire block, but is divided in half by a generous walkway running accross the entire width. With a capacity of 50 000 people, coupled with the gigantic 55m² LED screen, the square has become a popular venue for public gatherings. Film festivals, markets, concerts and important live broadcasts are just some of the events that the square hosts. However, on a daily basis the square is used as parking space.

Two sky disks are major elements on the square. The first depicts the stellar constellation as at the birth of Mary Fitzgerald, the second depicts the constellation as at the first democratic election of 27 April 1994. There is a third, which can be found at the entrance to the MuseuM AfricA depicting the constellation as at the official launch of the square on 16 December 2001 - Reconciliation Day. The disks use unique optic fibre lights that glow in the dark.(www.joburg.org.za).

Techtonically, the square is paved with concrete interlocking pavers for a durable and robust effect, and to assist stormwater run-off. The boundary is demarcated all-round with concrete street furniture. The northern and eastern ends of the square have wooden carved sculptures mounted on concrete bases, done by local artists. In addition,
Renowned French lighting engineer, Patrick Rimoux was commissioned to design the lighting for this square as well as for the surrounding public open spaces. (www.joburg.org.za)
Public drinking fountains are provided, also detailed in concrete.
The square is modern, robust, and functional.
Lessons can be learnt from the simple, yet functional design, and how to incorporate the work of local artist in creating visually appealing boundary demarcators.

Figure 2.3.29 Generous walkway.

Figure 2.3.31 Drinking fountain.

Figure 2.3.30 Lights.

Figure 2.3.32 Wooden carved sculptures.

Figure 2.3.28 Square panorama looking west