

chapter 04

the design influence

Apart from the brief, response, methodology and approach, various other influences contributed towards the final design of the new music school. These influences primarily relate to the architectural heritage of the existing buildings in the precinct. The Aula, Amphitheatre, Musaion and Music Building reflect a distinct modern character that was the trend of the time in Pretoria during the 1950's and 1960's. Although these stylistic trends overlap in many ways such as period, materials, formal response, scale, contextual

relationships and functional approach, there are certain characteristics unique to each.

In an effort to convert the existing language of the precinct to a more contemporary perspective, it is necessary to fully understand the original design influences of the precinct. In this chapter the three languages evident in the design of the precinct buildings will be analysed: Brazilian-inspired Pretoria Regionalism, Monumental Modernism and New Brutalism.

fig. 4.1 : "The Pretoria Wachthuis owes much to the Brazilian Influence - the use of an arcade paved in marble mosaic murals that are linked by a sweeping double stairway to the upper level, the introduction of brise soleil on the facade and elegant steelhelical stairs in the double volumes of the ground level shops" (Jooste, 2007:85).



“From Brazil to Pretoria – The Second Wave of the Modern Movement”

In the early 1940's the Brazilian mutation of the Modern Movement architecture started to gain a spirited following in the Transvaal. In 1943, to be exact, the Museum of Modern Art in New York staged the “Brazil Builds” exhibition. The exhibition portrayed an interpretation of the Brazilian Second Wave which proved to be more empathetic to both the privileged and the public than the austere International Style (Gerneke, 1998:197).

Elements such as continuous urban space at ground level, pedestrian ramps, brise soleil, free forms, sculpture, enormous murals and roof gardens of tropical flora reflected a regionalist intent which have been completely ignored in the International Style. Another impressive aspect of the exhibition was the dexterous handling by engineers and architects of audacious structures and innovative forms in reinforced concrete (Gerneke, 1998:203).

The same year as the exhibition, the Pretoria School of Architecture at the University of Pretoria was founded. The book “Brazil Builds” became to the post-war students of the Pretoria School what “Vers une Architecture” had been to the Modern generation in Johannesburg (Fisher, 1999:e2). In the following decades, the 1950's and 1960's, the influence of the Brazil Second Wave left an enduring mark on the architecture of Pretoria and also spread to other cities across the country. The particular affinity for the style in Pretoria lead to the Highveld becoming a “Little Brazil” as termed by Chipkin in 1993,

derived from Nikolaus Pevsner's (1953) observation that Johannesburg was “a ‘Little Brazil’ within the Commonwealth” (Fisher, 1999:e2).

According to Gus Gerneke's article in *The Architecture of the Transvaal* similarities in climatic conditions between South Africa and South America motivated the profound following of the Brazilian Movement in Pretoria. The impracticality of International Style trends such as flat roofs (difficult to waterproof in Transvaal thunderstorms) and large windows (inappropriate without overhangs in the harsh Highveld sun) left architects in search of more appropriate solutions. The regionalist touch of the Brazilian Movement provided suitable alternatives. Other reasons for the susceptibility of the Pretoria University graduates to the Brazilian influence are explained by Gerneke (1998:215):

“...Afrikaners, on gaining political power, espoused the avant-garde to proclaim their achievements. This is most evident in ecclesiastical buildings; while English churches were generally safely traditional even in the fifties, Afrikaans congregations championed daring buildings, often with crude results... Most likely the young Pretoria architects simply rejected the traditionalists – they were primed for a fresh approach by their admiration of Le Corbusier, Gropius, Mies van der Rohe and other Modern masters and, later, the Brazilians. What is more, the Transvaal Group had broken fallow land a decade earlier, creating a seedbed for

new design, which later led to a Transvaal mutation of the Modern Movement via an affinity with the bold Brazilian school.”

Norman Eaton, one of the pioneering Pretoria architects of the 1940's and 1950's, and Hellmut Stauch, another notable Bauhaus-trained Pretoria architect, were the first to reflect the transatlantic influence in their work.

Eaton's Ministry of Transport Building in Pretoria (1944) was the first in South Africa in the Modern idiom and the first building directly influenced by the Brazilian architecture. The building was strongly representative of the Rio de Janeiro Ministry of Health and Education building: “the juxtaposition of the wings, the facades with fins on a grid and adjustable brise soleil and the sculptured lift towers – typical floor, library, waiting room, auditorium” (Gerneke, 1998:212-213). Dry “movable” partitioning was also introduced to provide flexible office space, a first for South Africa.

Stauch's Meat Board Building in Pretoria soon followed in 1950 in the same Modern idiom and with the same Brazilian influence, and one of high architectural standard at that. Once again the Rio de Janeiro Ministry of Health and Education inspired the design: “pilotis, dry “movable” partitioning, fins on a grid, adjustable brise soleil, a similar roofscape and the separately articulated auditorium (in this case a boardroom)” (Gerneke, 1998:216).

fig. 4.2 : The Netherlands Bank was designed in 1953 by Norman Eaton. The building was a summary of the Brazilian notions used in the Ministry of Transport building: vertical hardwood louvres on the west facade and a roof garden, inspired by the acclaimed Brazilian landscape architect Roberto Burle Marx. Eaton took great care in his projects to have the exterior spaces compliment the building.



fig. 4.3



Netherlands Bank
1953
Norman Eaton

fig. 4.4



Polley's Arcade
Norman Eaton

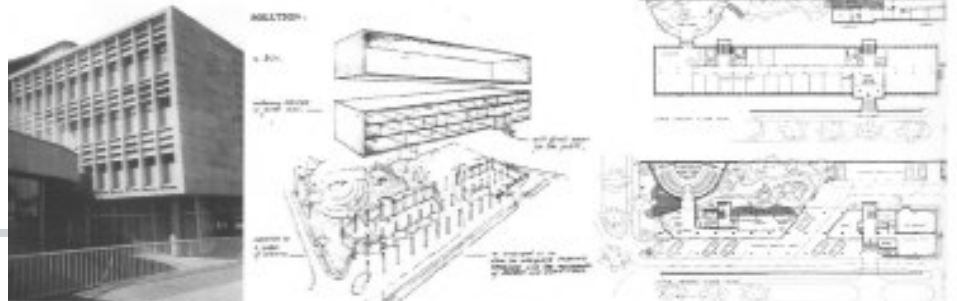
fig. 4.5



Little Theatre
1940
Norman Eaton

Meatboard
Building
1950
Hellmut Stauch

fig. 4.6



Pretoria Technical
College
1967
Eaton & Louw

fig. 4.7



Transvaal
Provincial
Administration
Building
1962
Meiring & Naude,
Moerdyk &
Watson

fig. 4.8



a new monumentality

monumental modernism

4.2.

The Brazilian influence was soon felt on the Main Campus of the University of Pretoria. Graduates of the architecture school like Karel Jooste, Gus Gerneke, Anton du Toit and Wynand Smit became tutors at the school together with other noteworthy architects such as Norman Eaton, Hellmut Stauch and Gordon McIntosh – all influenced by the Brazilian Second Wave. The campus soon reflected elements of the Brazilian influence with the use of pilotis, flaunting brise soleil and glazed tiles.

Aspects like the shortage of sheet-iron during the war years encouraged architects to experiment with roofs of formed concrete. Although this tested the skills of engineers and builders to the limit by creating daring concrete inventions, it developed confidence in the use of the material. Ribbon stairs and hyperbolic, folded or saddle-curved canopies and roofs were some of the new concrete elements included in the designs. The first free-standing ribbon stair in South Africa was tacked to the outside of the Aula. Unfortunately it has since been demolished. Apart from its renowned staircase, the Aula was also the first Monumental Modernist building on the campus and could well have been the first in South Africa if it was not for Stauch's Meat Board Building also classified as such (Fisher, 1999:e2).

Simultaneously to the post-war dilemma, an international quest for a New Monumentality occurred as a "re-conquest of the monumental expression" (Gerneke, 1998:220). Confidence in the Modern "form follows function" idiom was waning and the argument was that Modernism, based on functionalism, "can express little except utilitarian ideas" (Gerneke, 1998:220).



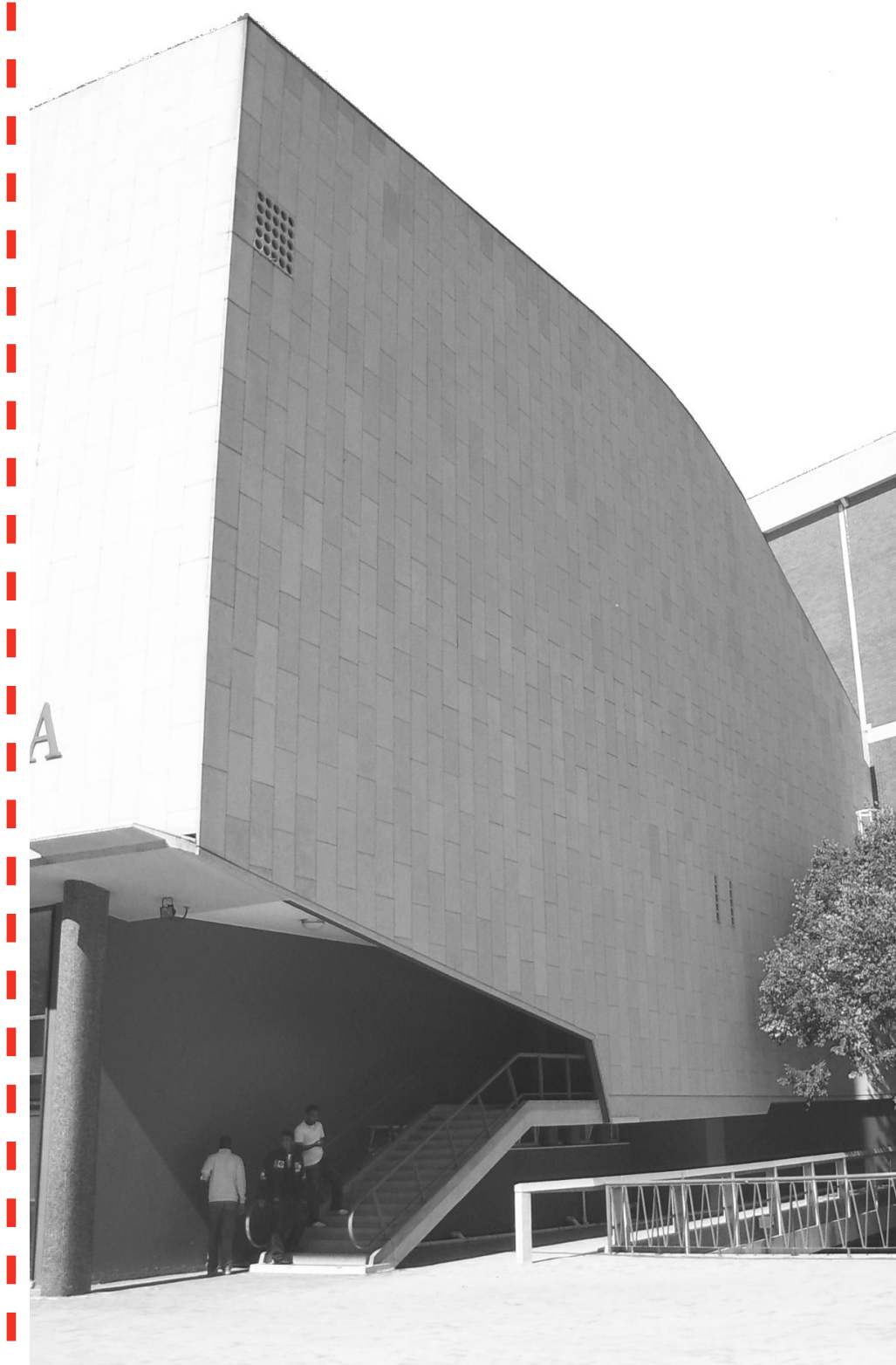


fig. 4.9 & 4.10 : The Aula is probably the most impressive example of Monumental Modernism in Pretoria. It was designed in 1958 by Karel Jooste.

By the 1950's views contrary to the doctrine of Modernism were increasingly being aired: "Modern architecture is torn by remorse and doubt because it is still wavering on the point of renouncing Functionalism and yet has no other conviction to replace this god of its youth" (Boyd, 1956:85). Disparate influences were gaining strength and in the light of this Le Corbusier's post-war projects erupted in the international press triggering the New Brutalism (Gerneke, 1998:219).

The Brutalist architectural style thus spawned from the Modern Movement and flourished from the 1950's to 1970's. The work of Le Corbusier largely inspired the early style, in particular his *Unité d'Habitation* (1952) and the *Secretariat Building* in Chandigarh, India in 1953. The term Brutalist architecture also originates from the French "béton brut" or "raw concrete" that describes Le Corbusier's choice of material. In 1954 the English architects, Alison and Peter Smithson, coined the term. However, it only gained strength when the British architectural critic, Reyner Banham, used it in the title of his 1954 book: *The New Brutalism*. The style has since been refined and experienced historic appreciation and resurgences well into the 21st century.

Brutalist buildings usually consist of striking, repetitive, angular geometries and often

reveal textures of the wooden shuttering used to shape the material which is normally rough, unadorned poured concrete – although this is not a pre-requisite for the style. Brutalist buildings may achieve its quality through a rough, blocky appearance and the expression of its structural elements, forms and services on the exterior façades. Other Brutalist materials include brick, glass, steel, rough-hewn stone and gabions. Another common theme of Brutalist buildings is the exposure of the building's functions – ranging from its structure and services to its human use. The Boston City Hall of 1952 and the Centre National de la Danse of 1972 in Lyon indicate strikingly different and projected portions on the facades, reflecting the spacial nature of rooms behind the walls.

The first upsurge of New Brutalism occurred in the 1960's when inexpensive construction methods were sought after to re-build war-ravaged communities. The late 1960's were also the era of expansions to various university campuses in North America and Canada and New Brutalism soon established itself at the American and Canadian universities. The first New Brutalist campus building was Paul Rudolph's Yale Art and Architecture Building in 1958.

"While the Smithsons and Paul Rudolph visited South Africa and left their mark on its

architecture, New Brutalism arrived at the University of Pretoria through Brian Sandrock" (Fisher, 1999:e2). Sandrock had been active on the campus since 1956 with additions to existing buildings. He would eventually dominate the campus with his fascination with the plasticity of concrete and a confidence about its engineering. Both of these were explored on Campus even when it was not a functional requirement. "His buildings are daringly engineered: the concrete façade of the Administration building is suspended on rubber hangers, the floors of the Engineering tower are suspended from central service towers on cables, the New Humanities building rises off an enormous concrete bridge podium" (Fisher, 1999:e2).

Even though most of Sandrock's designs express functionality on a monumental scale, the Musaion and Music Building adopted more contextually sensitive scales and proportions – probably indicative of the intimate nature of the school and the auditorium.

The buildings of Brian Sandrock might be designated to the New Brutalist language, however, they also reflect a strong Brazilian-influenced Pretoria Regionalist influence such as the glazed tiles of the Music Building and the *brise soleil* on the north façade of the Administration building.



fig. 4.11 : Modern Art Museum, Rio de Janeiro

fig. 4.12 : Exposed concrete aggregate as finish to intersecting rectangles.



fig. 4.13 : "Bruterin"

fig. 4.15 : Centre National de la Danse of 1972 in Lyon



fig. 4.14 : Le Corbusier's Unité d'Habitation in Marseilles



fig. 4.16 : Waterloo Mathematics Building



fig. 4.17 : Resurgence of Brutalism in a contemporary era



new brutalism across the globe