chapter 03
the design approach

In a reply to the brief by the Department of Music, a response was generated to establish a place on Campus where the experience of music can be intensified and celebrated. A methodology of extension and conversion of the existing milieu was formulated to ensure that the new intervention relates to the existing on a physical, social and functional level. In order to guide the process of extending and converting the existing environment, an appropriate design approach had to be adopted. The theory of gradual mutual adaptation by Christopher Alexander provided a suitable and sensitive perspective for approaching the project.

Alexander's theory developed as a reaction to the failures of Modernism in an effort to rectify societies and make them more whole. This implies that our environments need to be filled with more life, recognise the needs of the users as defined by our basic human nature and appreciation of the things that are truly beautiful. The quest to shape settings in which people feel safe, have alternatives and the autonomy to interact instinctively has been the objective of the theory of gradual mutual adaptation.

Besides the passion for the users of environments and their needs, other aspects are being highlighted within the theory as being critical design informants not to be neglected in contemporary space-making. Contextually responsive designs, stripped of commercially driven and stylistic intentions, together with sound sustainable principles, are probably the most appropriate strategy for the resolution of the design challenges of our day and age. This approach does not only take into consideration the socio-economic, physical, historical or cultural issues of an environment, but also has the intention of minimizing the long-term negative effects of the built environment on nature.

The aim of the theoretical discourse is thus to delineate this theory as a fitting approach to the introduction of a new music school in order to ensure a design solution that makes the environment of the Department of Music whole, both for its users and the context of the precinct.

"I believe we are on the threshold of a new era, when the relation between architecture and the physical sciences may be reversed – when the proper understanding of the deep questions of space, as they are embodied in architecture – will play a revolutionary role in the way we see the world … and will perhaps play the role for the world view of the 21st and 22nd centuries, that physics has played in shaping the world view of the 19th and 20th."

- Christopher Alexander, Berkeley, 1983

fig. 3.1 : Vast reductive spaces of the 20th century - created by a mechanistic world view.

3.1. perspectives of the design approach

The design approach for the new music school is based on three perspectives that provide direction for the project in order to create an environment that is orientated towards the needs of its users. The creation of spaces in which people feel comfortable and have choices is pertinent for the revitalisation of the music precinct and the much needed exposure of the Department.

a perspective based on *science*

This perspective discards any other, unscientific approaches such as fashion, ideology, history or politics. It is based on scientific reasoning, especially with regards to our perception of space. One of the transformations required is that we rethink the nature of space. It should be perceived as an entity which, like all organic and inorganic matter, has some degree of life in it. Space can therefore be more or less alive according to its structure and arrangement. This perception of space will influence the way we think about buildings, spaces and planning. With this approach in mind, based on how matter naturally arranges itself coherently and spontaneously within space, deviations from the restrictive ideas of modern planning can occur. Instead of grids, zones, roads and buildings being imposed onto human activity based on a preconceived design on paper, environments will have the opportunity to orchestrate their own identities and spatial organisations according to the needs of their occupants.

a perspective based on *beauty & grace*

In the current view of the world, we are still captivated by the power of Cartesian reductionism, the metaphor of the machine. It utterly dominates our power over nature, the power to take apart and reassemble nature at vast scales for our own purposes. We should however be looking towards nature for the kind of order necessary to create freedom, wholeness, harmony and life.

Nature and the order that exists in it also suggest that for buildings to be really alive, it needs to be deeply and robustly functional. For in nature there is essentially nothing that can be identified as pure ornament without function. Conversely, there is no system in nature that is functional without being beautiful in an ornamental sense.

With nature as our respectable teacher we will come to understand the idea of holism – instead of reductionism – which is inevitably integrated in designs that reveal feeling, spirit and true beauty.

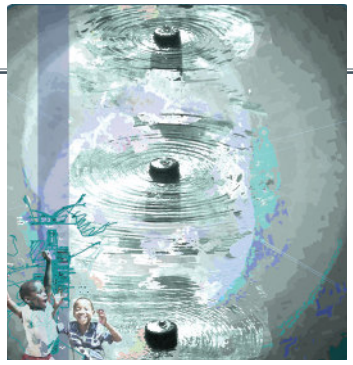
a perspective based on *intuition*

Alexander's theory proposes a vision of a human-centred universe, a view of order in which the soul, or human feeling, plays the central role (Alexander, 2001:6).

A new language is to be provided for the construction of and transition into a novel kind of society, rooted in the nature of human beings. The ability to provide for the needs of human nature requires once again a proper understanding of space:

"Geometry of the physical world, its space, has the most profound impact possible on human beings. It impact on the most important of human qualities, our inner freedom or our sense of life each person has." (Alexander, 2001:30)

Equipped with a clear picture of the importance of space on our everyday lives, we can start to make space in our environments, space that fulfil the common needs and desires apparent in all human beings.



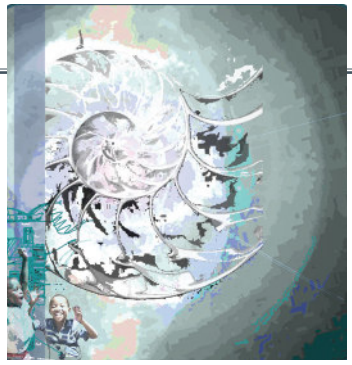


fig. 3.2

space nature humans

"The really good building. The really good space. Places that reach an archetypal level of human experience, reaching across centuries, across continents, across cultures, across technology, across building materials and climates. They connect us all. They connect us to our feelings. They are results of the practical task of making beauty."

- Vision of a Living World, Christopher Alexander

3.2. matrices of the design approach

centres

The concepts of order and wholeness are constructed around the idea of centres. Coherent centres and their interrelations with one another define the whole and the nature of order that exists within it. Each centre is crucial, for the existence and life of one centre can intensify or decrease the life of another and inevitably that of the whole. The life of a structure and its environment depends on the density and intensity of the centres which it consists of. Inspired primarily by his discoveries from *Notes on the Synthesis of Form*, Alexander has formulated fifteen properties for the transformation of centres. In essence these are fifteen ways to probe centres in an effort to bring them to life and strengthen them through a coherent and expandable connection to other centres (De la Port, 2008:5). The more these properties are present in the centres, the more the systems which contain them will tend to be alive. Properties such as levels of scale, boundary definition, alternating repetition, positive space, good shape, local symmetries, contrast, echo and voids have all been incorporated in the design of the music school to some extent.

wholeness

When comparing traditional environments, for example a tiny Gothic church or an ancient Zen Temple, with the works of modern architecture, one realises that the traditional settings have something in common: they are beautiful, ordered and harmonious. They strike to the heart and are utterly real. The modern structures, however, are not quite so real. What distinguishes the more traditional structures from the modern as being more real?

The answer lies in their quality of wholeness. This quality is directly related to the characteristics, strengths and coherency of the centres comprising the whole. Something that is whole and real accepts itself, it is true to its own nature, it has no pretensions and it is direct and simple. When all the forces which emerge from a system are in balance, the system is fully whole and utterly real. For an environment to be whole, it must fulfil five conditions:

- all the deepest society-wide psychological needs must be taken into account
- human feelings, climate, engineering, social problems, ecology, transportation and economics must all be integrated
- each person needs access to a shared pool of experiences
- all acts of building must contribute to wholeness of the environment
- the environment must be created by the people who live in it

order

A prominent initiative in Alexander's theory is the idea of order. He refers to a specific kind of order evident in nature as oppose to the different kind of order of modern society. In both order manifests, however, it is the nature of order that distinguishes our natural world from our man-made world. Society is currently ruled by a mechanical order. "The order is always prescribed – and even invented – in relation to the way the things work as a mechanism." (Alexander, 2001:15).

It is precisely this nature of order, he argues, that lies at the root of the architectural problem. The order we perceive in nature is the order we should strive for. It is similar to the order you find in a Mozart symphony: a harmonious coherence which fills us and touches us. Coherence of parts to a whole, an authenticity and transparency that captures and moves the human soul, which arouses feelings of the sublime. For anything, both in nature or man-made, to be filled with life, order is required. It suggests a set of well-defined, logically arranged structures present in all life, from micro-organisms to mountain ranges to good houses and vibrant communities (Alexander, 2001:15). Once we understand the qualities of this order, we can ask precise questions about what must be done to create more life in the world – whether in a room, a door knob, a neighbourhood or a vast region.

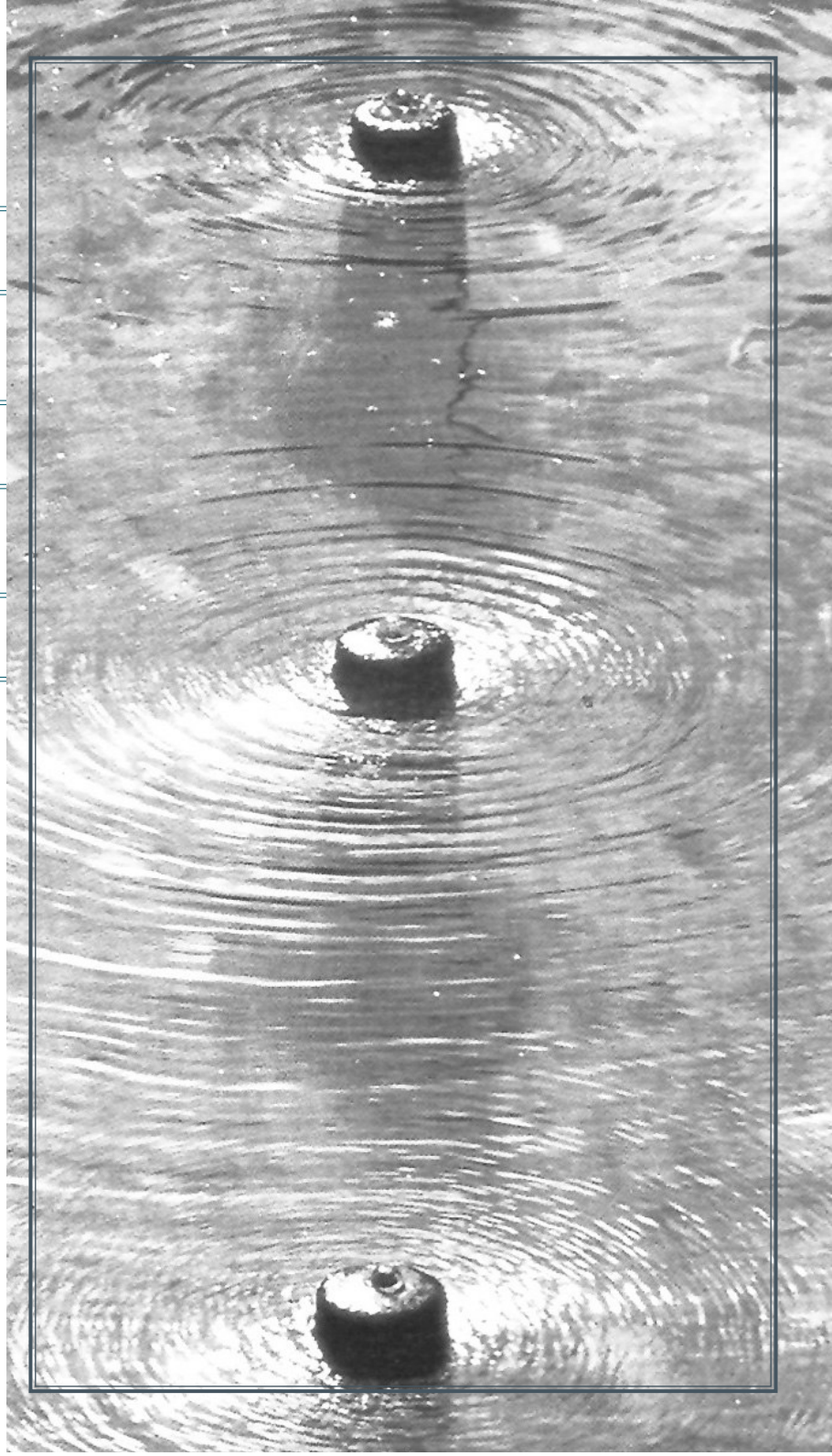
"All systems in the world gain their life, in some fashion, from the cooperation and interaction of the living centres they contain, always in a bootstrap configuration which allows one centre to be topped up by another, so that each one ignites a spark in the one it helps, and the mutual helping creates life in the whole."
(Alexander, 2001:176)

fig. 3.3

order

wholeness

centres

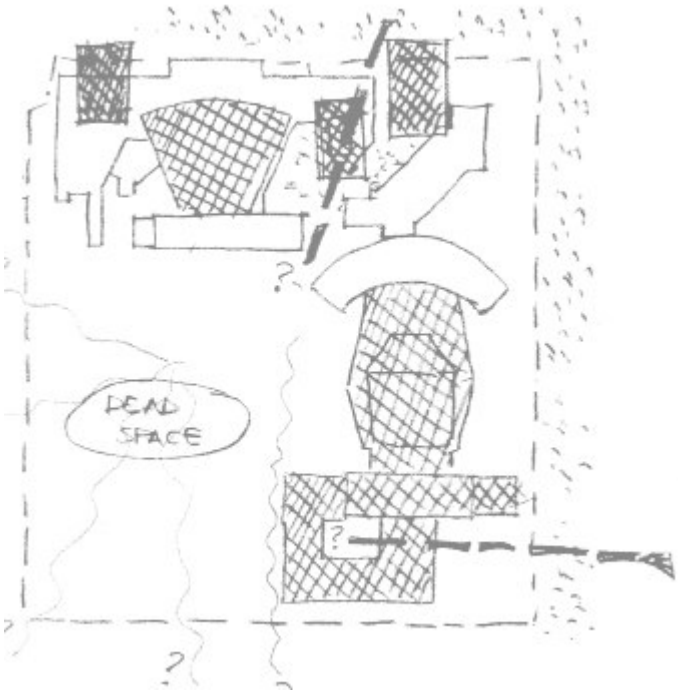


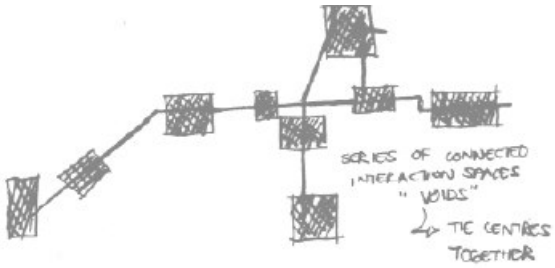
3.3. application of the design approach

In the context of the project the selected approach will be applied to the design of the new music school as well as to the revitalisation of the precinct. The process of gradual mutual adaptation prescribed for the precinct and the existing music building implies a subtle, sensitive conversion of the current environment to a more defined, concentrated network in service of music.

The new music school will act as a new centre to be introduced within a precinct already containing centres. Some of these centres are not very strong, not functioning to their full potential and thus the aim of the new centre and spatial framework is to enhance the existing centres as well. The new building will consist of a series of smaller functional centres, each with its own identity and characteristics, yet functioning as a whole. Order within the new building and its connection with the existing fabric will be inspired by the process of music. This process consists mainly of the preparation and performance of music. The spatial, social and functional organisation of the intervention will be ordered along these two aspects of music. Due to differences in the processes, the spatial and formal characteristic of the preparation and performance axes will also differ.

In an effort to bring wholeness to the precinct and the Music Department, a strategy has been devised to attract more life to the area that will bring about wholeness on a social level. The integrated and extended program of the new building will achieve functional wholeness. Contextually, wholeness will be created by the links and relationships established between the centres within the precinct as well as the integration of the precinct with the surrounding Campus and public realm. Finally a shared language will need to be formulated to tie the new building in with the existing built fabric of the precinct. This shared language aims to create wholeness between the new and existing with regards to aesthetics, materials, technology, form, spatial organisation and proportions.





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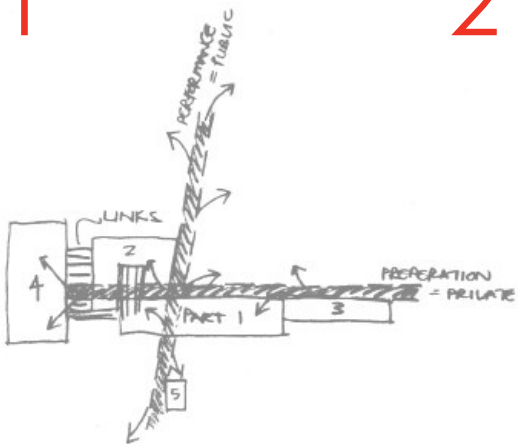

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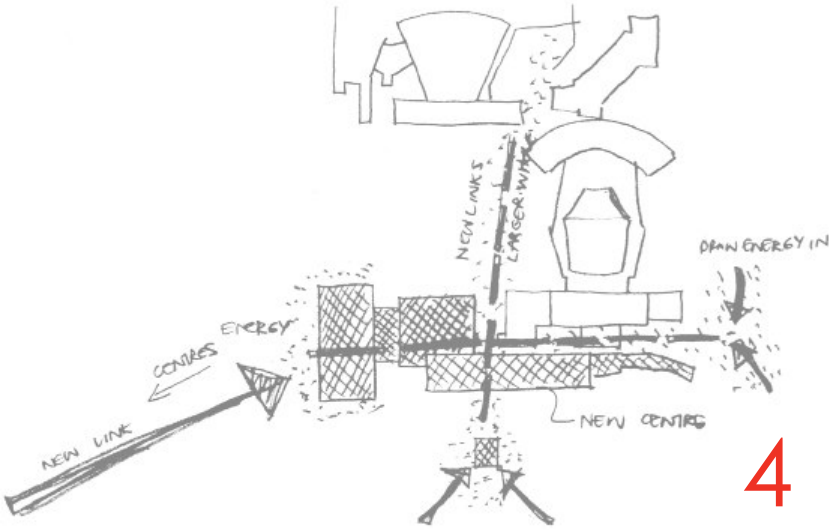

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fig. 3.4 : Design sketches indicating :
1: the existing strong centres of the precinct - a centre within the campus - a centre within the suburb of Hatfield etc.
2: a series of interconnected social spaces - the voids - linking the centres
3: a new centre is introduced - consisting of smaller connected centres along two contextual axes linking with surrounding whole
4: the new centre is strong within itself - also strenghtening the surrounding centres and the whole