



*...The interplay between the world of our bodies and the world of our dwelling places is always in flux. We make places that are an expression of our haptic experiences even as these experience[s] are generated by the places we have already created. Whether we are conscious or innocent of this process, our bodies and our movement are in constant dialogue with our buildings. Charles Moore and Robert Yudell as quoted from their book *Body, Memory and Architecture* by Ching (2000:227)*

# 1

## INTRODUCTION

The inquisitive nature of a post-modern society is in stark contrast to the prescriptive limitations implied by the modern movement (Venturi, 2002:16). Venturi (*ibid.*) suggests that this newly acquired knowledge is accompanied by a renewed self awareness.

Architect and writer, Charles Jencks (1997:8), aims to unravel the complexity that this renewed self-awareness has brought about. In his book entitled *Architecture of the Jumping Universe*, Jencks (*ibid.*) focuses on the reaction to this complexity. He collectively refers to these attempts as the meta-narrative, and argues that if design can respond to the meta-narrative by dissecting it in order to expose the systems it comprises of, it may possibly serve as design generator. This dissertation will therefore argue that room should be made to ask how design can possibly allow for the interpretation of the bigger picture.

The subject of human anatomy applies dissection as a tool to uncover the



altering the complexity of the architectural fabric.

## 1.1 Site

### 1.1.1 Site Identification

This investigation will focus on the South African institutional building, more specifically, The Tshwane District Hospital (1927).

This should include the context of the building in relation to the site it occupies. This will inform an analysis that could address the existing architectural envelope and its associated services. The built form should inform the space it occupies, and this will be analysed by investigating elements influencing spatial quality. The spatial quality of architecture influences the experience of the visitor and, as a result, the interaction of the user with the built form. For this reason, the existing user interface should be investigated. Scott's theory of stripping back, making good, enabling works and new work should be implemented in this project as an approach to the manipulation of built fabric.

### 1.1.2 Reaction

In reaction to the above analysis, the response implies the introduction of a human anatomy gallery to the building envelope of the Tshwane District Hospital (1927). A new building program with the services it offers will, in turn, introduce a series of new sub-systems to the building envelope. These new sub-systems should be manipulated and applied in a layered intervention, prioritising key areas in the existing built fabric that may result in building failure.

The pragmatic response will be outlined in *Chapter 2*.

## 1.2 Background

In a recent study conducted by a team of researchers from King William's College in London, it was found that most people lack even the basic knowledge of human anatomy (*Science Daily, 2011*). A similar study was conducted 40 years ago, but the result differs only slightly, if compared to the recent one, despite advances in education and increased access to health information. In a study of 722 individuals, 85.9% could indicate the position of the intestines in the body; 80.7% could indicate the bladder, whilst only 46.5% could indicate the correct position of the heart and only 68.6% correctly locate

complexity of the human body. The human body is seen as a collection of complex systems functioning as a whole (Solomon *et al*, 2002:4). The anatomist alters the existing arrangement of human tissue and through this process of disruption exposes individual sub systems, as indicated in

*Illustration 1.1.*



*Illustration 1.1. Students dissecting a cadaver as part of their medical study in anatomy*

Once a sub system has been uncovered, it is impossible for the anatomist to return the dissected material to its original state in order to re-evaluate its relationship to the complete living body. Instead, the anatomist reinterprets the findings in relation to the existing. It may possibly be suggested that the anatomist views the human body as a meta-narrative comprising of individual sub systems. It is only by exposing these systems that the anatomist is able

to derive a conclusion.

Buildings are therefore not mere structures; they are a matrix compiled of a complex arrangement of systems.

The interior architect is often confronted with the meta-narrative in the built environment, as British engineer and writer Steven Groak (1992:19) remarks:

*“It is useful to see buildings as ‘unstable systems’ ones which sometimes cannot respond to their changing circumstances – whether it be internal comfort, environmental degradation, new social or economic conditions or the external climate. Without the addition of active controls they decline further, either gradually or catastrophically. It is in this sense that we may speak of building failure.”*

The above statement implies that building systems should constantly be analysed in order to define systems that may contribute to building failure. Secondly, it suggests reaction to this identification. In the same light, the interior architect can implement identification and interaction as method of

the lungs (*ibid.*). Lead researcher, John Weisenman, expresses concern with particular relevance to doctor-patient communication:

*“Recent evidence has shown that when doctors’ and patients’ vocabulary are matched, significant gains are found in the patients’ overall satisfaction with the consultation, as well as improved report, communication, comfort and compliance intent.”*

The lacking public knowledge has, however, not kept over 31million visitors from attending the “*Body Worlds - The Original Exhibition of Real Human Bodies*” (Desmond, 2011).

Anthropologist Jane Desmond identifies the removal of social markers (the skin, fat content, facial features and hair) as the main reason why visitors can distance themselves from the living traits of human corpses on display (*ibid.*).

It may therefore be argued that Von Hagen, the creator of this exhibition, has established a popular medium for communicating anatomic subject matter to the public. There are, however, those with a different opinion. Meiring (2010) argues that Von Hagen’s approach is disrespectful and that the main aim for the exhibit is to shock the visitor and therefore has little educational value. Regardless of the criticism, *Body Worlds* still attracts more visitors annually and it should not be overlooked that all specimens on display have donated their bodies willingly for this purpose (Desmond, 2011).



*Illustration 1.2. Plastinated human body on display as part of Body Worlds – The Original Exhibition of Real Human Bodies*

In South Africa The National Health Act regulates the handling of human remains for research purposes (Lewis, 2011). It is outlined in the law on human tissue [Article 81] that human remains may only be obtained for research if it is donated by the individual or if a body is unclaimed by its next of kin – in which case it becomes the property of the government. The law also states that anatomic dissection for research purposes may only be conducted as an extension

of an academic hospital (*ibid.*). The immediate link of the Tshwane District Hospital as a part of the Prinshoff Campus to The University of Pretoria highlights the legislative justification for the specific site selection.

In addition, the subsequent relocation of services previously housed in the Tshwane District Hospital to the premises of the new Steve Biko Academic Hospital, provides the opportunity to also relocate administrative functions out of the administrative building (Soe, 2011). This possibility would enable the existing facility to house a new function.

### 1.3 Aims and Objectives

The aims and objectives of this study include identifying the current shortcomings that marginalise the possibilities of human anatomy and provide the designed means to reinterpret existing architecture.

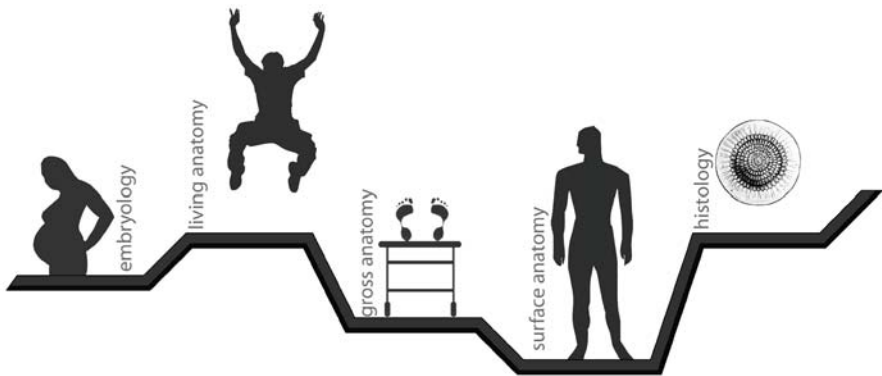


Diagram 1.1 Visual interpretation of sub-categories of Human Anatomy

### 1.4 Anatomy Museums (centres) in Context

The medical field of human anatomy comprises the following sub-disciplines as defined by [A MANanatomy] (2011) and illustrated in *Diagram 1.1*

Different medical faculties at universities in South Africa have diverse interests in the aforementioned sub-categories of anatomy. This diversity is



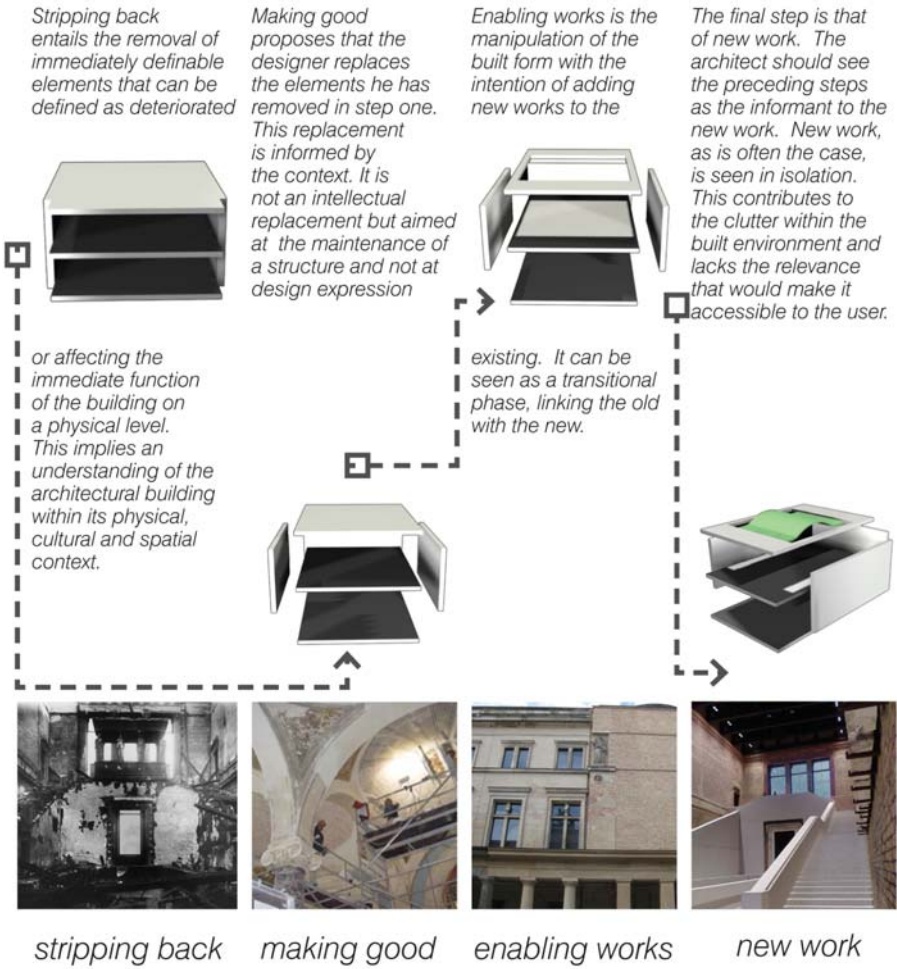
visible in the content of the anatomy museums at the various universities. According to Mr. Lewis (2011), the technical assistant at the Department of Human Anatomy at The University of Pretoria, the main focus of the existing W.G. de Haas Student Resource (1984) is human pathology. This implies a study of abnormalities. The sensitive nature of such a collection has brought about that the facility is closed to the public, with its content perceived by contributors as solely academic.

In contrast, the anatomy museum at the University of Stellenbosch has amalgamated with the Department of Zoology to produce subject matter pertaining to different species, as well as human specimens, in the same venue (Meiring, 2010). Yet again, approached differently, the anatomy museum of the University of the Witwatersrand is focused primarily on human anatomy within the field of anthropology and archaeology. This is largely due to the fact that its museum contains over 20 000 complete human skeletons (*ibid.*).

Few of these facilities are accessible to the public, and those who are accessible lack the facilitation of a designed user interface to effectively communicate the significance of its content to the visitor, as it is approached as storage rather than a display facility.

It is, however, evident that the medical knowledge is available to develop anatomic specimens for display purposes. It can also be noted that the diversity of the subject matter can provide a rich collection of information. What is lacking, however, is the designed facilitation that could enable the non-academic visitor to benefit from it.

## 1.5 Research Methodology



*Steps in altering a building as proposed by Fred Scott*

Diagram1.2 The study's proposed design methodology