



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Chapter 1

Information, Memory & Knowledge



1.1 Introduction

The University of Pretoria main task focuses on the gathering and distribution of information with the aim of creating knowledge. Lecturers disseminate information to students who in turn through a process of learning and application gain knowledge in a certain field. The cycle can continue into research which generates new information and knowledge from the base of a previous information-knowledge relationship.

Different fields of knowledge often intersect, having similarities or distinctions that support one another. In order for this interaction to take place, knowledge needs to be recalled and shared between two vessels of that knowledge. Just like energy that cannot be lost, but only transformed into a different form, information is transformed into knowledge, and then into memory which still in its barest form is information. Memory is information communicated

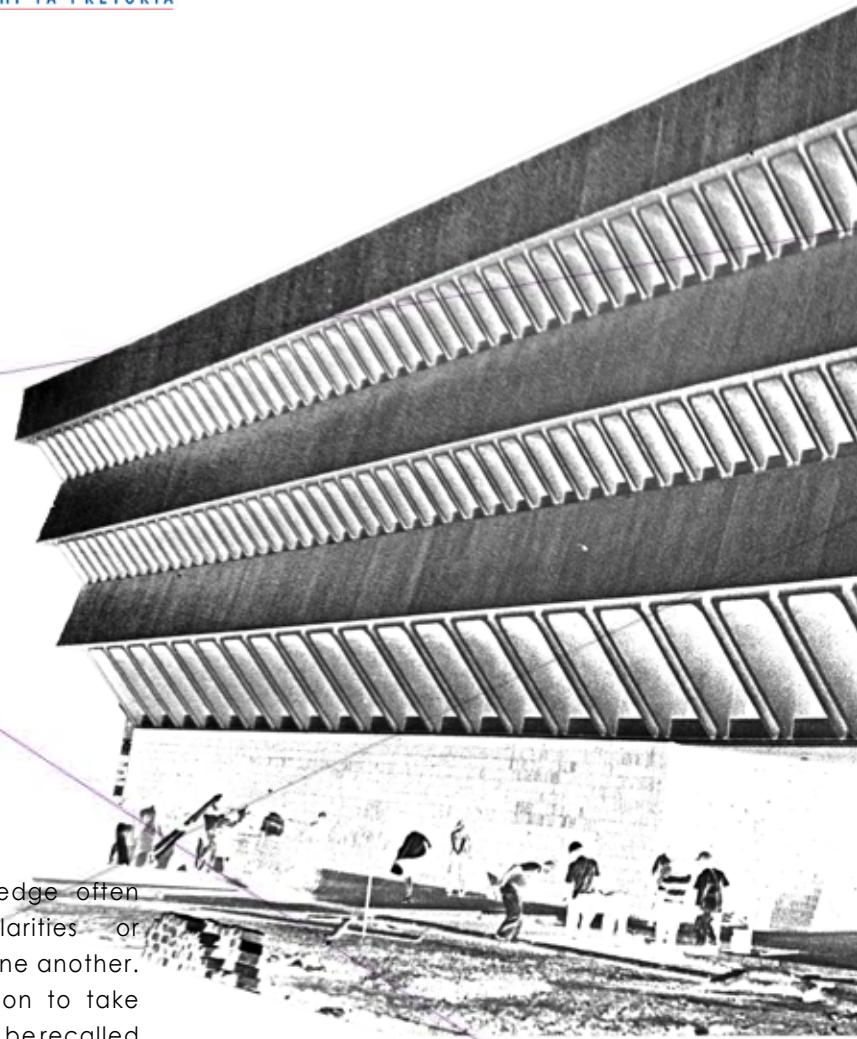
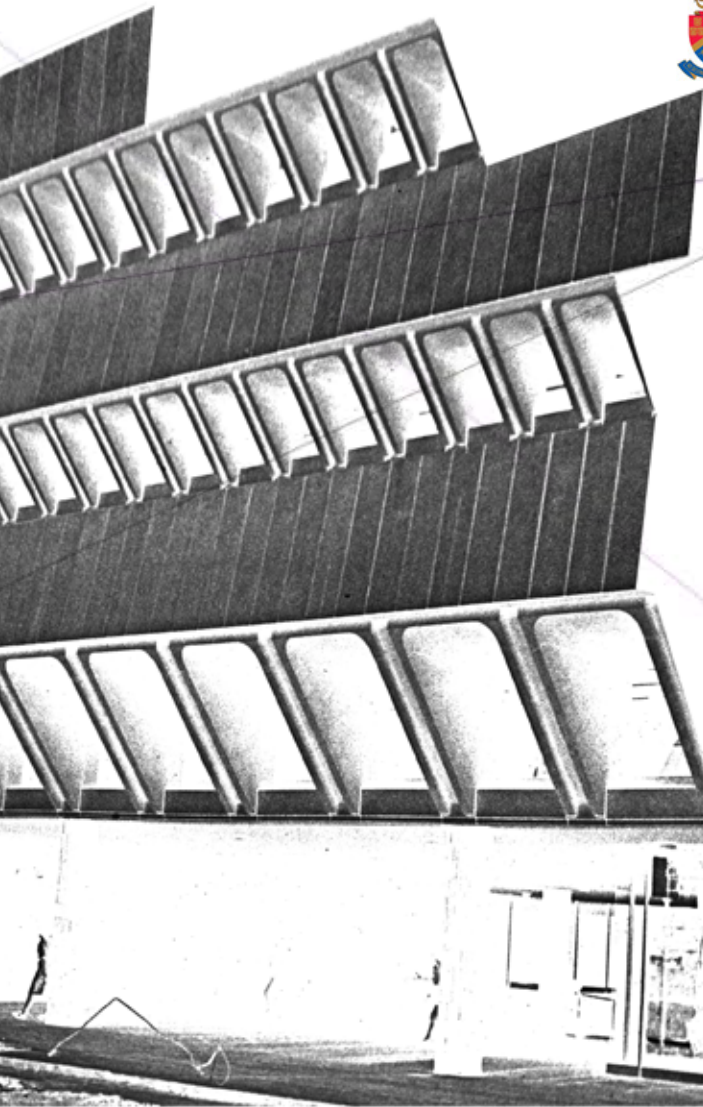


Figure 1.1: New Merensky Library shortly after completion

between two or more units, including communication between objects and humans, humans and humans and even objects and objects.



Memory refers mainly to the recalling of stored (by implication historical) events or data. Carving, painting and then writing formed the foundations of capturing information. Fundamentally memory refers back to something that happened in the past – it might still be happening, but in order to remember a part thereof, that part needs to be stored and then be recalled.

Memory as a current act deals with the actual collection and storage

of information and needs to happen continuously as new information becomes available. This process is executed through research, which in turn is still based on existing information and knowledge. However research is not the only form of memory, on a cultural level humans continually convey a lot of information through physical interaction which includes conversation, activities and general conduct that also builds up cultural and institutional memory.

Today, the rapid development of digital media brings with it a new way of dealing with this information. The building blocks, however, remain the same. Words – thought, written, read, spoken, taught and heard - form the basis of all information shared (communicated). Within this communication lies memory, linking the words to meaning, endowing it with use. The current state of our digital world (including concepts like “global village” and instant (internet) connection to anywhere in

the world) causes the collection and distribution of knowledge to happen even faster, and the generation of memory between groups of previously separated people to occur seamlessly.

Capturing memory intentionally for later reference indicates that current research is inseparably linked to the future, as it paves the way into new landscapes of information. The future is also involved in the continuous process of information management.

The thought of influencing the future through manipulation of current information and even human behaviour is an old idea.¹ Research is one way in which memory affects the future, new inventions change the course of human development irrevocably. The facilitation of research enhances and creates future memory.

¹ Imagine the possibilities had we not overspent the earth's resources, had we had the information we have on global warming we have today, our lifestyles would have been considerably different say 100 years ago.



Figure 1.2: Research facilities in the New Merensky Library shortly after completion in the 1970's



Figure 1.3: Modern day research facilities



MEMORY

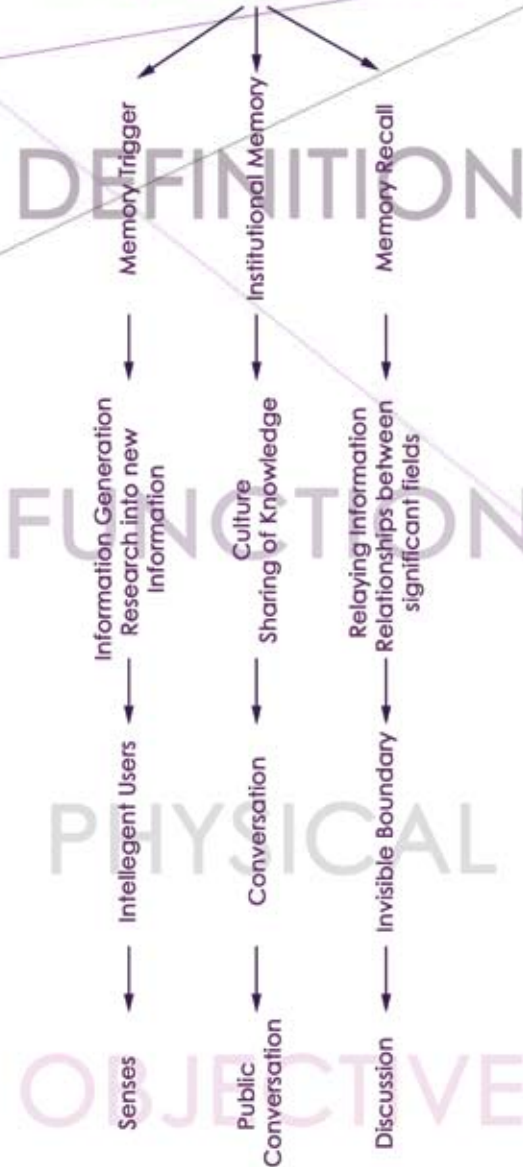


Figure 1.4: Memory definition to Spatial Objective

Looking to the future, we need to accommodate the growth of information into the new era, however, we cannot lose touch with the past. This accommodation would involve as many people as possible interacting with the available information to generate new knowledge, as well as the interface between different spheres of knowledge where memory exists through communication. Thus memory spans time and place – an ideal touchstone to re-use existing space.

1.2 Problem Statement

1.2.1 Real World Problem

2008 Marks the centennial celebrations of the University of Pretoria which creates an ideal platform for introspection and improvement on various levels.

Starting at physical infrastructure, the University has a rich heritage that began in 1908. The historical significance of the physical campus is not necessarily appreciated by the larger population – because of a limited interest in architecture and history as well as a lack of information linked to the main campus. Even though the information is available (Archives and Library) it is not observable by the average user of the space.² Information on campus is tied to faculties and subsequently hidden inside these buildings. As soon as the information is shared by surpassing physical boundaries, memory is created as part of the building.

² Walking about on campus, there is little to no "accidental" interaction with information about campus or its history.

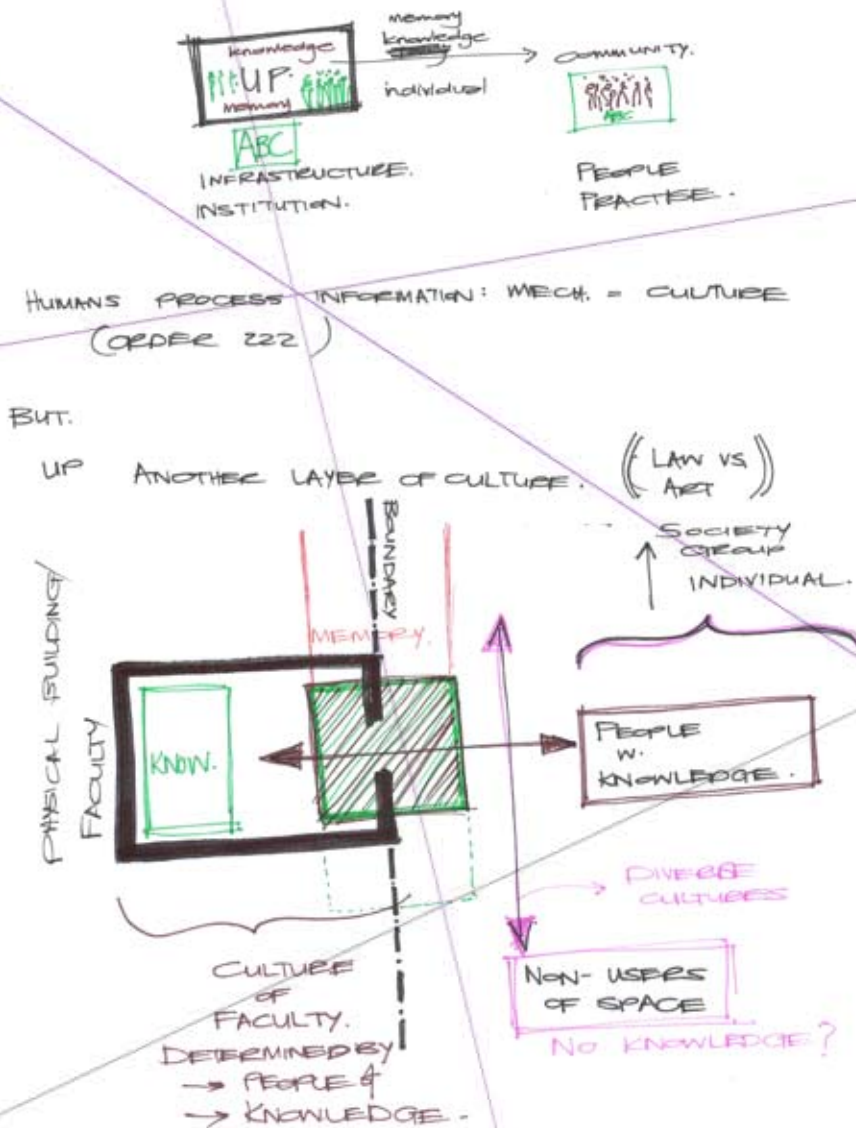


Figure 1.5: Relationship between memory and Built Environment



On another level, still physical, students generally arrive at their Faculty (generally a single building on campus) and then spend the largest part of their day within this building attending class. Like a typical urban area, there are several zones of related information on campus with definite boundaries between them. A problem arises because, as stated earlier (c.f.1.1), no area of knowledge stands on its own. Spheres of information are all connected to create a network of memory which

informs our reality. Opportunities for informative "accidents" are lost, as students are not exposed to various fields of information except their chosen field of study³.

³ If an engineering student "accidentally" encounters information from the Communication Pathology Department (CAAC) decides to research the archaic "hearing aid", does groundbreaking work in the field of micro-electronics while improving the services available to the general public, without realising this student becomes part of the "innovation generation". This student was exposed to a different sphere of information broadening his/her own frame of reference and in doing so catalysed innovation.

This bridges over to the metaphysical realm. Students acquire certain information to gain knowledge in that field and then apply the memory of that knowledge. This application of knowledge is most evident in the chosen career of the student, but on a more subliminal level, knowledge is also shared between individuals, including lecturers, students and even the general public, creating a boundless network of memory.

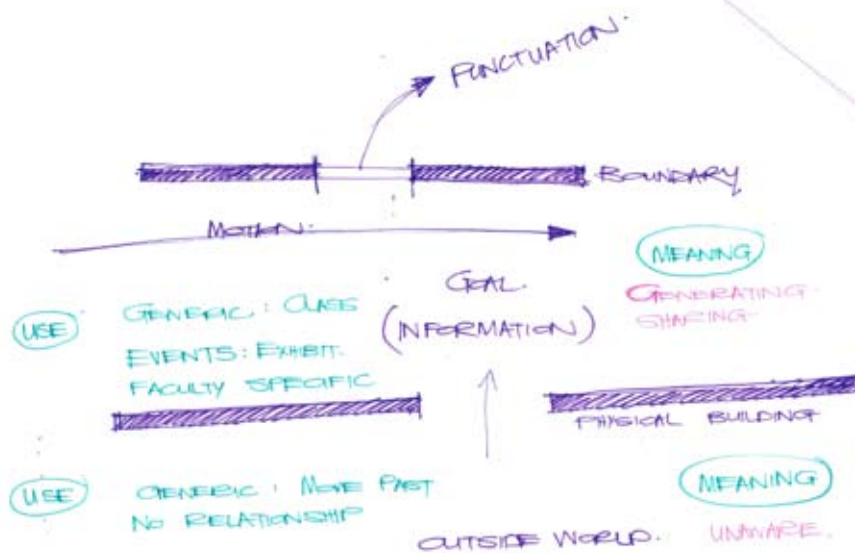


Figure 1.6: Relationship between information and User



Figure 1.7: Ancient Public communication in Agoran Space (Artist Impression)

Through the ages, man has held public meetings where not only opinions but also information and culture were shared (from the earliest gatherings around a fire to the Agora). Architecture and design responded to this human need for interaction with the design of the Agora, public squares and law buildings as well as public entertainment (early theatres). The ancient Agora defined boundaries and design influences. Here heated discussions generated new information while it remained a public event driven by creating seemingly non-essential social interaction that would later become the building blocks of civilisation.



1.2.2 Problem Statement

The social aspect of day to day life is still central to a lot of our current activities, though we are in the midst of a technological era. People still like airing their views, but the medium has changed and the public domain seems to be restricted to shopping malls or reserved for politicians and law-practitioners. Today we have

blogs, e-mail and wiki's for the general public – communication and to a large part information has gone digital. Within this digital media, the need for social interaction is more and more evident with Facebook and twitter as some examples of social networking utilities online that are extremely popular.

To transform an existing architectural space into an informing place that will generate memory through communication of knowledge by facilitating human interaction with space.



Figure 1.8: Modern Day public communication (Digital media Brands)

1.3 Site Selection

At the heart of the campus (physical layout of infrastructure) are the student centre, the humanities building, the Library and the old chemistry building. The organisation of these buildings forms corridors linking different parts of the campus creating a public space where

most of the people on campus pass through daily. These corridors intersect generating a central node under the Library overhang. This culmination of space with its implied potential public use is just void, left-over space. To a large extent the traditional Library supplies written, static and historical

information. Social interaction is limited to preserve the silence needed for research and reading. Heated debating, brainstorming and public lectures are some of the interaction (information sharing) that is lost, but that should not necessarily be hosted inside the Library.



Figure 1.9 Site Synopsis (Aerial Image)



Figure 1.10: Site Key



The Library cantilevers over this space surrounded by several elements, creating an interior space outside a building. Meta-physically the presence of the Library implies that information is readily available, however this information is hidden within the building, an island in the flow of people. The existing transition

between the islands of information is a blank space, with the mother ship of information as another enclosed island in this progression. Research is supported by an administrative team on campus, situated in the Marketing Services Building (adjacent to the Library), another information-related building hidden from the passer-by.

Physically as well as meta-physically, information needs to get into the public realm, where accidental encounters can generate new knowledge. The space underneath the overhang of the existing Library on campus is ideal for this.



Figure 1.11: Site: Corridor west of existing Library overhang, looking in northern direction



Figure 1.12: Site: Corridor north of existing Library overhang, looking in eastern direction



Figure 1.13: Site: Corridor south-east of existing Library overhang, looking in eastern direction



Figure 1.14: Site: Existing Library overhang, looking in western direction

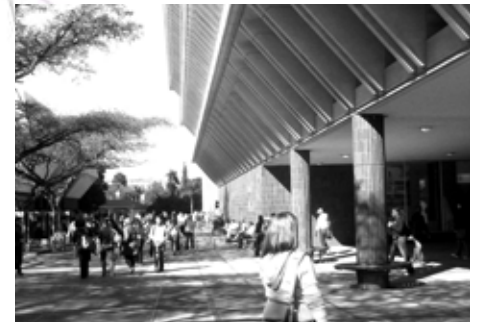


Figure 1.15: Site: Corridor east of existing Library, looking in southern direction

1.4 Hypothesis

An existing corridor leads from one open space to another creating a blank moment in time and space. This moment can be transformed into an event that will narrate information to the user of the space creating knowledge and through that knowledge generates memory by means of conversation

and debate, thereby connecting the users to the space by experience. The movement of the students through the space implies that the memory will be taken back to different Faculties (islands of information), which necessitates further points of contact with the various Faculties – creating a communication network on campus.

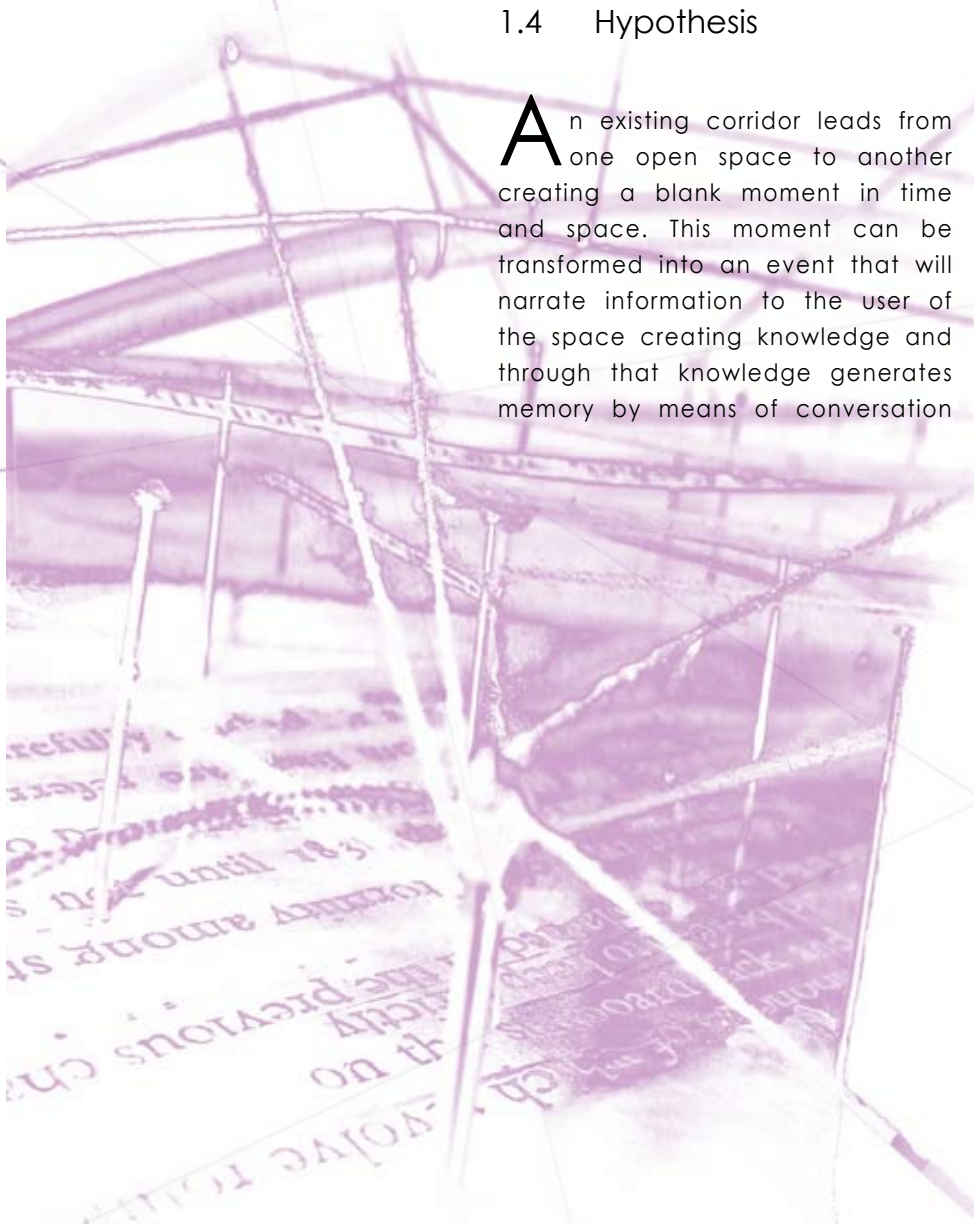
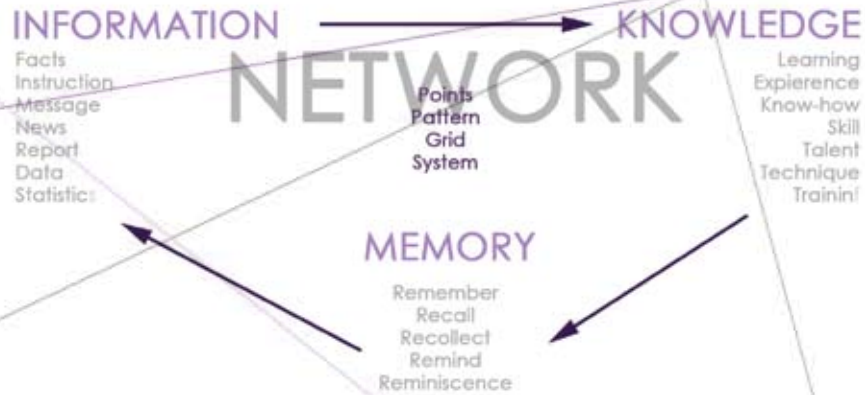


Figure 1.16: The users of the space indicated by the pins in the touchstone model meta-physically connected through information and knowledge, as indicated by the string



Information - Memory - Knowledge

Figure 1.17: the communication catalyst will function between information, knowledge and memory

Establishing a communication catalyst on campus through which information is shared between all interested parties to create "new" knowledge in individuals, and then create memory when these individuals meet in a public space designed for this purpose.

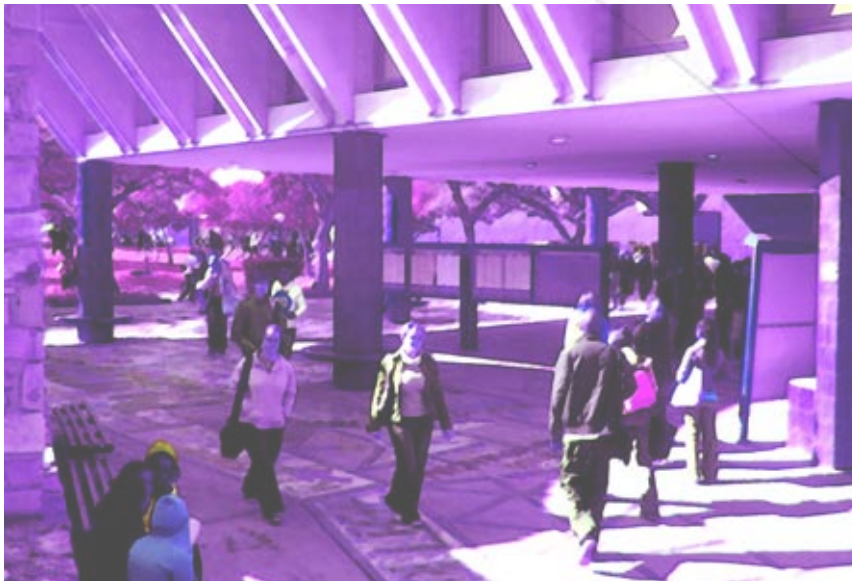


Figure 1.18: Site: The users of the space are currently disconnected from one another as well as from the space

1.5 Project Brief

Staying with the University's vision for the future, the macro framework will be addressed on two levels. Firstly the educational vision of the University and the goals set out. Secondly, the physical framework as designed by architectural students working in the same area.

According to the University's website (Bosman: University of Pretoria Webpage), part of the strategic plan for the future is to become an internationally recognised teaching and research intensive institution. This means a more focused plan for research as well as improving the teaching standards. With the intensified focus comes a need for support systems to carry this vision successfully into the future. From

the same website it seems that the University is already considered as one of the leading educational institutions in the country, and that the future of the research part of the vision still needs to be developed.

Most of the students (under-graduates) are not exposed to research on a regular basis, if exposed at all. This means that an opportunity is being missed to motivate under-graduates' interest in their studies to a point where their degree becomes a key to new information rather than a destination. This new information could be a topic that is being researched by post-graduate students from any department. Or it goes as far as to spark interest in a topic because the lack of information is evident in

the current research trends within a specific department.

In view of this argument, the project for this dissertation will incorporate the relationship between students, lecturers and research as one of the levels on which information needs to be relayed.

Infrastructure provides the second framework for a macro brief. The architectural students have designed an urban framework for the University, a look into a desirable future. This new perspective includes the following ideas: opening the University's grounds to allow for greater public access, creating enhanced pedestrian routes through campus and re-evaluating the current public spaces on and around campus.



Figure 1.19: Site: The library to the left of this image, showing the definite boundary prohibiting any flow of information from within

1.6 Client Brief

Creating a client brief from the above mentioned information will react on the following levels:

- the needs of the University in terms of research exposure,
- the obscure need for an institutional identity after 100 years of existence (and multiple changes in the social landscape surrounding the country and by implication society),
- the meta-physical needs as described (c.f.1.1)

Using the analogy of a “mother-ship”, a vessel carrying smaller vessels into a remote field, (a mobile and base station analogy) the space will be designed as a nucleus from which information will be dispatched. The “mother-ship” will be stationary in terms of its physical location, but much of its presence will need to change constantly. The smaller vessels carrying the information will be the users of the space. Different users imply different goals within the design, from the “stationary” Library-user, to the general passer-by.

Subsequently the space will inform the users so that they could access the space from any direction, and leave again in any direction, but they will always acquire some information. This information is defined on various levels, mainly levels of involvement of the user. On the outer level – the edges of the concept – lies the most current information, which changes frequently; news. News is shared with the masses, but will be viewed by individuals. An individual within the bigger group could form an opinion on this news, and decide to share it with the people in his proximity. Reminding one of a soapbox of old and a blog in today's terms, this information is shared from an individual to a group. The space will need to direct these conversations into academic terms, and catalyse research, so as to accommodate discussions and thoughts and maybe even solutions to the problems faced today throughout the world.

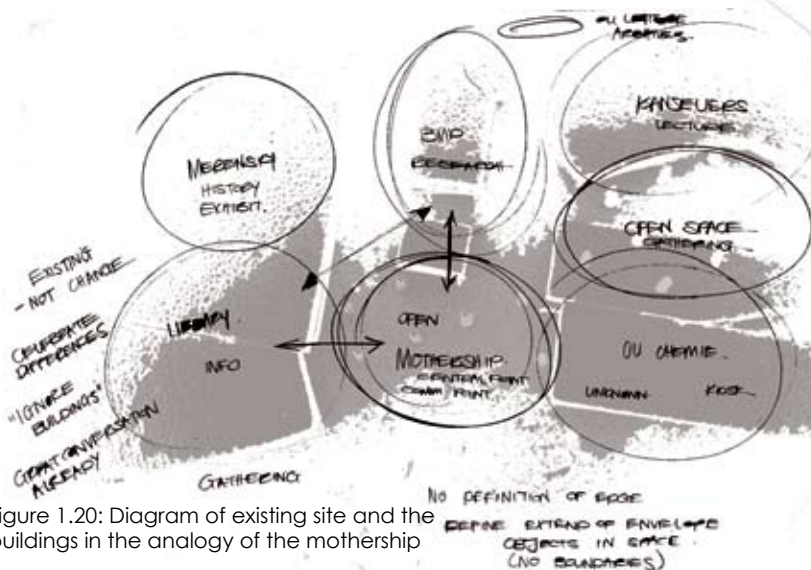


Figure 1.20: Diagram of existing site and the buildings in the analogy of the mothership