Chapter 2

Theoretical Approach

2.1   Introduction

Within the mentioned framework of information, knowledge and memory (c.f.1.1), memory is the last step, and in this dissertation the main objective is the generation and sharing of memory. This is a very broad term, and needs to be defined first, particularly the built environment's answer to the problem. Subsequently

Figure 2.1: Available information on site is not informing any memory. There is no relationship between the users and the information within the Library

this implies a level of awareness of human behaviour in the created space. This brings us to the final question concerning memory, the interaction with our current digital era where information (and subsequent knowledge) is readily available on a screen with the touch of a button, excluding physical space to a large extent.
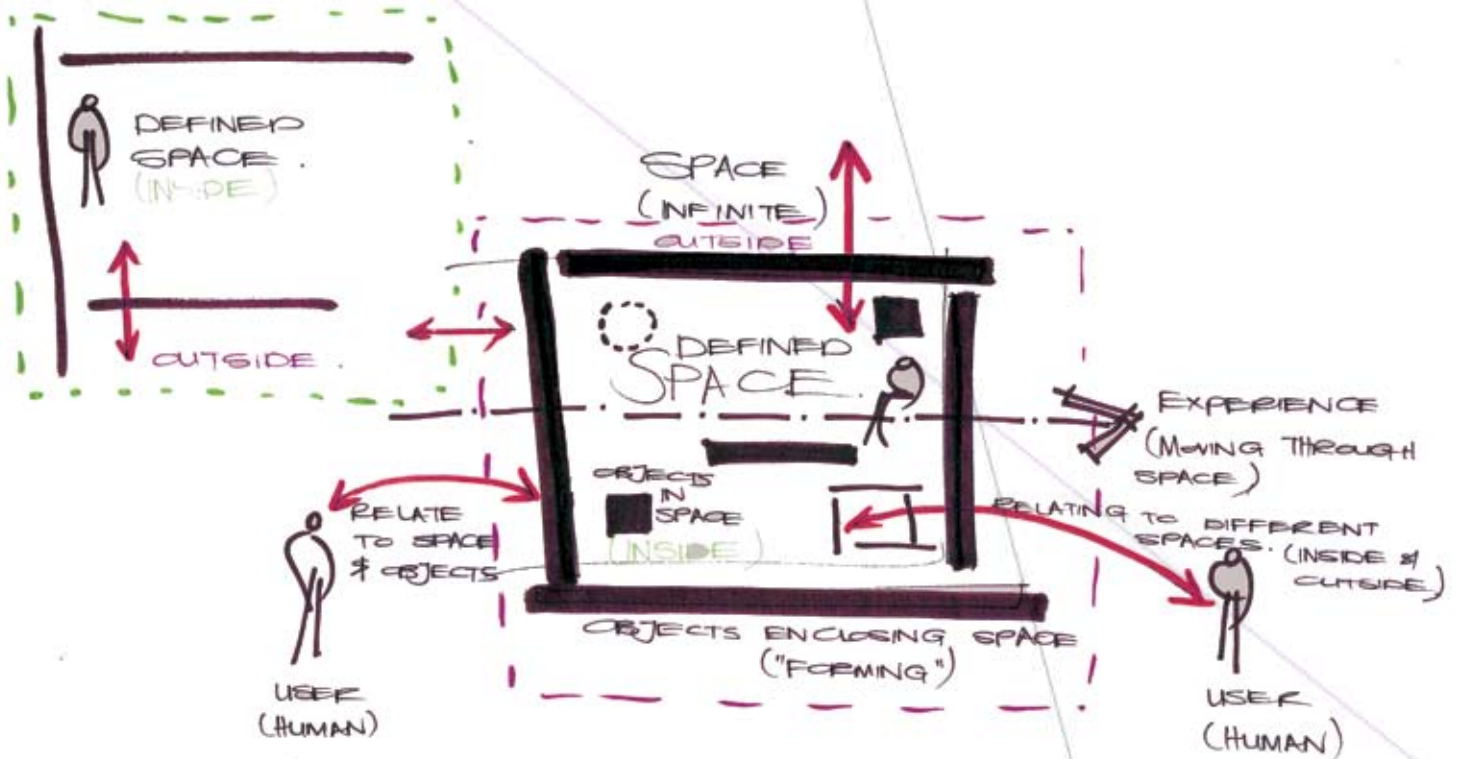

Figure 2.2: The relationship between users and space

2.2 Memory

The chosen site has apparent significance (c.f.1.3) in the analogy of information, knowledge and memory (c.f.1.1) that needs to be translated into space. The cognitive process of humans (particularly in space) has been the focus of architectural research for some time (Lang: 1973, 90) because of the relationship between space and its users. Gibson (Lang: 1973, 91) regarded the senses as "aggressive, seeking mechanisms", and redefined the five senses as we know it into systems (c.f.2.3). These systems rely on interdependent senses to "feel" space. The variety of possible factors that influence the user of the space forces another set of parameters to drive the inquiry into cognitive processes and its place in architectural design. By looking at the basic functions of the mind; receiving, processing, storing and production of information, some human behaviour can be related to perception.

2.2.1 Memory defined

"There is no neater definition than de Bono's 'A memory is what is left behind when something happens and does not completely unhappen.' Perception is based on memory, because it is impossible to perceive phenomena which are not partially related to past experiences" (Smith, 1974: 21)

Figure 2.3.1: A model of the conceptual space

Figure 2.3.2: The actual space, indicating the relationship between the user and the space. The seeking of the senses seems to go unanswered

Figure 2.3.3: Conceptual memory added to existing layer of users in the space

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Largely the typical Library can be seen as the best-known concept of gathered information. With this comes a definite memory, ideas including the notion that libraries are inaccessible by certain communities, silence, old books and a singular approach (books, reading and text). This project aims to create another level of information and subsequent memory, supporting the Library, but functioning separate from it. The site has a large number of students moving through it on a daily basis (c.f.1.6),

and is perceived as an empty space without any relation (the scale of the site removes even the sense that it is the Library overhead). Activating the site is ideal to trigger the memory of these students on a different level. Mainly a path of travel, the information gathering is accidental at first becoming an attraction as the site becomes known to students. This will create a new memory of information (and knowledge), as something that is vibrant, challenging and accessible, available to any and all.

"Yet the function of a university is not only to pass on our history in its fullest and richest sense, but also to try to significantly contribute to it. When they are functioning as they should, universities act to protect what we know while providing pathways to discovery and creation." (Bornstein, 1997: 52)

Figure 2.4: Approaching the site from the south, indicating the library to the left, as a monument of gathered information

Figure 2.5: The amount of users traveling through the empty space

Figure 2.6: The site to the right, indicating movement past the site, an ideal opprtunity to introduce information to the users

2.3   Space

2.3.1   Memory and Space

Lang (1973: 92) refers to the training of memory as integral to the experience of space to remember that space. Quintillian (Lang: 1973, 92) describes memory of space as an "image of the environment, subordinate images and some idea of path".

The chosen site has certain attributes signifying that it is space inside certain boundaries. Unconventional, but not new, the space feels like an outside room. Contrary to the notion that interior architecture is limited to the inside of buildings, this site is experienced as an interior space defined by the external walls and overhang of surrounding buildings. Memory informs the user that certain identifiable artefacts are present, and therefore the space should be experienced in a certain manner.

Memory of the familiar triggers and influences our perception of the new. The house as a type of personal space with its many recognisable artefacts that belong to the owner is a model for the city and subsequent public space. Reading public space in this manner we can truly feel like we belong. Identifiable artefacts stretch outside the realm of physical objects to include senses such as boundaries, possession, the notion of centre (Brett, 1970: 146, 147) and the sense of enclosure. When a relationship is established between a human and space, ownership can be taken of the space and the space will be used optimally (Bloomer, 1977: 51, 54). Habitability of public spaces refers to users "feeling at home" in the space, even if the users just feel like they have allies in that space sharing a certain identity (Bloomer, 1977: 84). It is necessary to differentiate between public spaces that are designed to be utilised by the public and spaces that are accessible by the general public, but are of no value to the users.

Figure 2.7: Site: identifiable as an interior space

2.3.2   Public Space

The surrounding buildings are erected in a seemingly haphazard pattern, creating what is referred to as "left-over" spaces between the buildings. Bloomer (1977: 84) refers to these spaces as "great blank horrors", "spaces that belong to no one", "neither public nor private", "neither comfortable nor inspiring nor even safe" calling it "no-places". This space is void of memory; it evokes nothing, stirs nothing and implies nothing. With no identifiable "artefacts", the space has no relationship with the user. Public space is not owned by a specific entity (therefore being accessible by the general public), but the term also includes spaces designated and designed for use by the public. Elucidating the idea of space accessible by the public is a space designed to host that user (public) and generate certain behaviours which will happen through the definition of public areas as social space. Social space in this sense includes public space that is designed and not just left blank.

Figure 2.8: The surrounding buildings create left-over space that provide the envelope for the project

2.3.3 Social Space

Public space consists mainly of involuntary relationships between users and space; however some spaces, referred to as social spaces, are designed for specific public use. Pre-supposed relationships are anticipated and designed, spaces such as the reception areas just beyond the entrance. In order to look at the relationship between space and its users, however, one needs to define "social space".

Humphrey Osmond (Powel Lawton: 1973, 66) refers to two aspects of "social space": sociopetal space, encouraging social interaction, and sociofugal space, separating / isolating people. Some spaces are used by more people and would evidently have a greater incidence of people meeting within that space. Space that has this outcome is defined as social space and typically includes inside space such as lobbies, halls and reception spaces, as well as outdoor spaces such as public squares

and amphitheatres. Apparently one of Frank L Wrights' favourite quotations is from Lao-Tze, "...the reality of the building consists not of the walls but of the space within" (Brett: 1970, 46). This statement points to space as an entity in relation to physical structures. Space is infinite, a statement reiterated by the universe. This immeasurable entity is inhabited by humans, and as designers we concern ourselves with the design (taming / defining) of parts of this infinite entity.

Figure 2.9: The existing public and social space.

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In a sense the ever-expanding concept of space is reversed to something small enough to include only one human being. With this user-focus, the design of space is approached in a series of relationships simultaneously exposing inside and outside(c.f.2.1.1), above and beneath, and on the in and out flowing of space relationship, all anchored in clearly traceable relations, moving in all directions (Brett: 1970, 32)[1].

The site consists of void public spaces (c.f.2.2.2) through which students are continuously moving. Through memory it will be transformed into social space (c.f.2.2.3). Space is used as a descriptive term as a building in itself is superfluous. A lecture room is a highly recognisable "artefact" on campus even though this is usually related to a memory of enclosed interior space. By creating clusters within a larger space, humans can more easily relate to the space (c.f.2.2.1). Working with the existing use of the space motion contributes to the new function of the space by a progression of relationships between users and the space. Moreover applying sociopetal space to the periphery of sociofugal space so that these interactions could then inform the more isolated group interaction.
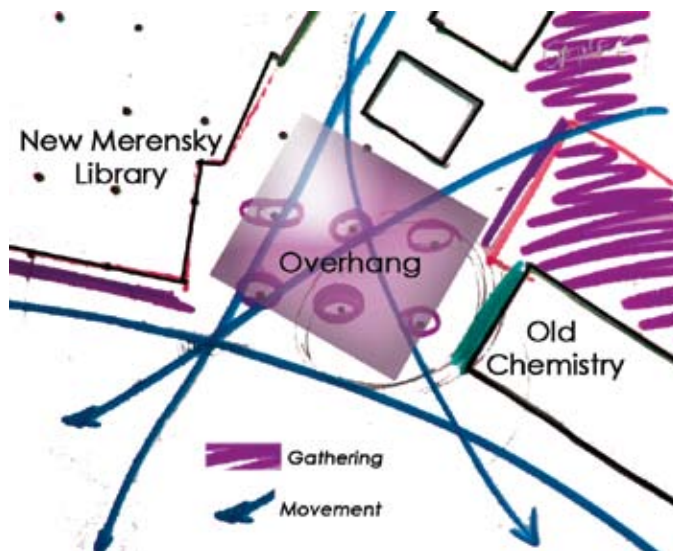

Figure 2.10: Sociopetal space (gathering) and motion through the existing space

[1]*"Formerly the architect made from visible, measurable and well-proportioned volumes building masses, calling this 'space creation'. But real spatial experiences rest in simultaneous interpenetration of inside and outside, above and beneath, and on the in and out flowing of space relationship, on the invisible play of forces present in the materials. Thus a present-day space creation does not consist in putting together heavy building masses, nor in the formation of hollow bodies, nor in the relative positions of well-arranged volumes. ...Space creation is today much more an interweaving of parts of spaces, which are anchored for the most part in invisible but clearly traceable relations, moving in all directions, and in the fluctuating play of forces." L. Moholy-Nagy, The New Vision (1939) [Brett, 1970:32]*

2.4   Behaviour

2.4.1   Memory and Behaviour

The built environment concerns itself with defining space by objects (enclosing space by objects, or placing objects within space) for human experience and use. Only by perceiving space can the user relate to and experience the space. The perception of space can be divided into 3 categories, the first being differentiation, concerning the whole and its included parts, secondly the relationship of the parts (specifically the boundaries defining the space), and lastly the user inhabiting the space.

Gibson (in Bloomer, 1977:33) regarded the senses as "aggressive, seeking mechanisms", and redefined the five senses as we know it today into systems. These systems were identified as the visual, auditory, taste-smell, basic orienting and the haptic system; which all rely on interdependent senses to inform experience. Humans and their reaction to space are then important in architecture to create successful place rather than accidental space. Gregotti (1996:10) notes that the difference between group behaviour and individual behaviour has decreased to a point where it coincides to a large extent. This tendency could be traced back to our culture of consumerism, where branding motivates us to be more alike.

The link between space and the user is argued in both directions (complete influence versus no relationship) (Lipman: 1973, 24 – 25). However the focus should shift from controlling human behaviour to accommodating existing and catalysing new human behaviour.

"By regrouping the senses around the types of information that individuals seek in their transactions with the physical environment, he has provided us with a rich mechanical model of perception from which we might better understand some of the processes that generate experience in architecture."
(Bloomer, 1977:35-36)

Figure 2.11:Site: walking into a defined space without boundaries

The conceptual theory behind human reaction to space and metaphors in space is described as architectural meaning. The stimulus object (transcending physical objects to include conceptual objects) relies on the memory of similar objects. Entry to the site as a celebrated threshold is not necessarily a front door, but rather a moment in time and space implying a change in hierarchy of experience. This stimulus triggers the memory of similar objects and appropriate responses which in turn generates certain behavioural response.

The cantilevered section of the Library creates a space that is defined by psychological boundaries rather than physical boundaries (the mind perceives walls where none are apparent). The underside of the slab resting on the columns limits infinite space, entering into this space happens when the threshold between open and covered is crossed and is defined by a definite contrast between light and shade. Scale contributes to the experience; a large and solid mass hovers over the space creating an abrupt opening that is considerably smaller in relation to the space. It is then read and understood as an intimidating space, dark and unknown, the transition between two open spaces becomes uncomfortable.

"The first hundred years of modern architecture have been principally devoted to the expression of technological revolution and new aesthetic intentions. There are welcome indications that the next hundred years of architecture will consider the act of experience, both communal and individual, as a primary generator of significant form." (Greene, 1976:106)
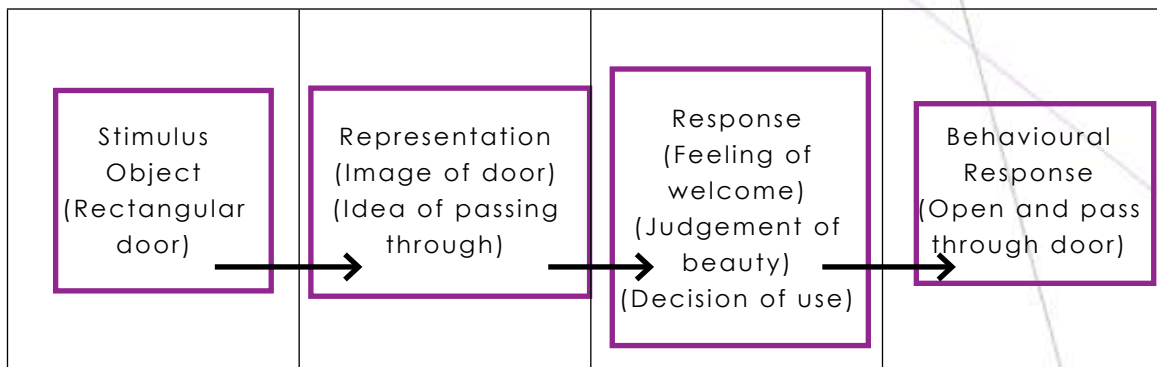
ARCHITECTURAL MEANING

Figure 2.12: Memory in the built environment: Architectural Meaning

2.5   Communication

The focus of this dissertation is on the recapturing of lost space. Activating this space implies identity, established by the designer so as to generate a relationship between the user and the space.

The design aims to emphasize and enhance the current dialogue between object and user, thereby generating more levels of communication.

Communication between humans as well as collective communication supports the notion of social space. This network of communication becomes a social stage, interactive and informing – a window on humans and their behaviour and ultimately on culture. Displaying the culture (institutional memory) in this manner will amplify the growth of any existing memory (knowledge and culture).

"Though the communal pleasures of hearth and fire have long ago died out, ... the centrality of forum – a place indoors or out where people can assemble to have a town meeting, or see or stage a spectacle, or talk, or collect signatures – is still important to us (though electronic communication and the takeover of the public realm by the privately owned shopping centre are casting long shadows over this fragile part of the public life; it is very difficult, for instance, to engage in political activity in most shopping malls)."
(Bloomer, 1977: 83)

Figure 2.13: Meta-physical communication defining the space to create user-experience

2.5.1 Space & Human

Using communication to achieve the behaviour and memory in space (c.f.2.3.1) is important to form an identity in a "no-place" (Bloomer, 1977: 84) (c.f.2.3.2) to generate an informing place. Most of the dialogue between space and human happens on a sensory level, having certain psychological effects. However, as stated previously, (c.f.2.3.1) experience does not happen in a simple way (pertaining to a single sense). For many years sight was the main focus of experience and architecture (Bloomer, 1977:49).

However, communication happens through all senses, manifested by material usage, scale, sound, rhythm, metaphors and light in space (Bloomer, 1977:71) (c.f.2.3.1).

2.5.2 Human & Human

A more obvious level of communication is the interaction between humans, including between two individuals, between an individual and a group as well as between groups. Social spaces carry the highest probability of social interaction. The richness of public space through history dwindled and with the development of consumerism, people are completely self-absorbed into the here and now, chasing time and focusing the attention of the individual on a cyber-reality. As early as 1976 the "need for experiences of communicative acts" as embodied by pueblos of Mesa Verde (with its imagery of urban theatre) highlights the importance of form generated by social acts irrespective of electronic communications (Greene, 1976:107).

Figure 2.14: Communication is vital to share information and generate knowledge

"all architecture functions as a potential stimulus for movement, real or imagined. A building is an enticement to action, a stage for movement and interaction. It is one partner in a dialogue with the body." (Bloomer, 1977: 59)

2.5.3 Information, Knowledge & Human

By using the analogy of a "mother ship" as the heart of a communication, sharing of information can be accommodated and this in turn can act as a catalyst for the generation of memory. Reference points lead the user on a journey to not only encounter information, but to actually absorb it. The differentiation between knowledge and information is notable here. Knowledge in this sense has to do with information that has been acquired by someone and in this document mostly refers to academic information. Information is a wider scope, including noteworthy facts that do not necessarily need to be remembered or shared by the receptor of that information. Subsequently this covers quite a large range of possibilities.

First of all, media according to the Oxford Thesaurus (Spooner, 2001) refers directly to communication and includes conversation, dialogue, document, message, news, notice, statements, writing, newspapers and radio. This coincides with information, informing the user of the site, but not necessarily generating new information or knowledge.

Figure 2.15: Boundaries and movement on site

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Knowledge, according to the Oxford Thesaurus (Spooner, 2001), refers to learning, competence, education, experience, familiarity and understanding. On the campus most of this knowledge is anchored within buildings, and could rather be shared.

Important to note here is that these different fields could relate in more than one way. Within the typology of behaviour, permeating the boundaries (c.f.2.1.1) of different faculties (physically and meta-physically) would bring the information (events, research and faculty-specific culture) into the public arena. The infrastructure of the University necessitates the use of links that would in turn form the communication network as proposed.

Figure 2.16: Meta-physical links on campus, that permeates physical boundaries

2.6   Conclusion

Like all educational institutions, the University of Pretoria concerns itself with information and knowledge. Memory completes the process of information that accumulates in humans to become knowledge which is then shared and applied. Accommodating this memory in different forms will greatly contribute to the overall identity of the University.

Memory is present on campus in the conversations and everyday actions of the users of the University, as well as in the outside world in careers and social interactions of people. The challenge is to design a catalyst, a place where these acts, conversations and interactions can be stimulated. This public space needs to accommodate existing information as well as generate new information,

Figure 2.17: Existing public space adjoining the Library (hosting information)

knowledge and memory. Most of all the space needs to communicate, become a medium for the transition of information to memory.

By specifically accommodating the conveyance of information to the passer-by the senses are activated and the perception of the space enriched. As soon as the users get used to the existence of the space, the space itself will become a canvas hosting changing information. The memory of the space pushes the information to the foreground, creating social space where the existing void is. Architectural meaning implies that the existing space is experienced as interior space. Rather than just moving through public space, the user walks into social space with a known identity expecting to encounter information. This identity includes audio and visual information as opposed to written information as supplied by the Library.
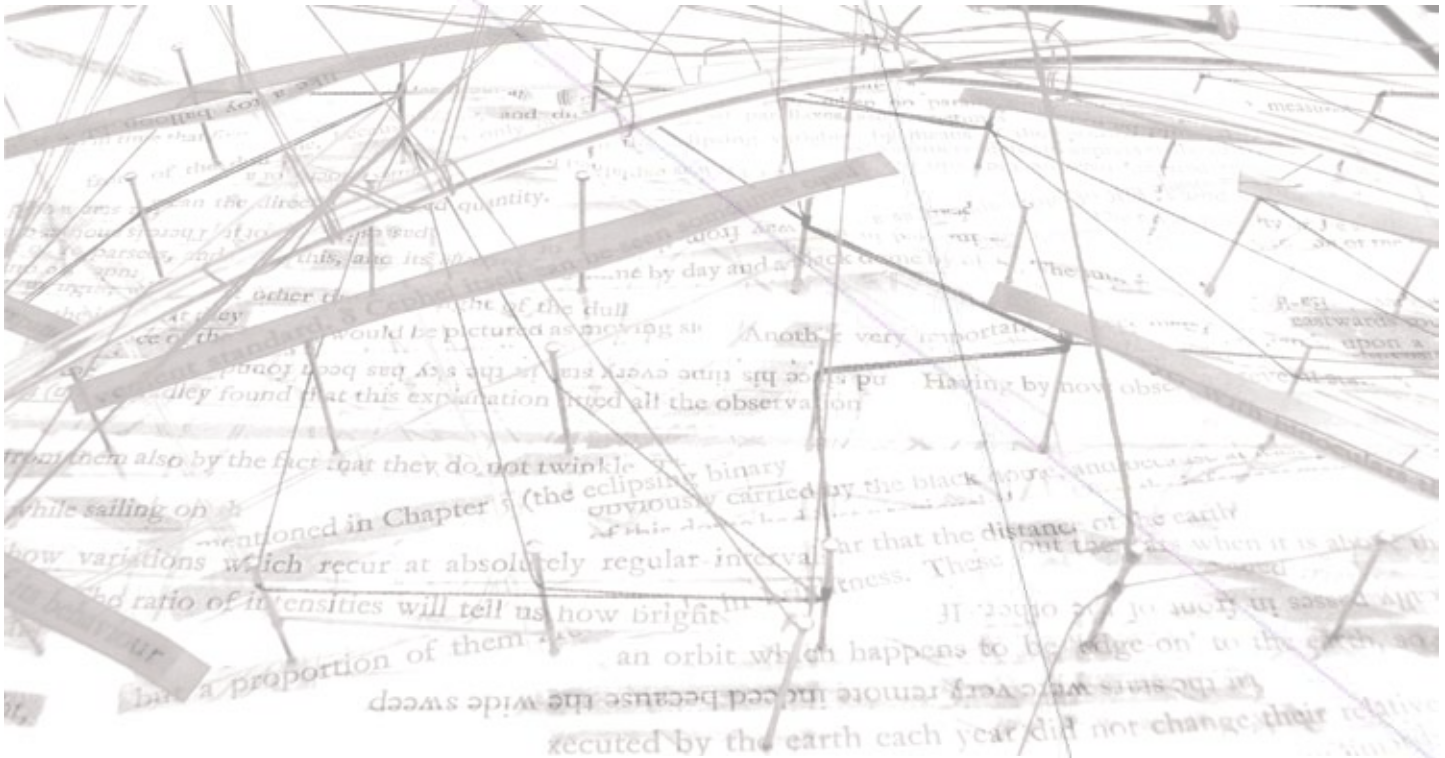

Figure 2.18: Touchstone: networks of links between students, lecturers, information and knowledge that needs to be hosted and developed in a single space on campus