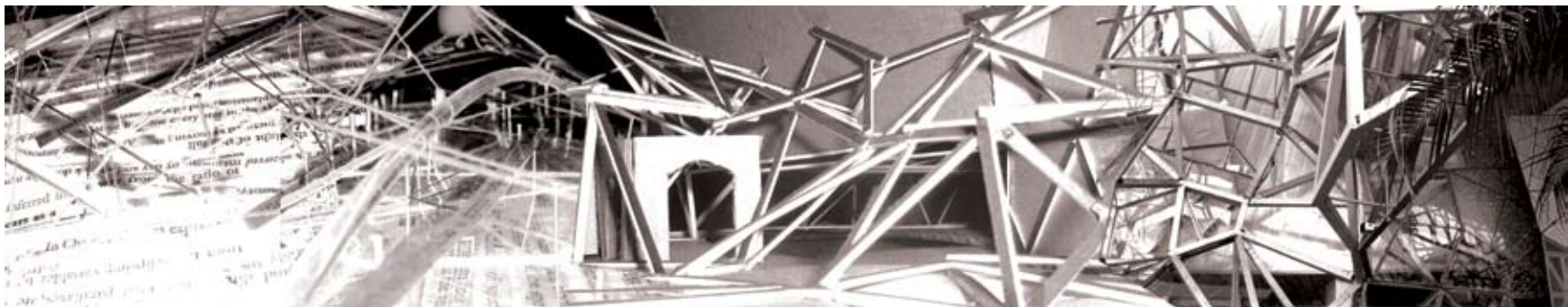




Agora

Transition through information to memory



AGORA

Transition through information to memory.

Submitted in fulfillment of part of the requirements for the Degree of Magister in Interior Architecture (Professional) in the Faculty of Engineering, Built Environment and Information Technology

By:

Marika van der Merwe

22 160 788

University of Pretoria

Study Leader: Catherine Karusseit

2008



This project would have been impossible without my base of support. Firstly all honour and glory to my Creator, Saviour and Lord and thank you to my family, and friends for understanding, helping and supporting me through this learning process. Catherine, thank you for your patience, guidance and dedication.



This project investigates Interior Architecture as the design of space within established physical parameters. The concept of an Agora as a public meeting space generating memory forms the design platform from which the investigation happens. After 100 years, the University of Pretoria is still relatively young compared to other similar institutions worldwide, and the current diversity of users further add to the loss of corporate identity that is shared between these users. The Agora creates a generator of information by hosting interaction between previously separated groups, exposing information to a majority of users on the Campus.



Table of Contents

List of Figures		iii
Touchstone		I
Chapter 1		
Information, Memory & Knowledge		1
1.1	Introduction	2
1.2	Problem Statement	6
1.2.1	Real World Problem	6
1.2.2	Problem Statement	9
1.3	Site Selection	10
1.4	Hypothesis	12
1.5	Project Brief	14
1.6	Client Brief	15
Chapter 2		
Theoretical Approach		
2.1	Introduction	18
2.2	Memory	20
2.3	Space	22
2.3.2	Public Space	23
2.3.3	Social Space	24
2.4	Behaviour	26
2.4.1	Memory and Behaviour	26
2.5	Communication	28
2.5.1	Space & Human	29
2.5.2	Human & Human	29
2.5.3	Information, Knowledge & Human	30
2.6	Conclusion	32
Chapter 3		
Context		
3.1	Historical	37
3.2	Structural	39

Information - Memory - Knowledge



3.3	Physical	41
3.4	Social	43
3.5	Climate	45
Chapter 4		
Precedent Studies		
4.1	Introduction	49
4.2	The Ancient Greek Agora	49
4.3	Apple Retail Store	51
Chapter 5		
Design Discourse		
5.1	Introduction	55
5.2	Ground Floor Level	56
5.3	Food Outlet	60
5.4	The Open Lecture Auditorium	64
5.5	Pnyx (Meeting Rooms)	68
Chapter 6		
Technical Report		
6.1	Introduction	72
6.2	Demolition & Excavation	72
6.3	Accommodation Schedule	73
6.3.1	Design Population	73
6.3.2	Sanitary Requirements	74
6.3.3	Adjustments for disabled users	75
6.4	Structure	76
6.4.1	Subterranean Structure	76
6.4.2	Web Structure	78
6.5	Ventilation	82
6.6	Lighting	84
6.6.1	Natural Light	84
6.6.2	Artificial Light	86
6.7	Circulation	88
6.8	Fire	90
6.9	Services	91



6.10	Acoustics	92
6.11	Inclusive Design	94
6.12	Material	95
	6.12.1 Flooring	95
6.13	Finishes and Fixtures	97
	6.13.1 Basins	97
	6.13.2 Food Outlet Wall Detail	98
	6.13.3 Digital Wall Unit	99
	6.13.4 Partitioning	100
6.14	Conclusion	101
	Bibliography	103
	Appendix A	
	Technical Documentation	

M van der Merwe 22 160 788 920101

Information - Memory - Knowledge



List of Figures

Front Page

Memory web

Composition by Author (Photographs by Author, Image of Federation Square taken from Website: "Nicole's (Construction & Structures) Blog", (http://bp2.blogger.com/_mSi-pZSjzp8/RIwuumbyn9I/AAAAAAAAAbk/-dZgXdwlJ-k/s1600-h/fed_square0177.JPG). Accessed on 23/08/2008.

Touchstone

Photos of Touchstone Model

All figures by Author

iii

Chapter 1

- | | | |
|----------|---|----|
| Fig.1.1 | New Merensky Library shortly after completion
University of Pretoria Archives, Digital Format (10-60A-3),
Edited by Author | 3 |
| Fig.1.2 | Research Facilities in the New Merensky Library shortly after
completion in the 1970's
University of Pretoria Archives, Digital Format (10-58B-2),
Edited by Author | 4 |
| Fig.1.3 | Modern day research facilities
Image taken from Website of "K.N. Toosni" (http://www.kntu.ac.ir/electrical/Services/ComputerCenter/tabid/764/Default.aspx). | 4 |
| Fig.1.4 | Memory definition to Spatial Objective
By Author | 5 |
| Fig.1.5 | Relationship between memory and Built Environment
By Author | 6 |
| Fig.1.6 | Relationship between information and User
By Author | 7 |
| Fig.1.7 | Ancient Public communication in Agoran Space (Artist Impression)
Image taken from Website of "Ancient Greece"
http://cd7.e2bn.net/e2bn/leas/c99/schools/cd7/website/Greece.htm).
Accessed on 23/08/2008. | 8 |
| Fig.1.8 | Modern day public communication (Digital Media Brands)
Image taken from Website of "Room 214"
(http://www.room214.com/social-media-rss-marketing.php)
Accessed on 23/08/2008. | 9 |
| Fig.1.9 | Site Synopsis (Aerial image)
BY Author | 10 |
| Fig.1.10 | Site Key
BY Author | 10 |
| Fig.1.11 | Site: Corridor west of existing Library overhang, looking in
northern direction | |

	BY Author	11
Fig.1.12	Site: Corridor north of existing Library overhang, looking in eastern direction	
	BY Author	11
Fig.1.13	Site: Corridor south-east of existing Library overhang, looking in eastern direction	
	BY Author	11
Fig.1.14	Site: Existing Library overhang, looking in western direction	
	BY Author	11
Fig.1.15	Site: Corridor east of existing Library overhang, looking in southern direction	
	BY Author	11
Fig.1.16	The users of the space indicated by the pins in the touchstone model metaphysically connected through information and knowledge as indicated by the string	
	BY Author	12
Fig.1.17	The communication catalyst will function between information, knowledge and memory	
	BY Author	13
Fig.1.18	Site: The users of the space are currently disconnected from one another as well as from the space)	
	BY Author	13
Fig.1.19	Site: The library to the left of this image shows the definite boundary prohibiting any flow of information from within	
	BY Author	14
Fig.1.20	Diagram of existing site and the buildings in the analogy of the mothership	
	BY Author	15
Chapter 2		
Fig.2.1	Available information on site is not informing any memory. There is no relationship between the users an the informaton within the Library	
	BY Author	18
Fig.2.2	The relationship between users and space	
	BY Author	19
Fig.2.3.1	A model of the conceptual space	
	BY Author	20
Fig.2.3.2	The actual space, indicating the relationship between the user and the space. The seeking of the senses seems to go unanswered	
	BY Author	20
Fig.2.3.3	Conceptual memory added to existing layer of users in the space	
	BY Author	20
Fig.2.4	Approaching the site from the south, indicating the Library to the left, as a monument of gathered information	



	BY Author	
Fig.2.5	The amount of users travelling through the empty space	21
	BY Author	
Fig.2.6	The site to the right, indicating movement past the site, an ideal opportunity to introduce information to the users	21
	BY Author	
Fig.2.7	Site: identifiable interior space	21
	BY Author	
Fig.2.8	The surrounding buildings create left-over space that provide the envelope for the project	22
	BY Author	
Fig.2.9	The existing public and social space	23
	BY Author	
Fig.2.10	Sociopetal space (gathering) and motion through the existing space	24
	BY Author	
Fig.2.11	Site: Walking into a defined space without boundaries	25
	BY Author	
Fig.2.12	Memory in the Built Environment: Architectural Meaning Adpated from Designing for human behaviour: Architecture and the Behavioural Sciences. Lang, J. et al. 1973, Page 182	26
Fig.2.13	Meta-physical communication defining the space to create user experience	27
	BY Author	
Fig.2.14	Communication is vital to share information and generate knowledge	28
	BY Author	
Fig.2.15	Boundaries and movement on site	29
	BY Author	
Fig.2.16	Meta-physical links on campus that permeates physical boundaries	30
	BY Author	
Fig.2.17	Existing public space adjoining the Library (hosting information)	31
	BY Author	
Fig.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	32
	BY Author	
		33
Chapter 3		
Fig.3.1	Historical Context	
	BY Author	
Fig.3.2	Historical aerial photograph of the site indicating the Old Chemistry in its original state University of Pretoria Archives, Digital Format (10-6B),	36

	Edited by Author	37
Fig.3.3	Construction of the New Merensky Library, to the left the partial demolition of the Old Chemistry (the arches were left in tact) University of Pretoria Archives, Digital Format (10-14B-1), Edited by Author	38
Fig.3.4	Construction of the New Merensky Library University of Pretoria Archives, Digital Format (10-14B-2), Edited by Author	38
Fig.3.5	The Old Arts Building in the foreground, with the Old Chemistry building in the background University of Pretoria Archives, Digital Format (10-21B-3), Edited by Author	38
Fig.3.6	Original Section through the Library indicating the depth of the basement and the structure Copy of Original section (drawing) by architects (Tectura) Edited by Author	39
Fig.3.7	Physical Context BY Author	40
Fig.3.8	Approaching the site under the overhang from the west past the Old Merensky Library BY Author	41
Fig.3.9	Approaching the site under the overhang from the east from the Piazza BY Author	41
Fig.3.10	Approaching the site under the overhang from the west past the "Kanseliers" Building BY Author	41
Fig.3.11	Social Context BY Author	42
Fig.3.12	Existing ATM under cantilever BY Author	43
Fig.3.13	Existing benches provided outside the Library (Eastern wall) BY Author	43
Fig.3.14	Negative space between "Kanseliers" and Old Chemistry BY Author	43
Fig.3.15	Diagram indicating haptic qualities of the site BY Author	44
Fig.3.16	Slope of site (Old Chemistry in the background) BY Author	45
Fig.3.17	View from inside the space towards the western corridors, light difference creating glare BY Author	45
Fig.3.18	Approaching the site, darker space under the overhang BY Author	45



Chapter 4

Fig.4.1	Diagram of Ancient Agora Diagrammatic plan from Website: Wikipedia (http://en.wikipedia.org/wiki/Image:AgoraAthens5thcentury.png) Accessed on 23/08/2008. Edited by Author	48
Fig.4.2	Interior of Apple Retail Store New York Image taken from Website: Apple.com (Apple Store, Fifth Avenue Gallery)	50
Fig.4.3	Interior of Apple Retail Store New York, the ceiling becomes the shopfront Image taken from Website: Apple.com (Apple Store, Fifth Avenue Gallery)	51
Fig.4.4	Exterior of Apple Retail Store New York, the main aesthetic feature is the glass entrance Image taken from Website: Apple.com (Apple Store, Fifth Avenue Gallery)	51

Chapter 5

Fig.5.1	Conceptual Site development - June 2008 BY Author	54
Fig.5.2	Conceptual Site development: interrupting the journey of the user with information BY Author	55
Fig.5.3	Conceptual investigation of the steel structure within the existing space. BY Author	56
Fig.5.4	Conceptual investigation of the steel structure within the existing space. Looking in a western direction, this corridor is the new main circulation route BY Author	57
Fig.5.5	Space that was fragmented by users of the site is redefined through the management of user movement on the site BY Author	58
Fig.5.6	Public square over the excavated site BY Author	58
Fig.5.7	Structural systems that define the site: columns and buildings BY Author	59
Fig.5.8	Plan of structural systems that define the site: columns and buildings BY Author	59
Fig.5.9	Window at Food Outlet BY Author	60
Fig.5.10	Section through Food Outlet BY Author	60
Fig.5.11	Plan of Food Outlet BY Author	61
Fig.5.12	Section through Food Outlet	61



	BY Author	62
Fig.5.13	Detail of window at Food Outlet	
	BY Author	62
Fig.5.14	Fractal Wall Detail elevation	
	BY Author	63
Fig.5.15	Plan of Open Lecture Auditorium	
	BY Author	64
Fig.5.16	Fixed Chair configuration of the Open Lecture Auditorium	
	BY Author	65
Fig.5.17	Stage of the Open Lecture Auditorium, Secondary circulation corridor above	
	BY Author	65
Fig.5.18	Circulation into the Agora behind the Open Lecture Auditorium	
	BY Author	66
Fig.5.19	Double Volume Space that is utilised as Open Lecture Auditorium	
	BY Author	67
Fig.5.20	Section through Double Volume Space that is utilized as Open Lecture Auditorium	
	BY Author	67
Fig.5.21	Pnyx indicating different configurations within the space	
	BY Author	68
Fig.5.22	Section through Pnyx	
	BY Author	69
Chapter 6		
Fig.6.1	Plan: Site Excavation	
	BY Author	72
Fig.6.2	Plan: WC Facilities in Agora	
	BY Author	74
Fig.6.3	Site excavation	
	BY Author	
Fig.6.4	Preparation of cavity floor in basement	
	BY Author	76
Fig.6.5	Perimeter detail to manage surface water at level differences	
	BY Author	77
Fig.6.6	Perimeter detail to manage surface water where the new floor is level with existing site level	
	BY Author	77
Fig.6.7	Federation Square in Australia, fractal façade	
	BY Author	78
Fig.6.8	Federation Square in Australia, double glazing as part of the fractal façade	
	BY Author	79
Fig.6.9	Conceptual development of space definition	
	BY Author	80



Fig.6.10	Conceptual development of space definition at arch ruins BY Author	81
Fig.6.11	Conceptual development of space definition at main circulation entry BY Author	81
Fig.6.12	Conceptual development of space definition over new public Square BY Author	81
Fig.6.13	Ventilation concept BY Author	82
Fig.6.14	Ventilation at Pnyx BY Author	83
Fig.6.15	Sun penetration into the Agora BY Author	84
Fig.6.16	Western window at the Food Outlet BY Author	85
Fig.6.17	Double Skin on northern side of the site BY Author	85
Fig.6.18	Clerestory windows under public seating BY Author	85
Fig.6.19	New levels on site BY Author	88
Fig.6.20	Main Circulation Staircase Elevation BY Author	89
Fig.6.21	Balustrade Detail BY Author	89
Fig.6.22	Balustrade Detail (Plan) BY Author	89
Fig.6.23	Acoustic reflection (lines) and absorption (purple areas) needed in the Agora BY Author	92
Fig.6.24	Barrier Acoustics: Absorptive Material (BA70PP or Pyramid sound panels) BY Author	93
Fig.6.25	Barrier Acoustics: Absorptive Material (BA70WP or Wedge sound panels) BY Author	93
Fig.6.26	Wheelchair accessibility of units BY Author	94
Fig.6.27	XCR Cork Rubber flooring in Steel Gray BY Author	95
Fig.6.28	Oriental Bamboo Flooring in colour Blonde (natural) BY Author	96
Fig.6.29	Oriental Bamboo Strandwoven Flooring in colour Blonde (natural)	



	BY Author	96
Fig.6.30	Oriental Bamboo Flooring structure	
	BY Author	96
Fig.6.31	Section through Hand wash trough	
	BY Author	97
Fig.6.32	Elevation of WC wall with window detail	
	BY Author	97
Fig.6.33	Elevation of fractal wall detail in Food Outlet Area	
	BY Author	98
Fig.6.34	Digital Wall Unit Door Detail	
	BY Author	99
Fig.6.35	Digital Wall Unit Elevation	
	BY Author	99
Fig.6.36	Digital Wall Unit Door Detail	
	BY Author	99
Fig.6.37	Elevation of wall detail in Pnyx Meeting Rooms	
	BY Author	100
Fig.6.38	The meta-physical nature of information exchange	
	BY Author	101

List of Tables

Chapter 6

Table 6.1	Design Population	
	BY Author	73
Table 6.2	Minimum WC Requirements	
	BY Author	74
Table 6.3	Adjustment to WC Requirements to include facilities for disabled Users	
	BY Author	75
Table 6.4	Agora WC Provision	
	BY Author	75
Table 6.5	Design Population	
	BY Author	90



List of Figures

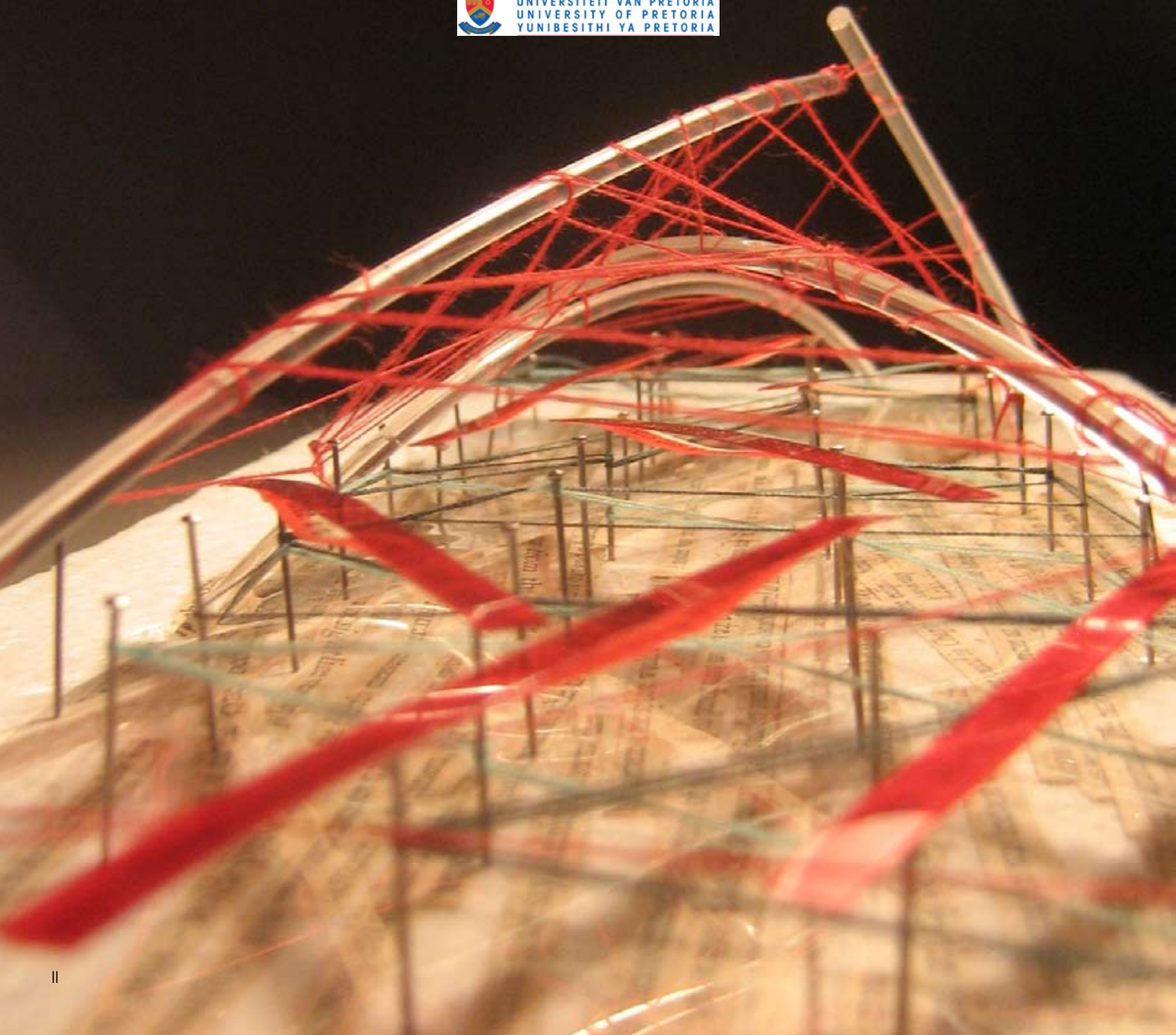
M van der Merwe 22 160 788 MProf(int)

Information - Memory - Knowledge



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Touchstone



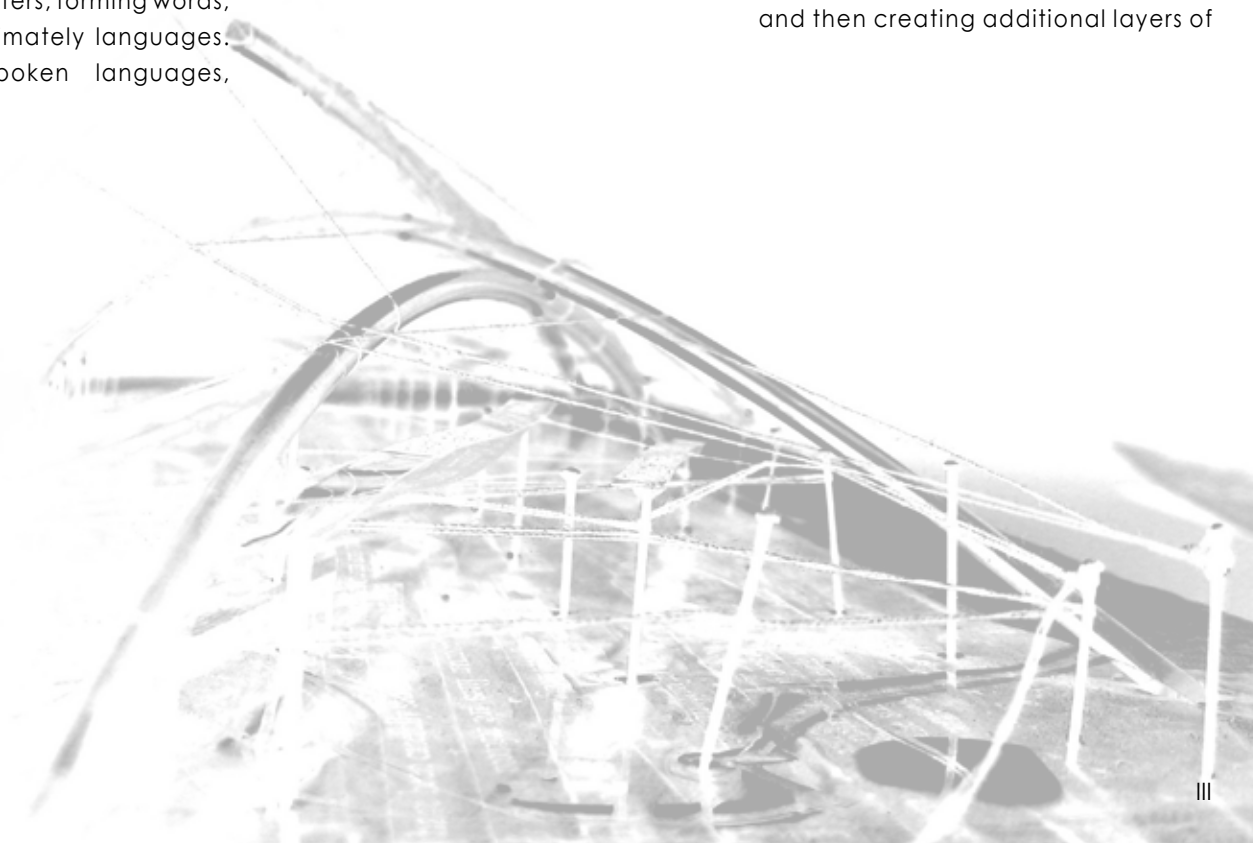
The Concise Oxford Thesaurus defines a touchstone as a criterion, a model or a point of reference. Commencing this dissertation by means of a touchstone is ideal to translate abstract concepts such as information, knowledge and memory into a physical project.

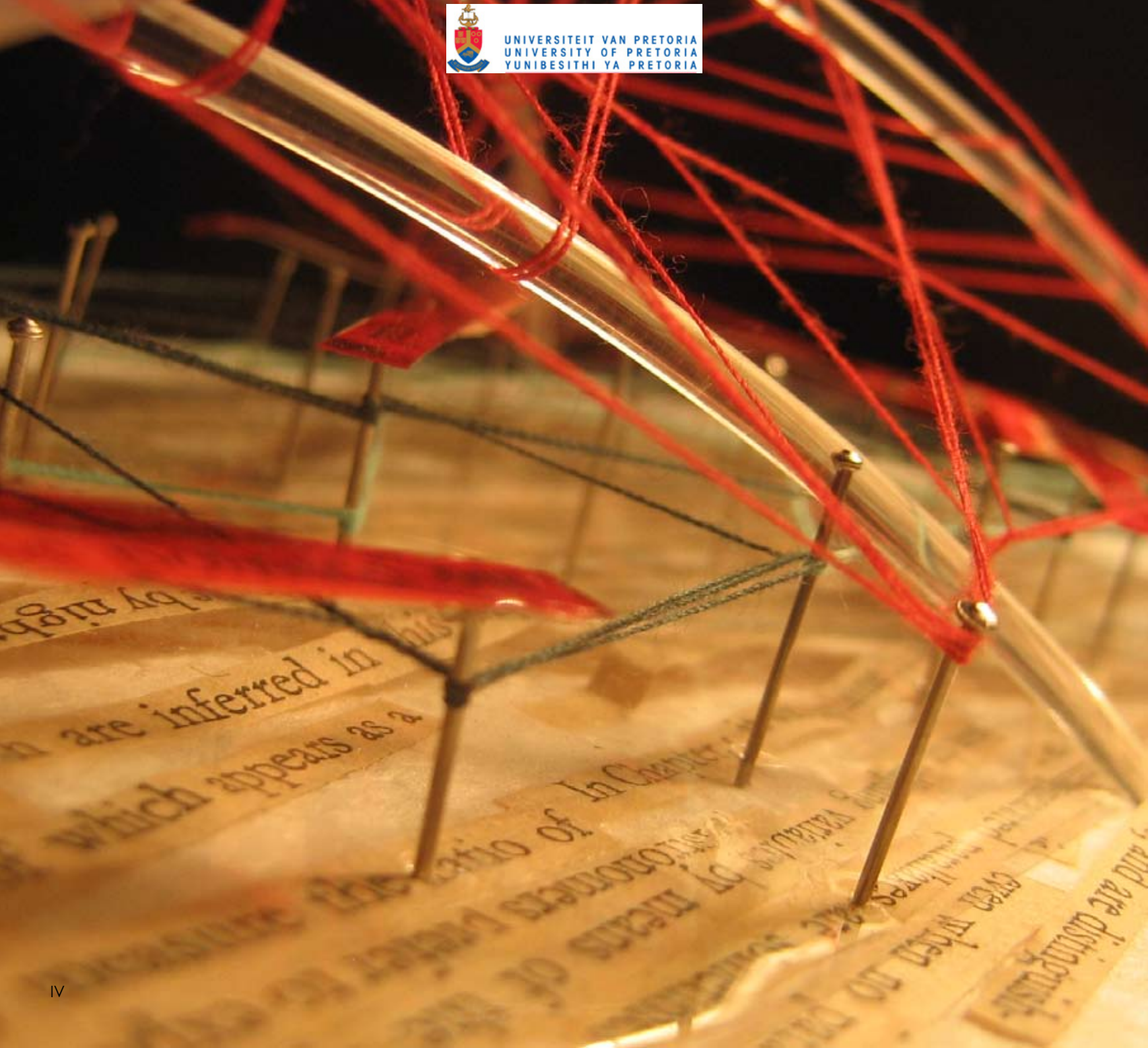
The starting point of the following investigation is the University of Pretoria and its main objective namely information. Forming the basis of information, are letters, forming words, sentences and ultimately languages. These include spoken languages,

written languages (historical languages) and even computer (binary) languages. Sentences at the base of the touchstone all refer to the universe. Mind-boggling and intriguing to most, unknown and daunting to others the universe remains one of the things in our frame of reference that still has some undiscovered secrets. It reminds one strongly of information - also vast and sometimes intimidating, yet it holds several "secrets" that still need to be discovered. People have captured information in various ways, but capturing anything implies tying it

down – taming it in a sense so that it can be accessed later on.

When this information is acquired by a human being, it becomes knowledge. Like pillars within the vast landscape of information, the human becomes a carrier of that knowledge. After this acquisition, the knowledge needs to be recalled and then applied. In its most basic form, recollection is summarized by the concept of memory. Memory is defined on various levels, as mentioned the first refers to recalling, then sharing that knowledge, and then creating additional layers of





memory. Like strings connecting the pins of knowledge, memory forms a network of relationships, both direct and indirect.

Distinguished in red, the new information commences from pins of existing knowledge and the interaction between the fields of knowledge supports this new information. Although it cannot be separated from existing fields of knowledge, it exists on another level (containing influences from current social trends and other needs that will be captured and stored).

The red string on the model points to future memory that is created through existing knowledge and new information. Perspex tubes, independent from the grid of structured information-knowledge relationships, spans the levels created by the previous memory (green and blue string) and knowledge to carry the future memory (red string) to elevated meaning. The Perspex tubes, transparent and not clearly distinguishable, refer to the metaphysical (human experiences like conversation) that in turn facilitates and generates the future memory (red string).

