

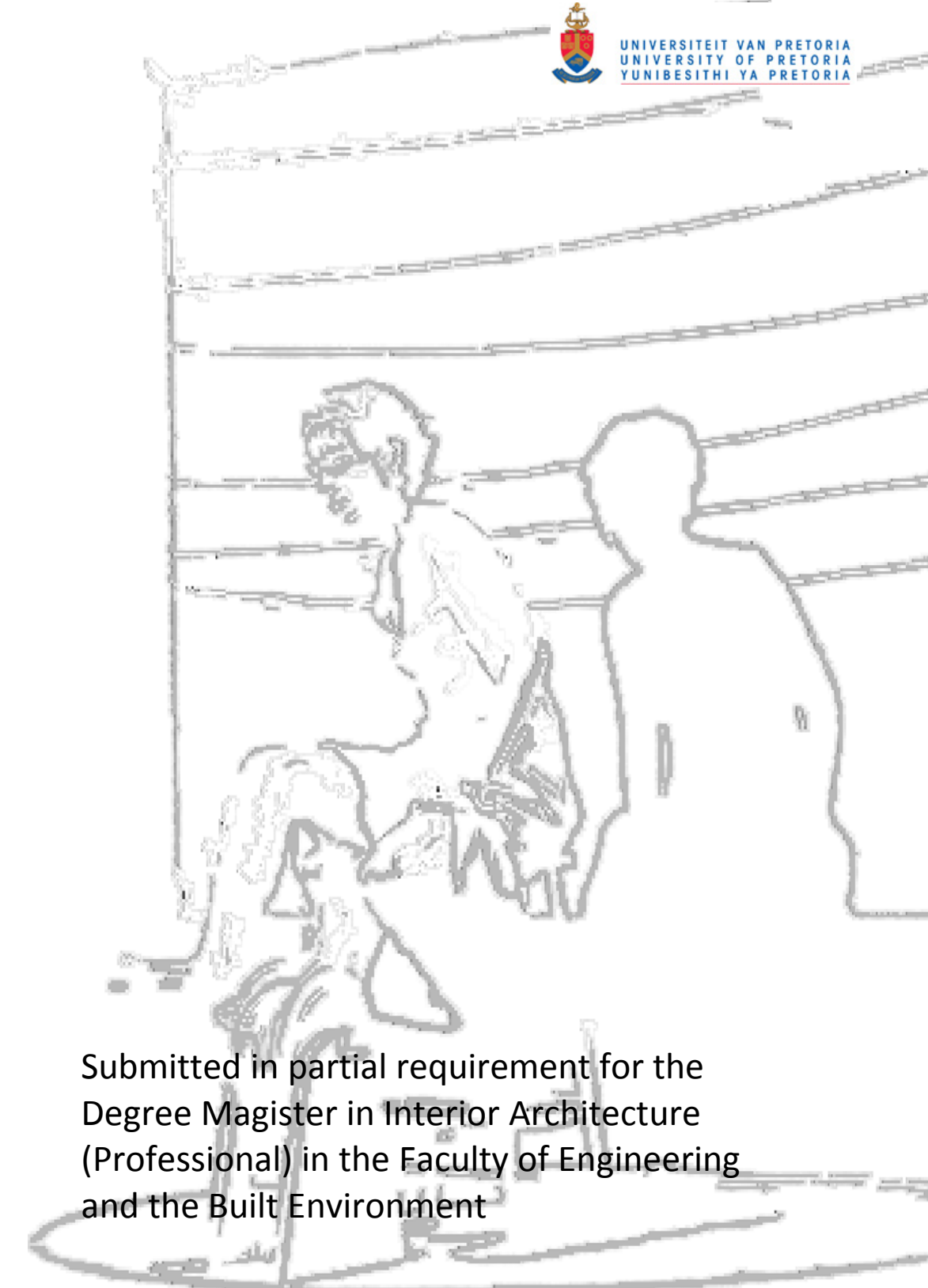


Flexible Education Spaces For Experimentation And
Freedom Of Expression In The Dramatic Arts

By Meera Chita

© University of Pretoria

REINVENTING
THEATRICAL EDUCATION



Submitted in partial requirement for the
Degree Magister in Interior Architecture
(Professional) in the Faculty of Engineering
and the Built Environment

**UNIVERSITY OF PRETORIA | DEPARTMENT
OF ARCHITECTURE
NOVEMBER 2008**

Meera Chita

Study leader: Barbara Jekot

Mentor: Catherine Karusseit

TABLE OF CONTENTS

0X | LIST OF FIGURES

01 INTRODUCTION	1
1.1 CURRENT THEATRE TRENDS	2
1.2 THE REAL WORLD PROBLEM	4
1.3 THE PROBLEM STATEMENT	
1.4 PROJECT BRIEF	5
1.5 PROJECT GOALS	5
02 CONTEXT STUDY	6
2.1 MACRO CONTEXT STUDY	7
2.2 MICRO CONTEXT STUDY	9
2.3 SITE ANALYSIS	11
2.4 BUILDING ANALYSES	13
03 DESIGN APPROACH	17
3.1 THEATRE THEORY	18
3.2 BLACK BOX THEATRES: A VOID SPACE OF MEANINGFUL PRODUCTIONS	23
3.3 SPATIAL THEORY	24
04 PRECEDENT STUDIES	26
CONTENTS	27
4.1 PERFORMANCE ACADEMY, NEWCASTLE COLLEGE	28
4.2 BARKING TOWN SQUARE	29
4.3 MUSEO DI CASTELVECCHIO	31
4.4 YOUNG VIC THEATRE	33

05 DESIGN DISCOURSE	37
5.1 USER GROUP	37
5.2 DESIGN INTERVENTION	37
5.3 PRECINCT DEVELOPMENT	37
5.4 SITE DEVELOPMENT	39
5.5 ARCHITECTURAL LANGUAGE	40
5.6 BUILDING DEVELOPMENT	40
5.7 DESIGN CONCEPT	44
5.8 INTERIOR	48
06 TECHNICAL INVESTIGATION	54
6.1 HVAC, HEATING, VENTILATION AND COOLING	55
6.2 ACOUSTICS	55
6.3 THEATRE RIGGING AND LIGHTING	57
6.4 APPLIED SYSTEM IN DIE MASKER	58
6.5 CONTROL ROOM	58
6.6 LIGHTING IN THE BUILDING	59
6.7 BASELINE CRITERIA	59
6.8 MATERIALS	63
07 TECHNICAL DRAWINGS	64
08 CONCLUSION	81
09 BIBLIOGRAPHY	83
01 APPENDIX 1	87
02 APPENDIX 2	90
ACKNOWLEDGEMENTS	

LIST OF FIGURES

01 INTRODUCTION

- Cover page: Philosopher's stone by Peter R Hall
- Figure 1.1.1: Sophocles's Philoctetes by Heiner, Muller showing the sue of a proscenium thrust stage⁷². Burris Meyer, 1968: 311)
- Figure 1.1.2: Rutherford & Son by Daw, Simon 2005, showing the use of a theatre in the round.
- Figure 1.1.3: *The Secret Love Life of Ophelia* by Simon Holdsworth 2001

02 CONTEXT STUDY

- Figure 2.1.1: GSDP Areas of Large Scale Economic Activity (City of Tshwane Metropolitan Municipality (2007))
- Figure 2.1.2: Metropolitan activity nodes in Tshwane (City of Tshwane Metropolitan Municipality (2007))
- Figure 2.1.3: Above: Diagram showing urban nodes in Pretoria, Hatfield being an urban node. Aerial photo of Hatfield showing vehicle routes in the Hatfield Urban Node.
- Figure 2.1.4: Aerial drawing of the University of Pretoria main campus and South Campus, Hatfield. The orange labels depict the other arts buildings and the circled area depicts the chosen site culminating at the end of the ring road. Author: Chita M
- Figure 2.1.5: Aerial photograph of the existing Drama department building with Die Masker, Die Lier and the Drama Building
- Figure 2.1.6: Panoramic photo of the Drama Building from Lynwood Road. By Misra S, May 2008
- Figure 2.1.7: Photograph of the entranceway into Die Masker. By Misra, S may 2008

- Figure 2.1.8: Photo of Die Lier from the entrance of Die Masker. By Misra, S May 2008
- Figure 2.1.9: Panoramic view of the courtyard to the Drama Building (old CBC), by Misra, S, May 2008
- Figure 2.1.10: Existing Site plan of the Proposed Drama Precinct
- Figure 2.1.11: ground floor plan
- Figure 2.2.12: First floor plan
- Figure 2.1.13: Section A
- Figure 2.1.14: Section B
- Figure 2.1.15: Existing materials and finishes of the Drama Building, Author: Chita M
- Figure 2.1.16: Die Masker, Existing façade, by Misra. S, May 2008
- Figure 2.1.17: Photograph of western façade of Die Masker, by Misra s
- Figure 2.1.18: Photographs of all the facades of Die Masker, By Chita M
- Figure 2.1.19: Interior view of the stairway to the controls level, by Chita M
- Figure 2.1.20: Interior view of the foyer, by Misra S, May 2008
- Figure 2.1.21: Interior view of the theatre. By Misra S
- Figure 2.1.22: Existing Plan Masker Theatre, By Chita, M
- Figure 2.1.23: Longitudinal section B through the theatre
- Figure 2.1.24: Existing Cross section A through the foyer
- Figure 2.1.25: Interior view of the extension used as storage for props and lighting.

- Figure 2.1.26: Stage wings used for storage, by Chita M
- Figure 2.1.27: Interior view of existing dressing rooms, by Chita M
- Figure 2.1.28: Photograph of Die Lier entrance, by, Chita M
- Figure 2.1.29: Interior View of the foyer, by Chita M
- Figure 2.1.30: Interior of Die Lier, by Chita M
- Figure 2.1.31: Interior of Die Bok, by Chita M
- Figure 2.1.32: Photograph of the exterior of Die Bok, by Chita M
- Figure 2.1.33: Section E. By Chita M
- Figure 2.1.34: Section F. By Chita M
- Figure 2.1.35: Plan of Die Lier and Die Bok

03 DESIGN APPROACH

- Figure 3.1.1: *Street theatre* Manchester International (Festival 2007)
- Figure 3.1.2: *Street theatre* Manchester International Festival (2007)
- Figure 3.1.3: Functional spaces within a typical theatre, Chita M
- Figure 3.1.4: Organisation of theatre spaces, Chita M
- Figure 3.1.5: Spatial transition in theatre from public to private, Chita M
- Figure 3.1.6: Sketch of a larger theatre volume and its effects, Chita M
- Figure 3.1.7: Sketch of theatre volume at a more intimate smaller level, Chita M
- Figure 3.1.8: Sketch of end stage, proscenium stage has the same concept. Burris-Meyer, 1964

Figure 3.1.9: Sketch of thrust stage, Burris-Meyer 1964

Figure 3.1.10: sketch of arena stage or theatre in the round, Burris-Meyer, 1964

Figure 3.1.11: interior of the Kwai Tsing Black Box Theatre, http://www.architectsjournal.co.uk/archive/black_box_light_box.html cited: 21 April 2008

04 PRECEDENT STUDIES

4.1 THE PERFORMANCE ACADEMY, Newcastle College 2004:

Figure 4.1.2: Back facade referred to as the black box
Figure 4.1.2: White glowing façade referred to as “light box” (http://www.e-architect.co.uk/newcastle/jpgs/newcastle_coll_ege_rmjm030408_1.jpg, cited 1 August 2008)

Figure 4.1.3: The Polycarbonate light box, (http://www.e-architect.co.uk/newcastle/jpgs/newcastle_coll_ege_rmjm030408_2.jpg, cited 1 August 2008)

Figure 4.1.4: The Light box is used for projections, (http://www.e-architect.co.uk/newcastle/rmjm_newcastle_college.htm, 1 August 2008)

4.2 Barking Town square:

Figure 4.2.1: Aerial diagram of the New Barking Town Square: Author of the image 2008: muf architecture/art ©, cited 25 June 2008

Figure 4.2.2: Aerial plan of the layout of Barking Town Square showing the Pink granite square (a), the end of the pathway with found objects (b), the new checkered arcade leading to the square in front of the Town Hall(c), and the new Secret Garden (d) muf architecture/art © Author of the image 2008). Cited 25 June 2008

Figure 4.2.3: Sketch of the arboretum with forty mature trees of sixteen different species that are lit

up at night with colours that vary according to the time of year. Author of the image 2008: muf architecture/art ©. Cited 1 August 2008

Figure 4.2.4: Pink Granite Slab Square adjoining old Town Hall and new buildings, creating a complete space. Author of the image 2008: muf architecture/art ©. Cited 1 August 2008

Figure 4.2.5: Town Hall Square which accommodates for events. <http://www.cccb.org/en/album?idg=22971>, cited 25 June 2008

Figure 4.2.6: Checkered arcade with golden chandeliers create new pathway into public square.

Figure 4.2.7: Temporary stage structure with backdrop inserted for an event. Author of the image 2008: muf architecture/art © Cited: 1 August 2008

Figure 4.2.8: Square used for event with the Town Hall as a backdrop. Author of the image 2008: muf architecture/art © Cited 1 August 2008

Figure 4.2.9: Various activities such as festivals and carnivals take place in the square. Author of the image 2008: muf architecture/art ©. Cited 1 august 2008

4.3 Museo di Castelvecchio:

Figure 4.3.3 Drawn plan by Carlo Scarpa of the changes he wanted for the courtyard and building. Author: Murphy 1990

Figure 4.3.2: Image of the Courtyard of Cangrande. Author: Murphy 1990

Figure 4.3.3: Sacello at entrance, new object vs. existing entrance. Author: Murphy 1990

Figure 4.3.5: Image of the timber screen applied over the existing structure. Author: Murphy 1990

Figure 4.3.5 Image of the timber screen applied over the existing structure: Murphy, 1990

Figure 4.3.6: Porticos in exhibition hall showing the new floor tiling and the planes, this creates with spaces between the vertical and horizontal elements: Murphy, 1990

Figure 4.3.7: Scarpa designed plinths for the sculptures to be placed on that lightly touch the existing and where one can see the thinness of the material: Murphy, 1990

Figure 4.3.8: Images of detailed elements that show the truth of their materiality and how they are inserted into the existing fabric: Murphy, 1990

Figure 4.3.9: Statue of Cangrande in the courtyard. <http://www.studiocleo.com/gallerie/scarpa/scarpapage.html> Cited 20 October 2008

4.5 Young Vic Theatre:

Figure 4.4.1: Section through foyer and studios, Rob, 2007

Figure 4.4.2: Section through theatre, Rob, 2007

Figure 4.5.3: Ground floor plan, Rob, 2007

Figure 4.5.4: First floor plan, Rob 2007

Figure 4.4.5: Second floor plan, Rob 2007

Figure 4.4.6: Entrance for the theatre showing the 3 spaces joint at with the signage. Author: Philip Vile. Rob 2007

Figure 4.4.7: Photograph showing front façade of eh Young Vic at evening time. Author: Richard Bryant, Rob, 2007

Figure 4.4.8: Interior view showing the combination of new and existing elements. Author Philip Vile, Rob 2007

05 DESIGN DISCOURSE

Figure 4.4.9:	The black box theatre configured in a Catwalk layout (The Young Vic Theatre). Author: Richard Bryant, Rob 2007	Figure 5.1.1:	Spatial analysis with pedestrian paths and building relation analysis.	Figure 5.1.15:	Ground floor plan design for the Drama Building.
Figure 4.4.10:	Black box theatre in Theatre in the Round configuration (The Young Vic Theatre). Author: Richard Bryant, Rob 2007	Figure 5.1.2:	Edge configuration and social space configuration with pathways increasing pedestrian access.	Figure 5.1.16:	First floor plan design for the Drama Building.
Figure 4.4.11:	Interior of foyer showing new and existing elements. Author Phili Vile, Rob 2007	Figure 5.1.3:	Identification of external and internal performance spaces that link interior to the exterior.	Figure 5.1.17:	Sketch diagram of Die Maskers building development.
Figure 4.4.12:	Interior of foyer with inserted timber, glass and steel structure. Author: Richard Bryant, Rob, 2007	Figure 5.1.4:	Sketch of conceptual site development with access paths, service passages, public areas, and building relation.	Figure 5.1.18:	Concept diagram of the spatial configuration for Die Masker.
Figure 4.4.13:	Membrane between service spaces and public spaces. Author Philip Vile, Rob, 2007	Figure 5.1.5:	Concept development of the proposed new building for the Precinct.	Figure 5.1.19:	Photograph of the lighting effect of the entrance canopy during the day. Silhouette created by natural light. Misra, S.
Figure 4.4.14:	Daytime view of the exterior, http://www.haworthtompkins.com/young_vic/index.html , Cited: 23 July 2008	Figure 5.1.6:	Sketch diagram of the proportions of the classical Drama Building.	Figure 5.1.20:	Photograph of the lighting effect of the entrance canopy during at night for performances. Silhouette created by lighting from below light. Misra, S.
Figure 4.5.15:	Night time view of the theatre exterior, http://www.haworthtompkins.com/young_vic/index.html , Cited: 23 July 2008	Figure 5.1.7:	Sketch of outdoor performance in the courtyard.	Figure 5.1.21:	Sketch of the entrance canopy and existing concrete portal wit internal soffit painted red.
Figure 4.5.16:	Photograph showing the detail of the cladding, Author Philip Vile, Rob, 2007	Figure 5.1.8:	Sketch diagram of the Drama Building showing move from public to private spaces.	Figure 5.1.22:	Sketch of existing south façade with new entrance.
Figure 4.5.17:	Exterior of theatre, http://www.haworthtompkins.com/young_vic/index.html , Cited: 23 July 2008	Figure 5.1.9:	Spatial configuration sketch of the ground floor of the Drama Building.	Figure 5.1.23:	Sketch of louvre system on the western façade. With concrete frames painted red to create a focal point.
Figure 4.5.19:	Interior view of entrance and foyer: http://www.haworthtompkins.com/young_vic/index.html , Cited: 23 July 2008	Figure 5.1.10:	Spatial configuration sketch of the first floor of the Drama Building.	Figure 5.1.24:	Sketch perspective of the new addition on the east of the existing Masker Building.
Figure 4.5.20:	Interior view gallery above foyer: http://www.haworthtompkins.com/young_vic/index.html , Cited: 23 July 2008	Figure 5.1.11:	Concept sketch of the convertible classroom used for performance.	Figure 5.1.25:	Sketch interior perspective of the foyer, looking at the new louvered glazing panels and seating area.
		Figure 5.1.12:	Concept sketch of the convertible classroom used for rehearsal.	Figure 5.1.26:	Sketch interior perspective of the foyer, looking towards the staircase and glass lift to the new mezzanine level where the dance studio can be accessed.
		Figure 5.1.13:	Concept sketch of the convertible classroom used for education.	Figure 5.1.27:	Interior perspective of the rehearsal studio.
		Figure 5.1.14:	Site plan for the proposed design of the Drama Building. Chita M	Figure 5.1.28:	Interior perspective of the multi-purpose theatre.

Figure 5.1.29: Spatial configuration for the backstage and service areas

Figure 5.1.30: Concept plan of the ablution facilities. M Chita, July 2008.

Figure 5.1.31: Sketch Interior perspective of the ablution facilities.

Figure 5.1.32: Concept theatre configurations which aid in the variation of use of the theatre space with regard to education as well as performance. A. thrust stage, B. theatre in the round. Sketch by Chita M, taken from Theatres and auditoriums, Burris Meyer.

06 TECHNICAL INVESTIGATIONS

Figure 6.1.1: Interior photograph of Di e Masker showing the existing AC duct in roof ridge, Misra, S. May 2008

Figure 6.1.2: diagram showing reverberation in the existing theatre, Author: Chita, M

Figure 6.1.3: Reverberation of new design showing absorbent materials and sound reflections, Authoir, Chita M

Figure 6.1.4: Method of locating theoretical positions of spotlights. (Tutt and Adler 1995:191-192)

Figure 6.1.5: On thrust and theatre-in-the-round stages virtually all the lighting comes from overhead to avoid glare in the eyes of the audience. (Tutt and Adler 1995:191-192)

Figure 6.1.6: This system, a 15 x 8m containment Frame, features an integral support structure complete with hangers and lighting grid, and is installed on the first floor of a Georgian villa that is now known as CCA Glasgow. Tension wire grid platforms are woven from stainless or galvanized steel wire rope

Architect: Page & Park
Contractor: Lilley Construction Ltd

www.thecablenet.net

Figure 6.1.7: movable louvre system consists of a range of aluminium elliptical louvers louvres can be motorized to provide maximum control over the amount of daylight passing through the system. www.reynaers.com, cited 12 September 2008

Figure 6.1.8: Recycled rubber flooring. <http://www.marleyflooring.co.za/> Cited 26 September 2008

Figure 6.1.9: Envirodeck. www.wpc-decking.co.za/change/main.asp?cbit=7 cited 23 September 2008

Figure 6.1.10: Screen printed glazing. http://www.smartglass.co.za/performance_data/images.pdf Cited 18 September 2008

Figure 6.1.11: Stretch ceiling. <http://www.barrisolco.com/technical.php> Cited 4 September 2008

Figure 6.1.12: Plastic panel. <http://www.greenbuilding.co.za> cited 29 September 2008

Figure 6.1.13: Multicolor plastic tubes with RGB LED lights. <http://www.ledlighting.co.za> Cited 1 September 2008

Figure 6.1.14: Modular Concrete block. <http://www.cma.org.za/UploadedMedia/Masonry-Vol-2-Hollow-Units-140-190%5B1%5D.pdf> cited 29 August 2008

Figure 6.1.15: The Linking Rod System. www.preformedsa.co.za cited 20 September 2008.

07 TECHNICAL DRAWINGS

Figure 7.1: Site plan 1:1000

Figure 7.2: Demolition Plans, scale 1:300

Figure 7.3: Ground floor plan, scale 1:150

Figure 7.4: First Floor plan, scale 1:150

Figure 7.5: Lighting plan, scale 1:150

Figure 7.6: Section A, scale 1:150

Figure 7.7: Section B, scale 1:150

Figure 7.8: Section C, scale 1:150

Figure 7.9: South elevation, scale 1:150

Figure 7.10: West elevation: scale 1:150

Figure 7.11: Theatre configurations, scale 1:250

APPENDIX 1

Figure A1: Aerial Photograph of the Grounds of the old CBC, unknown date, Afrikana library. 2008-11-20

Figure A2: Photo of the courtyard of the old CBC 1928, (www.cbcpretoria.co.za/index.cfm/p/pages.schools-s-history.htm, July 21 2008)