Tessellation: Exploring Pathways and Partitions

A thesis submitted in fulfilment
of the requirements for the degree of Master of Arts

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BA Fine Art (Honours)

School of Art
Design and Social Context Portfolio
RMIT University Melbourne
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Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethics procedures and guidelines have been followed.

Antonia Sellbach

18/5/2011

Acknowledgments:

I would like to extend many thanks to my supervisor Irene Barberis for her enthusiasm, encouragement and support throughout this process. I am also grateful to Robin Kingston for her insight and support. Many thanks to Sarah Trotter, Karla Way, Ali McCann, Mai Gryffydd and Luke Horton for assisting with the various installs - I would never have managed to get through that process in one piece without you all.

Thank you also to my family, Mary, Undine and Anna Sellbach and Roger Fay for your enriching and ongoing dialogue about this project as it progressed.

Thank you,

Antonia
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CRITICAL FEEDBACK: Archival Study by Phoebe Ross

Title:

TESSELLATION: EXPLORING PATHWAYS AND PARTITIONS

Summary:

This research project will investigate how combining systems of tessellation, modularity and seriality can be utilised with a specific method of paper staining to explore visual pathways within an artwork. A serial system of modular tessellation will be implemented, whereby different "sets" of oil-and-pigment soaked paper modules will be constructed and formed into various configurations. These configurations will then be documented within the architectural spaces of studio and gallery, in order to explore how the same set of paper modules may reveal a variety of visual outcomes in the form of visual pathways, divisions and partitions.

The research will also involve looking at how the visual aspect of tessellated forms in pavements, floors, pathways and walls, can affect and even guide one's spatial experience as we move through an environment. This quote from the book Italian Pavements: Patterns in Space by Kim Williams outlines some of the functions of tessellations within the pavement, "By articulating the surface upon which we move through space, the pavement provides a sort of map or visual guide to interpret the spatial experience." 6

I intend to review this concept in connection to the creation of my own work, by creating configurations which explore the pathways that the eye may travel.

I also intend to explore the work of other artists including Sol Lewitt, Kerrie Polliness, Jim Lambie, Walter Obholzer and Ellsworth Kelly who have utilised similar principles or systems of modularity, tessellation and seriality within their work.

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1 Definition of the word "Tessellate" "to fit together exactly" taken from The Collins Dictionary, Harper Collins, Sydney 1995
2 Definition of the word 'Modular' "Designed with standardized units or dimensions, as for easy assembly and repair or flexible arrangement and use" taken from The American Heritage Dictionary of the English Language, Fourth Edition, Houghton Mifflin Company, 2000
3 Definition of the word 'Seriality' "The quality or state of succession in a series; sequence" taken from The Unabridged Dictionary, Random House, 2006
4 Definition of the word 'System' An organised and coordinated method; a procedure" taken from The Unabridged Dictionary, Random House, 2006
5 It is worth pointing out that the system i will use, does allow room for intuitive decision making as this may affect the outcome of the research
6 Kim Williams, Italian Pavements: Patterns in Space, Anchorage Press, Houston, 1997 p.3
Introduction:

The aim of this project is to explore visual pathways within a series of tessellated art works. The term ‘visual pathway’ may in this case extend to include disruption of space and surface, the partitioning of space and surface, as well as the exploration of various pathways that flow through space and surface. Kim Williams suggests in ‘Italian Pavements: Patterns in Space’ that tessellated patterns: “…may enhance, modulate, or even contradict the qualities of the architectural space. An overall pattern may unite the disparate spaces of a sprawling architectural interior. A break in a continuous pattern may signal a transition in the space. A pattern may indicate continuity of movement through space, or provide an obstacle to movement.”

I will investigate how my art works relate to the different architectural surfaces that they are attached to. Existing research into the functions of tessellated spaces and in particular tessellated walls and pavements will be further explored and are also the impetus for this project. I intend to look at how my own specific process and methodology can be compared to the processes and the functions of tessellation found within both historical and contemporary walls and pavements.

Here, as Williams points out: “Paving designs demonstrate many of the perceptible qualities that influence our experience of architecture: scale, texture, a sense of movement, colour. We may perceive a pattern as being static or implying movement. We may perceive a rhythm. Colour may be used to heighten the effect of the pavement or to emphasize an important point of action in the space.”

Historically, pavement and wall tessellations often functioned to structurally organise the surface. They have served as visual cue or guide, mapping, pre-empting and projecting ideal or intended movements through space. Good examples of this can be found within the Alhambra Palace in Southern Spain, which features many colourful geometric wall and floor tessellations. Floor tessellations within the palace reveal coloured central pathways, snaking through the corridors. These can be seen to visually suggest directional movement throughout the space. My research investigates the potential for this sort of function to be explored and potentially updated, within a contemporary art context primarily adapted to the eye rather than the body.

This project involves the construction, placement and documentation of geometric modules into various configurations. These sets of geometric modules will be created through a process of staining paper with pigment and linseed oil. This process allows a known material such as paper to reveal a new materiality where its structures are changed or fused with another medium, in this case, linseed oil. Linseed oil has been chosen because pigments and oil paints may be dissolved into it creating a coloured oil solution with which to stain the papers. The linseed oil also provides a very specific waxiness and heaviness to the paper, suggesting a new materiality. The linseed oil and paint solution will darken slightly over time, thus deepening the hues of each module slightly.

In this project I will investigate how art works can be constructed that might manipulate, affect or guide the viewer’s eye on a visual journey through and around the work and also how the work might visually fuse with the surface of floor, wall etc.

This project will also expand on existing historical research within the area of Abstraction and Conceptual Art, and in particular, the statement by Sol Lewitt from his article Paragraphs on Conceptual Art:

“Using a simple form repeatedly narrows the field of work and concentrates the intensity of the arrangement of the form. This arrangement becomes the end while the form becomes the means.”

This statement provides a context for the use of a particular set of rules or ‘system’ within this research, yet also offers a point from which to differ. I wish to expand on Lewitt’s statement, creating work where the...
form is still the means, but the end, arrangement, or outcome is not finite. In this case, the decision making processes and working modes are selective, and these qualities could be seen to differ from Lewitt's statement.

For instance all permutations of the set of modules may not be displayed or configured as the system will incorporate aesthetic decision making practice modes which may 'intervene' with the usage of the system.

Background:

This project involves the staining of thick printmaking paper with coloured pigments and linseed oil. I have developed and worked with this technique previously, yet in the earlier works the paper was saturated centrally and never stained to the perimeter. I observed that the dry paper edge 'framed' each separate work that I created. Once I applied the stain right to the edges of the paper, I observed how this approach allowed the artworks to appear like 'modules' that could be placed against one another in a variety of combinations. This process allowed my work to extend beyond the boundaries of the paper through modular composition.

This also led to a shift in my practical methodology, which is the impetus of this project. The questioning of modularity, seriality and tessellation directly relates to a current questioning within my own art practice, as well as an overall questioning of how my work fits into a larger spectrum of geometric works in both contemporary art and urban spaces. The new work involves the tearing and cutting of large stained paper modules into geometric shapes that can be organized into tessellated patterns and formations.

Review of literature and current practice:

The book 'The Mediation of Ornament' by Oleg Grabar discusses the functions of geometry as an intermediary to a wide variety of fields such as architecture, science, design art and decoration. Here, Grabar writes, "geometry appears, as a frequent category to classify, describe, and comprehend the visual experience of many objects or monuments of architecture. It is also part of the process of creating things..." This statement reveals an already existing research framework which links geometry to many fields. I will build upon this statement by examining the link between the tessellation of geometric form, architecture and contemporary art within my own tessellation process.

Grabar also refers to the late Dutch graphic artist, M.C Escher in The Mediation of Ornament particularly in reference to his use of 'tessellation in order to cover space. This provides another context for the area of research that I intend to explore. Grabar writes, "Escher argues that there is a game of covering space, that is to say, that it is a desired activity with rules but without certainty about outcome. The geometry of what became \ known technically as 'tessellation through isometry' (totally covering with repeated motifs) is one way, perhaps the only one, of playing the game." Escher was particularly inspired by the geometric tessellations found within the Alhambra Palace. I intend to visit this site as part of a research trip later this year (see timeline).

Kim William's book entitled 'Italian Pavements: Patterns in Space' provides useful reference to some of the functions of tessellation within historical pavements and walkways. In depth analysis of tessellations within various pavements are provided.

Sol Lewitt's 'Wall Drawing' series relies on following a set of rules or a system that reveal an outcome. The series utilised a system whereby sets of diagrammatic instructions were followed to explore the permutations of simple geometrical combinations and shapes, and the juxtaposition of various colours tones and hues. His work is pertinent to this research because of his use of a systematic working methodology but also because he, or others following his instructions would often draw directly onto the walls and floors of the space, thus engaging with a re-visioning of the potential of architectural surfaces within the gallery and also public and private spaces. Modular forms were also commonly used within his practice.

Contemporary Australian artist Kerrie Poliness has used tessellating geometric forms in her painted works. She has offered her own interpretation of Lewitt's systematic and conceptual approach. Her series entitled 'Black O Wall Drawings' from 1998 revolved around the usage of a set of instructions that are followed and can be seen as also expanding on Lewitt's Wall Drawings, offering a contemporized approach to this idea.

The article 'The Serial Attitude' by Mel Bochner taken from the book Open Systems addresses the rise of systems art and seriality in the 1960s and 1970s. He conveys serial art as utilising a systematic process, fa-
vouring serial orders and systems over artistic aesthetic. He also suggests serial art should be self-exhausting. My research favours a system whereby aesthetic decisions may be allowed to interrupt or intervene with the working process or system at various stages within the works creation.

Artist Lionhard von Monkievitsch utilised serial systems within his work in his series from 1986 'Two Cuts in the Suprematist Square' which is based on a selection of images with an abundance of possibilities inherent within them. Using the repeated square as a prototype he explores permutations and variations through simple systematic design approaches (which are also used within mosaic and tessellated tilings) such as mirroring, repetition, duplication and rotation.

Contemporary Glaswegian artist Jim Lambie, creates artworks that engage with the specific dimensions of gallery spaces with his floor pieces that consist of psychedelic colourful warping patterns constructed from electrical tape. The works are created to cover the specific dimensions of the gallery floor. The idea that the exhibit space may determine shape and size of the piece is also intrinsically connected to this research.

In his piece entitled 'Otaku' from 1997, artist Walter Obholzer examines the relationship between the gallery wall and geometric construction, which is reminiscent of the spaces in between tessellated tiles and mosaics. In this work he fuses the gallery wall with the artwork itself, the artwork illuminating what may otherwise be viewed as the space in between. This is also an issue I wish to approach within this project.

This research is also partly informed by writings by Rosalind Krauss on the subject of 'The Grid'. She writes here, "Logically speaking, the grid extends, in all directions, to infinity ...thus the grid operates from the work of art outward, compelling our acknowledgement of a world beyond the frame" 11 The process of tessellation and also the geometric structure patterns revealed from covering space can be seen as an articulation of a grid within my own work. The structure patterns revealed could also be seen to suggest an extension of the work beyond its material boundaries as previously outlined in the background section of this document.

Proposed Project:

11 Rosalind E Krauss, "The Grid" taken from The Originality of The Avant-Garde and Other Modernist Myths, MIT Press 1986 p.18
To explore how the modular, tessellated elements of the work might relate to the installation site.

To follow the outlined project proposal whilst also allowing room for decisions based on intuitive aesthetics, and or additions from the initial research departure point.

Research Questions:

How can both complex and simple systems be utilized to articulate and to explore visual pathways within sets of tessellated forms?

How does the application of systems such as these affect the outcome of both the work and the architectural space in which the work is installed?

Rationale:
The link between art and architecture is an intrinsic element of this project. It is hoped that this research might incrementally contribute to interdisciplinary and ongoing reinforcement of the cultural and functional connections between art and fields such as architecture, design and decoration. In ‘The Mediation of Ornament’ Olef Grabar writes about the connection geometry has with many different fields. Here, he writes, "as a mode of perception or as a process of creation, geometry is clearly a significant intermediary for both making and for seeing." 12

This statement reveals the relevance of exploring geometry as a sort of ‘creative conduit’ to a variety of different visual fields and concepts. This research is in part, an investigation of how geometry might serve as a link between the fields of art, architecture and decoration in a contemporary context, reinforcing those connections that already exist between those fields.

Methods:
Combined with regular supervision meetings and discussions, this project will primarily involve the production of new work (along with back up work) in the studio.

Along with the preservation and documentation of this work, regular trips to the library and ongoing literature reviews will be undertaken. A potential research trip to Europe and in particular, Spain to visit the Alhambra Palace (to document and observe mosaic tessellations) will take place in November 2008. The site is particularly relevant due to its world renown and well preserved examples of large amounts of geometric mosaics.

Rigorous photographic documentation capturing the serial quality of works will be necessary as will the collection of artists plans sketches, notes and diagrams for use in the ADR.

Timeline:

Semester 1, 2007
- Literature review, regular library visits (isolate additional texts which may be of use to this project)
- Apply for exhibition at First Site, RMIT
- Creation of 10 new works (guide only)
- Discussion (with fellow students and supervisors etc) about new work and ideas
- Investigate other streams of my practice eg. how back up material, new materials, jottings, plans and maquettes might feed into the research outcome
- Review new work
- Progress Report

Semester 2, 2007
- Staining of new works (investigate some other colour options such as powdered pigment instead of oil paint, and explore and document different combinations of colour)
- Research / document colour pallets for new work. In specific, look at tessellations from Alhambra.
- Construction of work from Semester 1 in a variety of spaces i.e. studio space, RMIT Gallery spaces,

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o Research Proposal

o Continue to expand set (create more geometric modules). Look at limiting hues? Collate and review

o Progress Report

Semester 1, 2008:

o Attend Research Strategies and seminar.

o Draft readings take place.

o Further in depth refinement of Research Proposal, library visits.

o Formulation of Power Point Slideshow (documentation of work thus far).

o Revise and expand on Bibliography by photocopying the bibliographies from key texts.

o Apply for exhibition at BUS gallery and West Space (in 2009).

o Creation of new work (specifically looking at what I want to find out visually from the research).

o Explore the spaces in between the modules and how they relate to the proposal.

o Documentation and discussion of new works.

o Progress Report

Semester 2, 2008

o Submit Research Proposal (August 8th).

o Start early preparations for exhibition at BUS Gallery (April 2009) review dimensions of gallery space

o Planning of a 1 week research trip in November in order to document and observe tessellated geometric tiles within the Alhambra Palace in Spain

o Formulation of new modular pieces (make continual additions to the modular, ongoing set) Reflect upon outcomes so far. Think about starting new ‘set’ and how this might affect the research outcomes.

o Look at other materials: Which materials might be used in a similar way as the stained papers as an ongoing part of expanding the research and exploring research outcomes?

o Documentation of new work

o Progress Report

Semester 1, 2010

o Unpack of documented outcomes from research trip

o Revise materials used (what other mediums and materials may tie into the research?)

o Begin to document every step and decision made within the arrangement of the modules

o Apply for the end of candidature Exhibition (RMIT Faculty Gallery)

o Formulation of new sets of modules (how are these different from those created before?)

o Ongoing library visits

o Preparation for exhibit and experimentation at Sutton Project Space

o Compile ADR

o Progress Report

Semester 2, 2010

o Prepare art work for end of candidature exhibition and assessment

o Review and Timeline check: Revise Materials? Were the new material additions successful?

o Ongoing Documentation

o Revise Aims: In relation to the research project questions, what new work may need to be created in last 6 months of candidature?

o What are my research outcomes?

o Progress Report

o Collate Documentation for ADR

o Creation of ADR
Bibliography and references:


De Zegher Catherine, Teicher, Hendel, ed. *3 x Abstraction: New Methods of Drawing*, The Drawing Center, New York, 2005


Mion-Jones, Esta, ed. *Elements of Abstraction: Space Line and Interval in Modern British Art*,

South Hampton City Art Gallery, South Hampton, 2005


IMAGE DETAILS: A GUIDE

Details such as title and date of all works are listed underneath each image throughout the ADR.

All works that have not been marked otherwise use the mediums ‘Linseed Oil and Pigment on Rag Paper’ (300gsm).

The dimension of each individual triangular module is 1100 mm x 750 mm. The dimensions of works vary according to the ongoing serial addition and subtraction of modules.

The dimensions of the work also rely on a questioning of where the boundaries of the work start or finish, which is partly what this research is about. For instance, the negative space behind the work may play an integral role in the piece, rendering it ‘part’ of the piece. I have left this up for questioning and it is for this reason that exact dimensions of work have not been supplied. However, the dimensions of the area of the studio, work area or gallery space in which work is installed is provided for all installs and exhibits.
METHODOLOGY

DOCUMENTATION OF PROJECT

TESSELLATION: EXPLORING PATHWAYS AND PARTITIONS

Note* Working with a hard flat surface on the floor, multiple papers may be stained at once. The medium is poured onto the paper and then rubbed in with a cloth.
Studio composite (image of mediums and materials)

Medium bottle and rags
Drying papers

* The side of the paper that has been stained directly has a brighter, more saturated hue. The other (under-side) of the paper (pictured left) will appear lighter.

A series of papers, left to dry for 2 weeks.
Layers of butchers paper are laid down underneath the works to absorb excess oil and aid the drying process.

Assembly line of dried papers

*the top 2 papers have already been torn centrally on the diagonal to create 4 triangular modules. These are now ready to be tessellated into an undisclosed (and potentially unknown) variety of configurations. While not in use they are archived along with the ‘ever growing set’ of other triangular paper modules.
An example of the texture of the underside of a piece of 300 gsm printmakers rag paper (aged 3 years). The texture and fibers of the paper have now become merged with the staining solution making it impossible to separate the two elements.

*Note a very slight yellowing of paper a year on due to linseed oil darkening slightly over this time.

STUDIO INSTALLATIONS

EXPLORING PARTITIONS, VISUAL PATHWAYS AND IDENTIFYING PATTERNS:

INTRODUCTORY WALL AND FLOOR INSTALLATIONS

(2007-2008)
'ZIG ZAG' WALL PIECE

'OPEN DIAMOND' FLOOR PIECE

STUDIO INSTALLATION
BLDG 6 RMIT, 2008

dimensions of wall: 2300mm x 2250, dimensions of floor: 3000mm x 2600mm

Notes on 'zig zag' and 'open diamond' pattern
STUDIO INSTALLATIONS
PART TWO

RMIT BUILDING 4

2008
COMBINATION C: PERMUTATION C (8 modules)

COMBINATION C: PERMUTATION E (8 modules)
COMBINATION C: PERMUTATION F (12 modules)

dimension of wall: 5ms x 2.5 ms, dimensions of floor: 5 ms x 1.5 ms
COMBINATION C: PERMUTATION H (wall and floor)
STUDIO INSTALLATIONS
PART THREE

RMIT, BUILDING 4

2008
COMBINATION D: PERMUTATION B (above and right)
COMBINATION D: PERMUTATION C (above and left)
COMBINATION D: PERMUTATION  D (above and right)
Triangles from ‘Combination D’ wall piece laid out on floor (above and right)
STUDIO INSTALLATIONS

PART FOUR

GOSSARD BUILDING, RMIT

2009

STUDIO INSTALLATION PART FOUR:
GOSSARD BUILDING 2009
COMBINATION E: PERMUTATION B, CORNER VIEW
dimensions: north wall: 4.5 m x 3.2m east wall: 2.1m x 3.2m
WORKING DIAGRAM FOR 'COMBINATION E'

COMBINATION E: PERMUTATION K, NORTH WALL, DETAIL
ASSEMBLAGE AND DISASSEMBLAGE:
A SERIAL DOCUMENT OF EXPERIMENTS WITH A SET OF 100 TRIANGLES
GOSSARD PROJECT SPACE
2009

COMBINATION E: PERMUTATION K: NORTH AND EAST WALL, DETAIL
COMBINATION H: PERMUTATION L

COMBINATION H: PERMUTATION M

COMBINATION H: PERMUTATION J

Surplus triangles
EXHIBITIONS

PART ONE

COMBINATION H: PERMUTATION V

COMBINATION H: PERMUTATION W
‘STRUCTURE PATTERNS’

SOLO EXHIBITION, BUS GALLERY

2009

Installation shot, bus gallery 2009
Installation shot, bus gallery (above and right)
Installation shot of bus gallery show

Screen shot of dimensions of bus gallery space

“This space was chosen because of its dimensions and in order for modules to ‘cover’ or ‘wrap around’ a very enclosed space.”
'Structure Patterns', South and West Walls, detail

'Structure Patterns' South and full West Wall, detail
CROPS AND CLOSEUPS:
INTERVAL, COLOUR RELATIONSHIPS, TEXTURE, IDIOSYNCHRACY, INTERSTICES AND CONNECTION POINTS.

BUS GALLERY 2009

Image Details from 'Structure Patterns' exhibit (right)
'Blue, Grey, Blue' 'Structure Patterns' detail (above)
'Blue, Maroon, Beige, Blue' 'Structure Patterns' detail (right)
EXHIBITIONS PART TWO:

CLUSTER AND CONNECT

SUTTON PROJECT SPACE 2010

'Interstices and connection points' 1, 2, 3 and 4 (previous pages)
SUTTON PROJECT SPACE INSTALL 2010

Screen shot. Dimensions of Sutton Project Space work area for 'Combination M'

COMBINATION M: PERMUTATION C
'COMBINATION M' (above and right)
'COMBINATION M' (above and right)
CROPS AND CLOSEUPS

SUTTON PROJECT SPACE

'Yellow, Blue' detail (right)
'Pink, Green, Pink' 'COMBINATION M' detail

'Blue, Yellow, Pink' 'COMBINATION M' detail
'Interstices and connection points' 5, and 6 (above and right)
EXPERIMENTAL FLOOR PIECE

SUTTON PROJECT SPACE 2010
COMBINATION N: PERMUTATION 1

COMBINATION N: PERMUTATION L
INSTALLATIONS AND EXPERIMENTS
2010

GOSSARD PROJECT SPACE
COMBINATION O: PERMUTATION F (left)
COMBINATION O: PERMUTATION G (below)

COMBINATION O: PERMUTATION K (right) and detail (below)
COMBINATION O: PERMUTATION R (longshot)

COMBINATION O: PERMUTATION T (above)

Working diagram for ‘Combination O’ plus observation notes (below)
COMBINATION O: PERMUTATION R (sideview)

'KITE SERIES' # 3 (above)
'Kite Shape' identification diagram (right)
Wall construction A (kite series extension)

Wall construction C kite flipped, 2 triangles on floor
A NEW AXIS: BREAKING FROM THE VERTICAL HORIZONTAL GRID SYSTEM

A SERIES OF NEW INSTALLATIONS

GOSSARD PROJECT SPACE

2010

Floor shot. Playing with potential tessellations which do not conform to the usual vertical/ horizontal grid systems I have previously employed.
IMPOSSIBLE PRISMS SERIES: COMBINATION F

'IMPOSSIBLE PRISMS SERIES': COMBINATION Z. PERMUTATION B (top)
COMBINATION Z. PERMUTATION C (middle)
COMBINATION Z. PERMUTATION E (bottom)
floor shot #3

‘IMPOSSIBLE PRISMS SERIES’ ‘COMBINATION Y: PERMUTATION B’ (above)
‘COMBINATION Y: PERMUTATION C’ (below)
'IMPOSSIBLE PRISMS SERIES', COMBINATION X

Room shot, Gossard Project Space.
Featured works, COMBINATION Z, COMBINATION X and COMBINATION Y
'IMPOSSIBLE PRISMS SERIES' COMBINATION W: PERMUTATION B (top)
COMBINATION W: PERMUTATION C (bottom)
Sketch / notes relating to new grids

COMBINATION W, COMBINATION Z and COMBINATION X
COMBINATION X PERMUTATIONS B & C. (right) COMBINATION V: PERMUTATIONS B, & C
COMBINATION V: PERMUTATION D, 'IMPOSSIBLE PRISMS SERIES' (above)

Preliminary sketch relating to 'Impossible Prisms' Series
COMMISSIONS:
*This installation was commissioned to appear in a scene of the television series 'The Slap' (based on the Australian book 'The Slap' by Christos Tsiolkas. Shot taken on set, January 2011.

FINAL EXHIBIT:
SCHOOL OF ART GALLERY, MARCH 2011
Floor Shot. Triangles laid out for viewing during the selection process.

Installing the exhibit
IMPOSSIBLE PRISMS SERIES: COMBINATION W
172

COMBINATION Y WALL PIECE : PERMUTATION P
173
THE INVENTORY: 
MAQUETTES SKETCHES AND DIAGRAMS 

DOCUMENTING, ARCHIVING AND RECORDING THE ‘EVER GROWING SET’
Diagram of 40 triangles and how much real space they would take up in one solid block

An ‘inventory’ or working list of new triangles created between February and September 2010. Categorizing individual units of each colour and breaking colours down into descriptive hues other than basic, primary descriptors.
A 'final' inventory, collated from 6 separate working lists. Includes the 'finished total' of triangles at the end of the project, along with categorization of colours / hues. Also includes data of how many triangles were made each year and what colours they were.
ANOMALIES

It's interesting how the ANOMALIES, DIFFERENCES, IMPERFECTIONS (?) + VARIANTS have become HIGHLIGHTED at this stage in the project.

I have 160 triangles. At this stage I am beginning to notice more from the areas that STRAY from these limitations due to HUMAN ERROR or HUMAN INTUITION.

These differences are an intrinsic part of this research outcome. By limiting project to same size modules etc., making 'estimations' I have begun to notice a MICROcosm of variation within this LIMITED SYSTEM.

Scope for varied mit calculation, mis, torn, damaged modules + COLOUR INTERACTION (due to ARCHWAII ISSUES!!)

Balsa wood maquettes (2009) were created using a rough estimate of existing triangles in order to explore multiple combinations, patterns and effect (above)
Research notes, February 2010 (left)
Antonia Sellbach is a Melbourne based Artist and Musician currently completing a Masters (by Research) in Fine Art at RMIT.

Her research explores the aesthetic variables and geometric configurations that might occur from the usage of a system which allows for intuitive decision making processes combined with an ever growing set of rearrange-able geometric modules.

Antonia has been employed as a selection panelist for the Australia Council for the Arts Music Board, and is registered with the Australia Council as both a Music and Inter Arts Peer Assessor.

She plays music in the bands Love of Diagrams and Beaches.

EDUCATION:

MA, Fine Art RMIT: 2007-2011

BA Fine Art (First Class Honours) RMIT 2003-2006

Diploma of Visual Art, RMIT 2001-2002

EXHIBITIONS:

House me with a Geometric Quality, Platform 2011

Seimens Scholarship Exhibition, RMIT Gallery, Storey Hall 2010

Cluster and Connect , Sutton Project Space, Fitzroy, 2010

Collective Mr Kitly, Brunswick 2010

Dark Moon 3 Anytime Place, Brunswick 2010

Split View, Passage Gallery, RMIT

Verisimilitude, Jackman Gallery, St Kilda 2007

RMIT Graduate Exhibition, First Site, RMIT Swanston St, 2006

SOLO EXHIBITIONS:

Antonia Elizabeth Sellbach ( Final Masters Exhibit) School Of Art Gallery, 2011

Structure Patterns, BUS gallery, Melbourne, 2009
COMMISSIONS:

Wall Piece, ‘Combination C’, Neurosciences QLD office, Brisbane, Australia, 2010

‘Wall piece 14’ commission, to appear in the television series ‘The Slap’, based on Christos Tsiolkas’s book by the same name

Limited edition of T-shirt and poster designs (invited alongside a selection of other international graphic designers and artists) to promote Indie Record label, Matador Records, New York 2008

PUBLICATIONS:

‘Cluster and Connect’ an article on the exhibition by the same name, authored by Helen Hughes and Genevieve Osborn 2010

‘Antonia Sellbach, Wall Combination #22’ an archival investigation into my work authored by Phoebe Ross, University of Melbourne 2010

‘Combination M’ appeared in a feature on Antonia Sellbach which appeared in ‘The Sublime issue’ arts section, Vogue Italia March 2007


INTER ARTS: Exhibitions and Opportunities

Rock Chicks: A History of Women in Australian Music. The Arts Center, Melbourne Nov- Dec 2010 (Original, archived art works relating to both Beaches and Love of Diagrams album cover and poster production have been included in this upcoming exhibition.)

Beaches performance, at Fair Shake curated by Jess Johnston from Hell Gallery, Melbourne in combination with the Melbourne International Art Fair

Beaches performance, at NGV Summer Series, Sculpture Garden, National Gallery of Victoria 2010

Beaches performance, at Melbourne International Art Festival (Forum Theatre, Melbourne 2009)

FUNDING / GRANTS 2007-2010:

2010 recipient (beaches) Australia Council, International Pathways Grant

2010 recipient (beaches) Victoria Rocks Touring Grant

2010 recipient (love of diagrams) Live on Stage Grant

2009 recipient (love of diagrams) Victoria Rocks, Touring Grant

2009 recipient (love of diagrams) Victoria Rocks, Recording Grant

CRITICAL FEEDBACK:

A STUDY BY PHOEBE ROSS CONCERNING ARCHIVAL ISSUES WITHIN THIS WORK
Introduction

Antonia Sellbach is an emerging contemporary Australian artist, currently based in Melbourne. Her work is distinct in the use of colour and colour saturation; abstract geometric form and the innovative use of traditional materials. This essay will examine specifically the work entitled ‘Wall combination #22’ in regards to the use of materials and processes and their relationship to colour and conservation.

This project takes the form of an ever growing ‘set’ of paper triangles (stained with oil paint and linseed oil), which may be placed, or ‘tessellated’ into different configurations and installed in a variety of different architectural environments, including traditional gallery spaces, plus domestic and public spaces.

Each of the works explore the multiple variables, visual pathways, distortions, effects and aesthetic differences and combinations that are the outcomes of a system of modular arrangement and re-arrangement. The series is also an enquiry into ‘decision making’ within abstract and geometric aesthetics exploring the scope and possibilities within following an intuitive system whereby multiple possibilities may be revealed by limiting the ‘rules’ of the project.

The systematic approach to the project is both concrete (whilst all triangles are varying colours, the same dimensions are used for each triangle and there are no other shapes involved as units) and intuitive (the configurations from the ‘set’ are decided on when the work is being installed, these decisions are partly a product of and reaction to the architectural space in which it is installed).

The tessellation of the triangular shapes, and the ever expanding nature of this series, plays with an idea of the ‘infinite’. The artist can continue to add to or extend the work which then forms part of a larger whole with which to work from. Australian artist, Imants Tillers whose work utilised a system of ever growing canvas boards which were pieced together to form larger works, once spoke of his canvas board system as moving relentlessly “toward infinity- an impossible goal”.[1]

This series is informed by the tessellation of geometry and a similar obsession with an idea of ‘the infinite’ as ‘a suggestion’, implied by multiple variations of an evergrowing set.(2)

[1] P .96 Hart, Deborah. Imants Tillers: One World, Many Visions
[2] (Sellbach, Artist Statement 2010)

Wall combination #22

Wall combination #22 is a multi component artwork, comprised of 16 large paper triangles. These triangles have been worked individually. In this work we can see four hue variations of red, two variations of orange and five variations of blue. In addition to the variations in hue there are also differing degrees of colour saturation, opacity, transparency and coverage, due to the differing paint mixtures used to stain the paper.

The paper support is a high quality commercially produced printmaking paper- Somerset, Satin, 300gsm. This paper is produced from 100% cotton, contains a long grain direction and in production is buffered with calcium carbonate, taking the ph to between 7-8. (Talas, 2010).

For each work Sellbach creates individual mixtures tailored to her colour and opacity requirements. Using pre-mixed artist tube oil paints, dry pigment or a combination of both, Linseed oil (hardware sourced) and mineral turpentine are added as diluents, individually or in combination to each mixture. These combinations are then combined mechanically by hand in a bottle prior to application. Sellbach has noted that using a mixture containing mineral turpentine creates white rings around the edges of the oil while on the surface of the paper, before the mixture is rubbed into the paper, and that these rings are a permanent addition to the work (Sellbach, per comm, 2010).

These mixtures are interchangeable and dependent on the artist’s intention at time of creation. Examples of the possible combinations are as follows:

Oil paint/linseed oil/mineral turpentine
Oil paint/linseed oil
Dry pigment/linseed oil/mineral turpentine
Dry pigment/linseed oil
Oil paint/dry pigment/linseed oil/mineral turpentine
Oil paint/dry pigment/linseed oil

The paint mixture is applied directly to the paper when on a horizontal surface and rubbed into the paper fibres using a rag. The paint mixture penetrates the internal structures of the macerated paper fibres through a combination of adsorption and mechanically assisted penetration. This technique results in a combination of intense colour luminosity of the pigments that have been introduced into the structure of the paper support and increased transparency of the overall paper structure due to the addition of linseed oil into the paper fibres.

The penetration of the paint mixture by the artists into the paper support renders the support not merely a ‘carrier’ to the artwork, but a fundamental component - the artwork itself.

**Working process**

**Use of Colour**

Within the colour wheel, colours are categorised into primary, secondary and tertiary colours. Primary colours are identified as red, yellow and blue. Secondary colours are orange, violet and green and tertiary colours are mixtures of the primary and secondary colours in differing ratios (Ball 2001 p52). The mixing of pigments together to create alternating hues is described as subtractive mixing.

As Sellbach’s artist statement describes, the concept of geometric forms and sets can create an ‘ever growing’ and ‘infinite’ range of geometric possibilities. This concept we can also relate to her work in regards to colour mixing.

Primary colours are the most important as I never use the colours straight from the tube, I mix them until I am satisfied I have gotten the hue that I want. (Sellbach, 2010)

From this statement we can assume that the colour mixing is being undertaken from a visual and aesthetic standpoint rather than an exact percentage value. This mixing process has the possibility of creating minute changes in pigment ratio, hue and saturation. For this reason, the colour palette used in Sellbach’s works, whilst distinctive and seemingly easily categorised, is actually quite complex, carrying the possibility of an infinite number of minute changes in hue and saturation levels within her oeuvre.

In Wall combination #22 it is observed on a basic level that there is four hue variations of red, two of orange and five variations of blue. Without attempting to determine the exact pigment type, and discussing colour from a basic primary, secondary, tertiary level we can see in the artwork (from left to right) that:

**Reds**

The first red triangle is throwing slightly to the tertiary region of red-purple with varying degrees of saturation from low to high and has rendered the paper support semi-transparent to semi-opaque. The second red triangle is throwing towards the tertiary region of red-orange, has a low degree of pigment saturation, has rendered the paper support semi-transparent and has spotted areas of minimal and no pigment coverage due to mineral turpentine dispersing the pigment in areas.

The third red triangle is similar to the first in pigment saturation and transparency, though the hue appears to be throwing more toward the red side of the red-purple tertiary region than triangle number one. This could also be due to the angle of the light in the photograph.

The fourth red triangle is also a red throwing to the tertiary red-purple but has a high pigment saturation that also increases the opacity of the paper support to a semi-opaque due to pigment coverage.

**Oranges**

The first orange triangle is in the tertiary region of orange-red. There is a high degree of pigment saturation, rendering the paper support to a semi-opaque due to pigment coverage.

The second orange triangle is a similar hue to the first, though with a very low degree of pigment saturation in addition to little or no pigment coverage due to pigment dispersion through the addition of mineral turpentine.
Blues

The first blue triangle appears to be a blue throwing to the blue-purple tertiary region. It has variations of a low to medium degree of pigment saturation, there are areas of little to no pigment coverage due to pigment dispersion from the addition of mineral turpentine and the paper support is semi-opaque. In addition there is a slight tinge of green, likely owing to the yellow of the linseed oil combining with the blue pigment to alter the hue.

The second blue triangle is throwing to the blue-green tertiary region and has a similar degree of pigment saturation, support opacity and lighter areas due to mineral turpentine use. There is a more noticeable green tinge to this section, which is likely due to an increased linseed oil ratio within the mixture, this is also observed as the increased yellow bottom and right edge.

The third blue triangle is a dark blue, likely darkened through the addition of it's complementary, orange. This triangle has a high degree of pigment saturation; the support is semi-opaque and has areas of minimal pigment saturation due to dispersion by mineral turpentine.

The additional five blue triangles are of similar variants to those previously described.

Ball comments that the addition of linseed oil to dry pigment may cause a tendency for darkening or rendering the paint mixture semi-transparent when added to dry pigments (Ball 2001 p37) This statement could verify the ‘muting’ of the pigments, whilst still retaining their saturation, brightness and intensity.

Possible conservation issues

As noted by the following statement, the artist is well aware of the potential for colour change of the work resulting from degradation characteristics, such as alteration of colour due to aging of linseed oil:

Linseed oil is a yellowish colour. As the stained work ages, it gradually becomes yellower because of this. So if I make a blue, in 15 years it will probably resemble a bluish green due to the addition of the linseed oil in the staining mix. The work ages faster when it is subjected to air. If the work is sealed away somewhere dark or even just framed it won't age as fast. My mother has also worked with a similar technique and there are works of hers from 15 years ago or even longer and I can tell they have darkened slightly, but really it's only a slight darkening and slight yellow tinge.

When you stain paper or canvas without priming it will rot. With my mums work as a guide I can project that the work will be safe for at least 20 years. (Sellbach, per comm., 2010)

In this statement, Sellbach acknowledges the tendency for linseed oil to yellow with time, in addition there is a tendency for linseed oil to embrittle the paper support over time due to a continuing oxidation process; stabilisation through conservation grade framing and minimal handling of the work will reduce damage to an embrittled work. Hardware sourced linseed oil is likely to be less refined than artists quality linseed oil, therefore increasing the potential for yellowing.

Replication of colour due to deterioration or damage

If the need for conservation treatment involving colour restoration arose, treatment consideration would be informed by a number of factors such as:

- The artists’ intent.
- The artists awareness of the degradation potential of the materials being used
- The artists’ awareness of likely colour change due to ageing characteristics of linseed oil.
- The support being a significant component of the whole artwork.
- The use of colour and form being significant as the aesthetic and conceptual content of the work.

Taking these factors into consideration and the fact that this work is current and being made by a living contemporary artist, the collating of materials and processes relevant to this work as well as the artists requirements in regards to conservation treatments would be advised.

Deterioration due to embrittlement of the paper could likely cause tears of losses of support/media. The deterioration of these sections would significantly disrupt the visual reading of the work; therefore conservation treatment involving loss compensation would likely be necessary. Due to potential colour changes of the media owing to an increase of yellowing from aging linseed oil, merely knowing the original pigments would be insufficient for colour replication and visual colour matching would likely be necessary.
References


