

pattern languages

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Introduction

In what LeCorbusier described as 'an Homeric cleansing' of architecture Adolf Loos presaged the dominant 20th century attitude to decoration. His essay 'Ornament and Crime' states that 'As ornament is no longer organically linked with our culture, it is no longer an expression of [it],' and further claimed that the absence of ornament '[...] is a sign of spiritual strength'.

'Pattern Languages' was a companion studio with final year architects and interior designers. It aimed at redeeming ornamentation as an aspect of the built environment, recovering and reviving its potency as a conveyor of meaning and delight. Pattern and pattern-making were addressed in both theoretical and practical terms. The studio considered the theoretical and applied acts and arts of patterning on macro and micro scales, informed by historical and contemporary readings.

Intentions and means

The intention of this studio was to consider and confront existing attitudes to pattern and ornamentation in design and architecture, and understand them in relation to the historical continuum. Students were required to learn the geometries and mechanisms of repetitive pattern-making and then apply them to design processes and products in a manner which had meaning within contemporary society and culture.

The objective was to design, develop and document a highly resolved medium scale building — an international research centre for theoretical physics. Students were required to integrate applied and intrinsic patterning; understand and respond to the epistemological nature of the proposed building; and to express through the design the intrinsic characteristics of the field of study it housed.

One of the means used to consider contemporary expressions of pattern was through the micro scale of scientific observation (eg. fractals, Mandelbrot sets, electron microscopy etc.) and the macro scale of social and cultural

settings (habitational mappings and urban landscapes). The 'everyday' as a profound concept in theoretical and tangible societal structures constituted a critical underpinning of the programme.

In concert with the quotidian, a continued emphasis on the study of types as a visible and persistent form of patterning, and essential basis for contextualising design was maintained.

A further aim was to simulate the conventional collaboration between architects and interior designers in practice, offering the option of joint submission to those students who demonstrated collaborative skills and intent.

Syllabus

The programme had five main components:

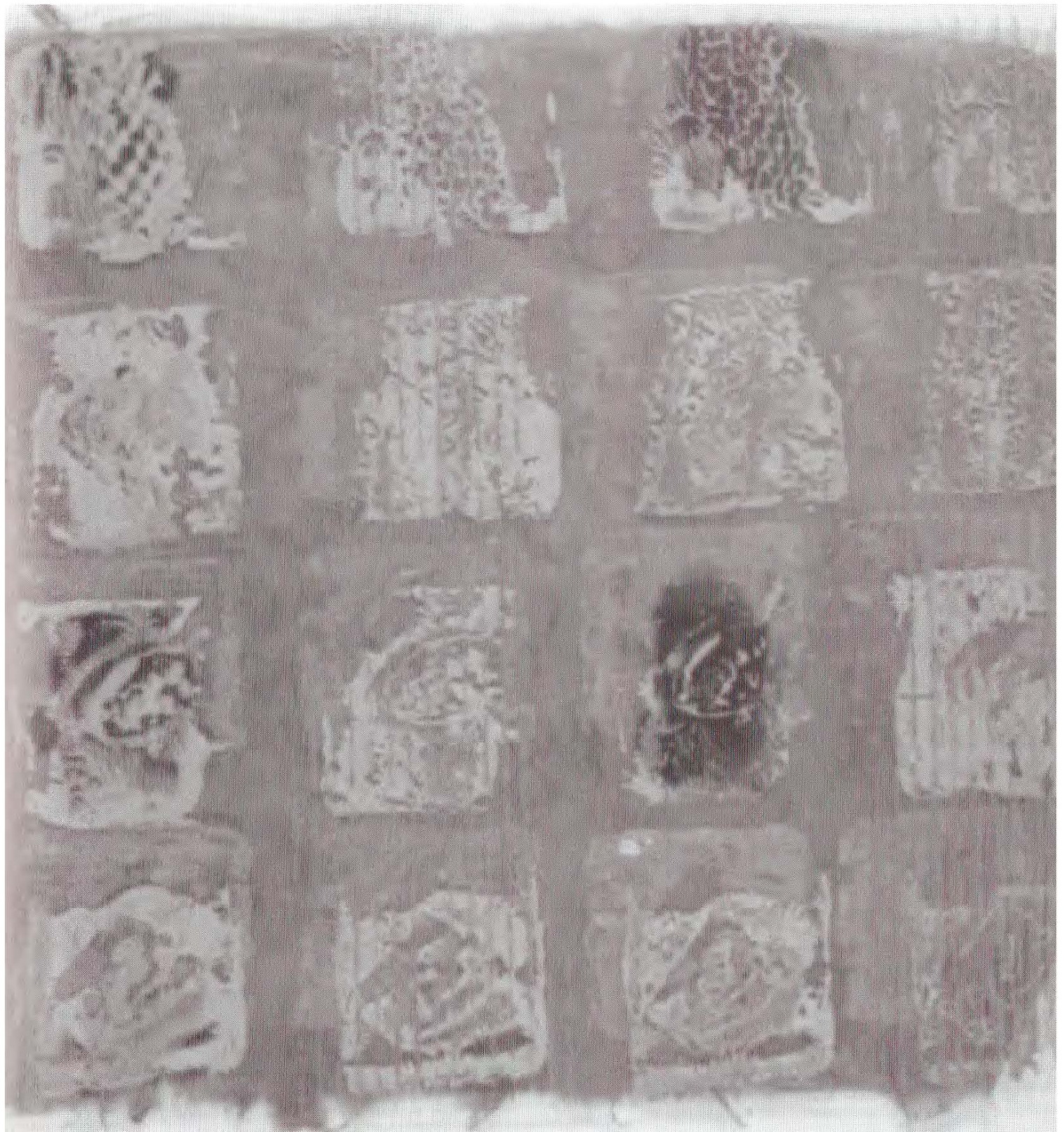
- Pattern Analyses: personal, actual and theoretical mappings translated into pattern files;
- Typology Studies: context analyses;
- Literature Review (and research document);
- Design Object: a three-dimensional container describing the central design ideas in abstract; and
- Design Building.

Process

Total number of students — 32 interior design students, 23 architecture students.

Programme duration — 13 weeks, nine contact hours per week.

Staffing — two full time staff members, four part-time tutors, each staff member contributing four hours per week each.





The various components (some running concurrently) were scheduled and weighted as follows:

•	Pattern analyses	10%	3 weeks
•	Typology Studies	10%	
•	Literature review, research report		13 weeks
•	'Partis' pack	20%	9 weeks
•	Schematic proposal	10%	3 weeks
•	Final proposal	50%	7 weeks

Assessment

Projects were appraised in three categories — at both interim and final stages — on standard proforma assessment sheets. They addressed Context, History and Theory, Technology and Composition. Additional foci were added to the mark sheets depending on the specific component and stage.

Moderation

The School adopts a process of moderation at the end of each semester for both disciplines and at every level to ensure equality of marking. All design staff and two external moderators from interstate universities participate in the review process which benchmarks the studio outcomes and standards.

Pattern Analyses

The intention of this series of exercises was not only to familiarise students with the mechanics of patterning but also to explore potentially meaningful sources and symbols for incorporation into the contemporary built environment. Through a series of lectures, workshops and site visits, students were introduced to the notion of mapping physical and invisible patterns and their potential for generating form.

left - melinda hill. design building, interior model

Students were asked to map cultural sequences and activities as a basis for spatial relationships and ornamentation — a mosaic of patterns, generated in turn by personal, actual and theoretical stimuli. For each given generator students were required to produce two panels: one using white material only; the other using prescribed colour, material and texture. Each panel was accompanied by an explanation of the patterning processes used with respect to the geometrical transformations employed:

- Personal

In the manner of the famous Rorschach psychoanalytical test, students distilled an ink blot into a bas-relief repetitively patterned panel, using white material for one panel and further amplifying the pattern by using colour selectively on the second panel. They referred to common mathematical transformations and symmetries which produce repetitive patterns.

- Actual

Based on a mapping of first hand observations of the daily, physical and emotional sequences, students devised motifs as the bases for their patterned panels.

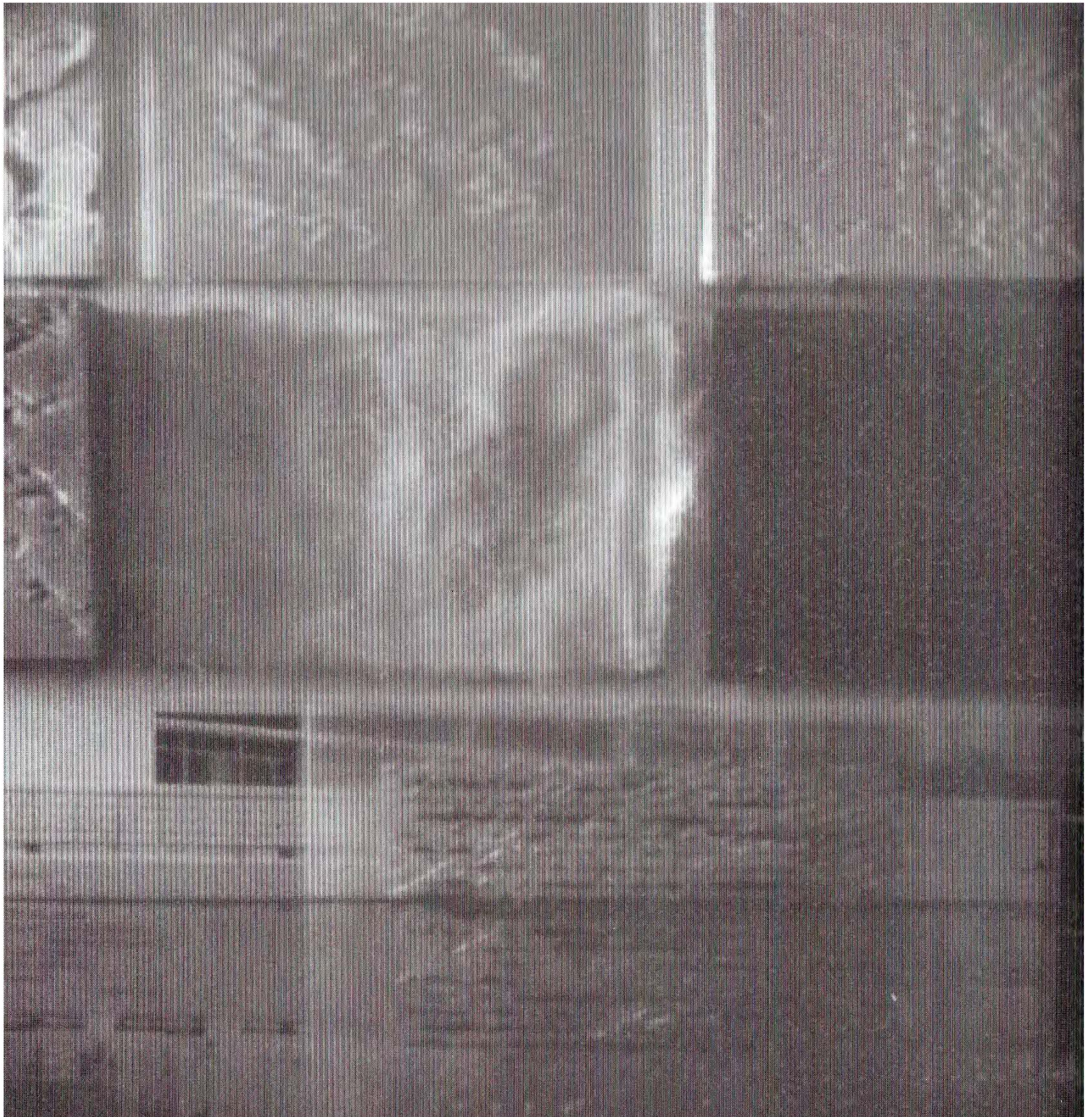
- Theoretical

Students used contemporary readings of significant ideological conditions in a field (or fields) which influenced their understanding of design (eg. cultural theory, film, music, the body, feminism, religion, technology and literature), to repeat the exercise.

Typology studies

Students analysed and recorded typological criteria of specific sites and contexts relevant to the building. These informed the later studio components — the 'DESIGN object' and 'DESIGN building'.





Design object — 'Partis' pack

Informed by both the pattern analyses and contextual and typological studies of the site, students designed and constructed a container of 'pattern languages'. In conceiving this object, they considered it as a tool to inform and engage the client, and to describe and evoke the salient qualities of the building proposal. It was to be portable and robust, proportional to the site or building, and no larger than a lap-top computer bag, employing three-dimensional material and spatial compartments and components. The 'partis packs' were intended to become the vehicles for the overarching design concept, and stood in place of lengthy text or dialogue to describe schemes. They addressed: patterns of spatial hierarchies, symmetries and balance; patterns of circulation to use; natural light; massing; repetitive to unique, unique to whole; additive and subtractive; plan to section; and structure.

Design building

An International Institute for Theoretical Physics

The building program was a hypothetical centre based on existing international precedents, a pre-eminent base for advanced research, symbolising the interface between the deepest and most fundamental explorations into the physical world and their application in material reality. The design presented the opportunity to express the transformation from the intellectual and conceptual to the tangible and physical realm.

In order to understand the nature of theoretical physics and the functioning of advanced research institutes, a number of specialist lecture sessions were held with a recent head of a mathematical physics department. Students also chose to explore the field through contemporary popular science writing (eg. *New Scientist* journals, books by Richard Feynman, Stephen Hawking, Paul Davies, etc.) and via the Internet.

The accommodation was to house offices, meeting rooms of various sizes, lecture theatres and auditorium. Students could choose between

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designing a new building for a prominent urban site or upgrading an existing campus building. An important criteria for the selection of this building shell was that it be devoid of decorative features, and that as an example of modernist design thinking, it resisted to some degree the idea of patterning. In this sense the studio suggested a redemptive role for the designers. The persisting modernist ideal has left a substantial stock of built places which, although physically sound, remain unpopular in contemporary culture for their lack of delight. And while the purist aims of modernism have lost currency within design discourse, there remains a prevailing tendency toward the design of minimal and sterile spaces, which this studio attempted to challenge.

Literature review

Each student was required to compile a literature review of the following themes:

- Ornament and Pattern
- Educational and Research Facilities
- Urban Design

While the reference list was extensive, students preferred the following texts:

- Alexander, Christopher, *The Timeless Way of Building, and A Pattern Language*, Oxford: Oxford University Press, 1977
- Colomina, Beatriz, *Privacy and Publicity*, Cambridge Mass., MIT Press, 1996
- Jencks, Charles, *The Architecture of the Jumping Universe*, London: Academy Editions 1997;
- *Signs, Symbols and Architecture*, New York: Wiley, 1980
- Jones, Owen, *Grammar of Ornament*, London: Day and Son 1856 and New York: Van Nostrand Reinhold Co., 1972 (plus check availability of CD-Rom format)

- Loos, Adolf, 'Ornament and Crime' in Conrads, Ulrich, *Programmes and Manifestos on 20th Century Architecture* trans. Bullock, M., Cambridge Mass.: MIT Press, 1970
- Weyl, Hermann, *Symmetry*, Princeton N.J. : Princeton University Press, 1952
- Mandelbrot, Benoit, *The Fractal Geometry of Nature*
- Blumenthal, Leonard M. and Menger, Karl, *Studies in Geometry*
- Sorkin, Michael, *Exquisite Corpse: Writing on Buildings*
- Thom, Rene, *Mathematical Models of Morphogenesis*
- Arets, Wiel, *Virological Architecture*

Review and outcomes

The programme was devised from the perception that both interior design and interior architecture remain somewhat in the hysteresis of modernism in avoiding pattern, decoration and ornament. Predictably, this was more evident in the architectural students, who needed to be cajoled much more than the interior designers to explore the field of two-dimensional patternmaking, and then to use those skills in the three-dimensional conception of spaces.

An encouraging aspect of the programme was the use of texture and colour as a basic design skill which students extended beyond the expectations of the programme, with some profound and evocative references to social habits and temporal conditions, new technologies and theoretical readings. Particularly surprising was the richness of macro scale and urban observations.

Equally successful was the production of the 'partis pack' as a metaphor and synthesis of ideological and philosophical aspects of the design process. Students initially found the interpretation of their ideas into a three-dimensional container to be a difficult exercise, as appropriate precedents were rare and the physical task of making the object demanded much of their time management and craft skills. However, the products were generally finely wrought, intimate and complex in conception, and

multi layered in their incorporation of two and three-dimensional formal spatial manipulations.

The prompts to examine pattern in the broader built environment and through cross cultural readings, stimulated an acute awareness of the role of visual richness and delight, which is intrinsic rather than applied.

Furthermore students became aware of the implicit gendering of design professions, and the art/craft/architecture interface, evident in various types of production.

The themes adopted by the students for the design of the spaces were observed to have parallels with the field of theoretical physics. Specifically, these parallels could be found in the interface between natural phenomena and intellectual manipulation; the use of intrinsic and applied patterning as a continuum and meaningful sequence; and a fascination with universal phenomena of light, gravity, time, magnetism, mathematical systems and technologically derived forms. They also took from the epistemological nature of the discipline, the excitement of exploring a new frontier, as few precedents for contemporary patterning exist in architectural practice.

At final year level it is important that studios are set with clear and complex planning and spatial problems, emphasising philosophical, theoretical and historical contexts. Pattern and decoration have been a neglected part of our culture despite underpinning much of the chronology of architecture. Their influence provides a fundamental way of reading and making order in the world. This studio reinstated the importance and resource of patternmaking and helped students realise there is no crime in ornamentation.

