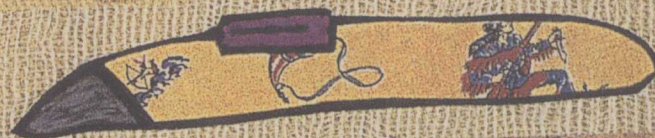


**Design** *and*

**Practice** *for*

# Printed Textiles



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**Design** *and*

**Practice** *for*

# Printed Textiles

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藏书章

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ANDREA MCNAMARA

PATRICK SNELLING

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# Glossary

Glossary words are indicated in the text by a **bold** typeface.

**acrylic** a pigmented polymer paint used by artists more than textile designers. Can be used to create thick impasto styles for working back into with a hard tool.

**airbrush** the application of ink or gouache through an airbrush using compressed air. Creates fine, controlled gradation of colour.

**all-over design** a design style that has connecting, irregularly occurring motifs within one repeat unit. Fairly close and compact in style, e.g. Laura Ashley sprigs of flowers.

**analogous colours** colours that are next to or near each other on any part of the colour wheel.

**backing cloth** the top layer on a print table, onto which fabric is stapled ready for printing. The backing cloth is easily removed for washing.

**batik** a traditional form of resist printing using wax.

**bleed** a term used in screen printing when the print crawls beyond the design area when drying and does not form a crisp edge.

**blends** fabrics with combinations of yarn types, e.g. cotton and linen.

**block printing** one of the first forms of repeat printing. Wood, copper and lino blocks are carved with the design in one repeat unit. Also used in this text to create a mark making process.

**blotch** a solid background area surrounding the motifs in the printed or painted design.

**border** a design that runs alongside and independently from the main body or field design. Bed linen, tablecloths, wallpaper, scarves and carpets incorporate borders within the design.

**bracket** a piece of metal that is screwed into the wooden frame of the screen for correct alignment with the stop.

**brief** information relayed by the client to the designer in written or verbal form.

**CAM** computer-aided manufacturing.

**CATD** computer-aided textile design.

**cellulosic fibres** natural fibres made from plants.

**challis** a light weight woollen fabric.

**check, plaid or tartan** a pattern of interlacing squares, lines and colour, usually woven but also printed. Yarn dyes are used to replicate these styles for printing.

**chroma** intensity or strength of a colour or hue.

**client** individual/s or company for whom you are doing the work.

**collage** an illustration technique where cut or torn paper is applied to a surface to create a pattern or image.

**colour chips** small areas of painted colours taken from the finished painted design. Informs the client or printer how many colours there are in the design.

**colour palette** the palette describes what sort of colours are used in the design.

**colour predictors** designers who make colour predictions. They forecast colours for forthcoming seasons or styles. The industry uses specialist prediction colour periodicals.

**colourist** person in the design studio or a freelancer who specialises in developing correct colours for a given market and season.

**colour separation** see **process colour**

**colourways** a term used to describe an alternative colouring of a design.

**complementary colours** colours opposite each other on the colour wheel.

**concept boards** visual reference for a client or designer to explain a development theme or concept. Can be constructed from magazine cut-outs, photocopies etc.

**constructed textiles** knitted or woven textiles.

**coordinates** a term used to describe two or more different designs that relate by colour or pattern.

**copyright** a term used to describe the legal rights of the designer when negotiating the selling of the design work.

**croquis** a word to describe a design that implies a repeat but is not painted up to final production specification. The word *croquis* comes from the French, meaning 'to sketch'.



**découpage** process of decorating a surface with paper cut-outs.

**degreasing** process to prepare the mesh for the photographic emulsion.

**design styles** in textile design, styles for categorising designs have emerged, e.g. floral, geometric, novelty, toile.

**detail paper** similar to tracing paper, used for tracing the design to put into repeat.

**devoré style** technique of printing that uses an acid print paste on cellulosic and synthetic blended cloth. The cotton is burned out leaving a transparent area where the design was printed.

**directional, non-directional** describes the direction in which a style of pattern repeats, i.e. vertically, horizontally or both. Furnishing fabrics are often directional (can only be used one way), while fashion fabrics are more economical to use if they are non-directional.

**discharge** a printing style where a special print paste removes the colour from the printed area on the base cloth.

**fashion fabrics** fabrics that have specific qualities of weight and texture suitable for garments. Design motifs are usually smaller and in all-over repeat styles.

**finished design** painted design work that is in accurate repeat, to scale, in full colour and can be used by the printer for production.

**flat bed screens** flat bed printing uses flat screens.

**freelance** a term used to describe designers who are self-employed and work for a number of different clients.

**frisk film** a semi-adhesive plastic film used to create stencils or masks around motifs on paper.

**frottage** a technique where an image is transferred onto paper by rubbing over with dry media.

**furnishing fabric** fabric that has specific qualities of weight and texture suitable for furnishing. Designs are usually larger in scale and have borders with specific repeat sizes.

**gouache** or designers' colour: a good quality paint used by professional designers. It is widely used in textile design for finished artwork because it gives good flat colour.

**halftones** the process of converting tonal areas into dots, e.g. newspaper photographs.

**hue** refers to the pure colour, e.g. red

**in-house designer** a designer who is employed and works in a company studio.

**Indalca or Guar gum** a thickener used for printing discharge and devoré styles. Also used for printing woollen fabrics.

**intensity** describes the strength of a colour, i.e. whether it is dull or bright.

**intercut** a technique for cutting out and replacing problem areas in a design.

**'knocking off'** copying another design that already exists in production. Copyright laws forbid this unethical practice.

**layout** an arrangement of motifs in full repeat. The size of the layout relates to the dimensions of the screen.

**Manutex RS or F** An alginate. When mixed with water it is used as the printing paste for dyes.

**market** areas of commercial activity that are targeted by textile designers for selling work.

**mark making** methods of applying different media onto a surface with tools.

**masks** used to protect an area while colour is applied around it.

**masking fluid** liquid latex applied with a brush. Used as a resist.

**media** all types of wet and dry art materials.

**monochromatic** colour scheme where colour stays the same but values change from light to dark.

**monoprint** any printing process that results in one print.

**ogee** a traditional 'onion'-shaped design style.

**opaque base** a term used to describe media that does not allow light to pass through them. Brown opaque is used for painting film positives; gouache is used by designers because of its opacity as solid colour; opaque printing ink is used for printing lighter colours on top of darker ones.

**pattern** a term used to describe a repeating set of motifs.

**percale** denotes the density of a closely woven cotton fabric.

**photocopy acetate** a plastic acetate film used in a normal photocopier to copy from originals onto film for use as an overlay on artwork or for exposing onto a photographic screen.

**pinholes** small holes that occur on the coated area of the mesh after exposing the screen.

**polychromatic printing** refers to a one-off printing technique that uses reactive dyes.

**process colour** the photographic separation of colour into cyan, yellow, magenta and black. These four colours, when mixed in certain ratios, can make any colour



within the colour spectrum. The technique is more common with paper printing.

**process white** A high solids paint used for wash-off technique and used to touch up photographs.

**protein based fibres** fibres made from animal hair or silk worms.

**proving the design** checking the design to make sure it repeats.

**regenerated cellulose fibre** fibres made from wood pulp.

**registering your screens** the design must be squared to the rail prior to coating.

**registration rail** a metal rail running along the length of the print table. Used in conjunction with stops and brackets to print fabric in repeat.

**registration stops** metal devices that are placed and screwed onto the rail at exact intervals for repeat printing.

**repeat** images or motifs that recur to create pattern. Putting a design into repeat is the process of accurately drawing up the design ready for production.

**repeat mirror/glass** a tool for visualising a design in repeat.

**repeat size** the dimensions given by the client or printer to the designer for finished artwork for production.

**repeat systems** traditional design systems used by textile designers for putting designs into repeating formats.

**repeat unit** an area of the design that indicates the boundary of repeating motifs.

**reprographic camera** a camera used to convert line and halftone design work onto film for textile screen printing.

**resist** a substance used to block the application of wet media.

**resource book** refer to **visual diary**.

**rotary screens** printing with rotary screens is a continuous production printing system, using cylindrical rather than flat screens. The rotary screens do not move, the cloth is passed underneath them on a moving belt.

**ruling pen** a tool used by designers to create yarn dyes and fine lines using gouache paint.

**saturation** refers to the intensity of a colour; whether it is dull or bright.

**scanning** a scanner is a laser device that can scan artwork with light, then convert the light into digital information, which is stored in the computer.

**selvedges** woven strips running along both sides of the fabric; they reinforce the fabric edges.

**shades** colours with black added.

**silk screen positives** film produced by hand or camera ready art for exposure onto a screen.

**spot repeats** a traditional form of repeat based on a sateen weave structure.

**stencils** paper or film that is cut or torn and colour is applied within the area.

**story board** a finished version developed from a concept board. This is the product shown to clients to sell design work or to show how a design works in an illustration format.

**stylist** a designer who coordinates and arranges themes and directions for other design team members. Can also be freelance.

**sublatic printing** or transfer printing disperse dye is printed or painted onto paper. The design work is transferred by heat. Used on synthetic fibres.

**surface pattern design** a term used to describe other forms of two-dimensional design, e.g. gift wrap, tiles.

**swatchbook** a range of printed fabrics, all cut to the same size and presented in a book format. Shows printed designs that coordinate or are in colourways or are on different fabrics.

**swatches** pieces of fabric used for matching colours in a design, or a piece of printed or other fabric used on interior or fashion story boards.

**swiss repeat** another version of a full drop design.

**technical drawing pen** a professional drawing tool for creating accurate line work in a variety of widths.

**tints** colours with white added.

**toile** a traditional 18th century fabric incorporating a pastoral or pictorial narrative.

**tones** colours with grey added.

**tram tracks** unintentional lines or gaps formed by the negative spaces in the repeating design.

**transfer printing** see **sublatic printing**

**translucence** refers to the quality of transmitting light. For example, ink is translucent and gouache is not.

**twill** a constructed cloth creating diagonal lines.

**value** how light or dark a colour is.

**visual diary** a resource book kept by designers and students in which ideas, sketches, fabrics, colours and magazine cut-outs are kept for reference.

**wash off** an illustration technique that uses permanent ink over a resist of process white paint.

**yarn dyes** simulated weave patterns using ruling pen and spray effects to create warp and weft characteristics on paper.

# Contents

Acknowledgments	v
Glossary	vi
Introduction	1



## **Making a start**

3



## **Design resources**

13



## **Colour**

27



## **Mark making: materials and techniques**

51



## **Computer-aided textile design**

83



## **Pattern**

99



	<b>Finishing and presenting designs</b>	143
	<b>Fabrics</b>	157
	<b>Setting up a print workshop</b>	189
	<b>Printing fabrics: preparation and techniques</b>	209
	<b>Alternative methods for producing printed textiles</b>	251
	<b>Recipes</b>	273
	<b>Careers in textile design and related industries</b>	291

## Appendixes

<b>A</b>	Troubleshooting: coating and exposing screens using the photographic process	299
<b>B</b>	Troubleshooting: common printing faults	301
<b>C</b>	Troubleshooting: using reactive dyes	303

	Bibliography	307
	Suppliers of equipment, inks, dyes and printing auxiliaries	308
	Index	310



# Introduction

*Design and Practice for Printed Textiles* was written because of a perceived absence of a text that covers the entire process of design for printed textiles taken right through to a conclusion of fabric. The approach is from a design perspective, within the textile industry; beginning with the development of ideas, and what to do with them, through the use of mark-making techniques and pattern formation. The book then looks at the processes through which those ideas can be translated, through the medium of print, onto textiles.

This book has particular relevance for students and teachers of the VCE. The structure of the book, the methods of research, and the exercises directly relate to or can be adapted for use in study designs within the subjects of Art, Studio Arts, Materials and Technology, and Technology, Design and Development. Anyone who wishes to know more about design processes, and how ideas can be applied to fabrics, will find this book useful — designers, craftspeople, artists, and those who are interested in finding out 'how to'.

The discipline of 'textiles' has many outcomes, only one of these is printed fabric. Knitted and woven textiles are as important in everyday life as printed textiles. Many of the design processes described are applicable to constructed textiles — the resourcing of images and ideas, the selection and evaluation process, the conversion of ideas into pattern. The difference lies in the production of the fabric, and the limitations of process that affect designers.

It is not suggested that successful designers for printed textiles must be able to produce printed fabric. It is, however, important for textile designers working in industry to have an understanding of the processes involved in the production of printed fabric. The print processes described are, in principle, those used by industry, although where, for example, the process of handprinting is described, industry is mechanised. The technical information is presented so that processes can be done on a limited budget, without sophisticated equipment. The aim is to encourage experimentation by designers, through the translation of ideas onto fabric.









# Making a start

**Helen Wilson**

Designer

*Floral design painted up in  
repeat, using gouache.*



**Design** is the organisation of parts into a coherent whole.

**Design** is creating order out of chaos.

(Marjorie E Bevin, *Design through Discovery*)

**design: 1** The general form or composition of any building or work of art.

**2** In applied art, the shape given to any object of use and also the way in which it functions.

**applied art:** Art which is essentially functional, but which is also designed to be aesthetically pleasing (e.g. furniture, metalwork, clocks, textiles, typography).

(Thames & Hudson *Dictionary of Art Terms*)

**T**he implication in the above definitions is that design is associated with function. Designers have to be aware of the end-use (or function) of their work.

It doesn't really matter what area we talk about when looking at the link between form and function, which is called design. When designing, for example, a new chair, which they hope to sell, furniture designers have to consider several things:

- where the chair might go — in the home, the office, a corporate foyer
- who might sit in the chair and for how long
- whether the chair is stable when someone sits in it

- the surface of the chair — wood, metal, fabric — and how appropriate it is for the environment of the chair
- current trends in furniture design.

Of course, designers may choose to ignore all of these considerations and design a work of art that happens to be a chair — high on aesthetic value and low on functionality. This is only a problem if the designer hopes to sell that chair as *a chair*, and not as a piece of art.

Consumers have certain expectations about a chair such as that it won't fall over or break when you sit on it, and won't give you a bad back if you sit in it for two hours watching TV. If the chair is to have only a decorative function, then other

**The professional designer responds to the marketplace, to the requirements of industry, to the needs of the manufacturer and sales personnel, and to the demands of the consumer.**

(Richard Fisher & Dorothy Wolfthal, *Textile Print Design*, preface)



criteria apply: How does it look? Does it suit its proposed location?

The design of the chair will be assessed according to the context in which it is placed. If it is in a furniture retail outlet, it is expected to be functional; if it is in a gallery, it will be judged more on its aesthetic merit. Ideally, the design would be a union of *form* and *function*. Textile designers' considerations are less easily defined. The variety of outcomes for textile design and the multitude of products that use print as a covering (whether functional or decorative) require that textile designers are very versatile, or carefully define the area in which they will specialise. Textile designers could be designing T-shirt prints for a surfwear company, bed linen for department stores, souvenir teatowels for the tourist market or exclusive prints for top-of-the-range homeware. Any surface that is decorated in a patterned format is appropriate for textile design: tiles, wrapping paper, laminex, Con-Tact, wallpaper, carpet, to name a few. Textile design is distinguished from other design disciplines by the repetitive nature of the designs. Commercially produced fabric is often in 3000 metre minimum runs of continuous pattern. The design is produced so that it will work 'in repeat', which means that it will join up and appear continuous. This is a skill peculiar to textile designers. Graphic designers or artists might have ideas for fabric designs but it is unlikely they would have the skills to put that idea into repeat, that is, into a format that makes the idea suitable for fabric.

Textile designers have to be aware of the chain of processes through which the design will go before it appears on fabric although often they will be quite removed from that process.



These croquis designs were developed for a design brief for floral bedding.

**Alex Lawrance**

2nd year student, RMIT  
Gouache, sandpapered paper



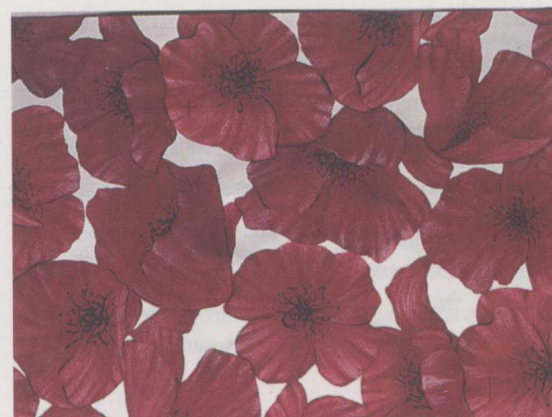
**Alex Lawrance**

2nd year student, RMIT  
Gouache, pencil, sandpapered paper



**Jason Kenah**

2nd year student, RMIT  
Gouache



**Jason Kenah**

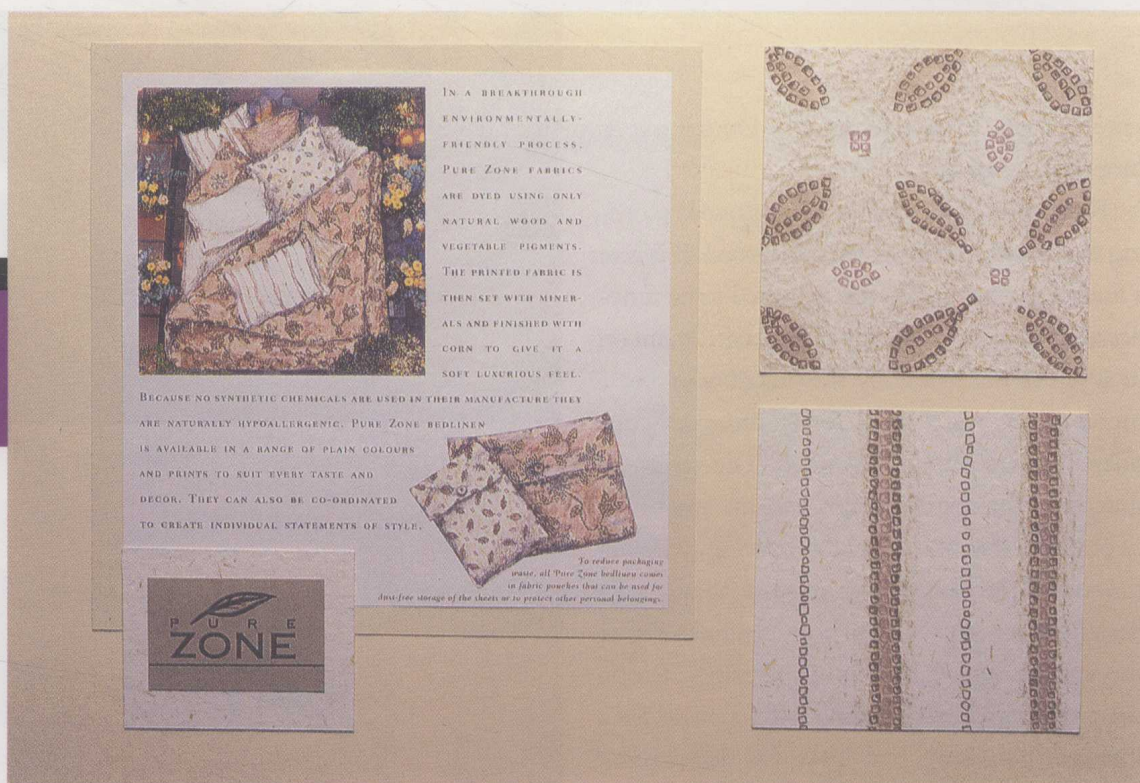
2nd year student, RMIT  
Gouache, ink, pencil



Kate Dorahy

3rd year student, RMIT

Story board to present croquis designs for bedding in a particular market.



Pro-duction of fabric with Australian print designs often takes place offshore and **freelance** designers have little to do with production. However, the more knowledge designers have of the production processes, the more saleable their work is likely to be and the less subject to interpretation by the production house that converts their design into printed fabric.

Textile designers can sell **croquis** (pronounced croakie) designs (*croquis* is a French word meaning a sketch, and has come to apply to a design that is not in repeat). Croquis are ideas for designs, to which more work will have to be done before production takes place. Designers may be required to paint up the croquis into a finished design so it can be produced. Sometimes this job will be handed over to the in-house designers of the company that bought the croquis or to the design team attached to the factory that will print the fabric. Some textile designers are better at having

ideas for fabric and others are better at interpreting those ideas into patterns suitable for production. Another role traditionally given to textile designers has been that of '**knocking off**' designs, from swatches of fabric or magazines — a particular European trend might be perceived to be the one to follow for the next season, and the shortest road to success is to copy the designs. Strict **copyright** laws now mean that designers, while influenced by overseas trends, must ensure the originality of their design.

Awareness of the **market**, manufacturing needs and consumer demands has to take place at some point. It might be when the design manager or art director hands down the design brief to the design team or when the freelance designer is producing designs to take around to companies to sell or when the company's **stylist** is assembling the range of designs for a collection that is to be taken through to production.



However you look at it, 'The textile designer is a link in an industrial production line.' (Susan Meller & Joost Elffers, *Textile Designs*)

'Designer-maker' is a term coined in the 1990s to apply to those (relatively few) people who design and produce work within their chosen discipline. They are still involved in an industrial production line, but it is one over which they have complete control.

## **Design is appraised in terms of its suitability for a defined purpose.**

A **brief** is the term used to define what is required of designers. It gives the boundaries within which the suitability of the design will be assessed. It is the document that contains instructions to designers. Often, design briefs are verbal and may be given over the phone — when this happens, designers should make their own notes immediately, so they have something to refer to.

## **Design is about communication.**

The **client**, or the people for whom designers work, must communicate what they want. Then designers visually communicate their response to the brief, in whatever form is specified: rough sketches, croquis designs, colour samples. If the

brief is for a product that message will eventually be communicated to consumers who buy it.

## **Complete artistic or creative freedom is some thing that always appears to be enviable.**

For experienced designers, such freedom may well be the case as they have probably built up a 'style' or preferred way of working, have favourite themes to work with, or have been given the job because the client likes their work.

When designers start out, complete freedom can be daunting; a good place to start is to define limits by writing a design brief. If designers are working freelance, or developing a folio of work to be shown to a variety of clients for possible sale, then they might write their own brief. They still need to think about potential outcomes for their designs, colour trends and so on.

At the start of a career, designers are asked to do fairly specific work, which might be as basic as painting up someone else's design, in different colours. Sooner or later, designers have to deal with an audience, whose reception of their work might determine its success or whether a design is bought and taken through to production.

The briefs given to textile designers are many and varied. The following real-life examples give an idea of the scope for design projects, and also the variety of limitations imposed on designers.

Lewis F Day in *Pattern Design* wrote that 'The very strictness of such bounds is a challenge to invention'.

## Susan Banks

Susan Banks, a self-employed textile artist, was commissioned to design and produce a wearable fashion scarf and tie for the Royal Australian Chemical Institute. The brief was to develop designs representative of the chemical world. In order to do this, Susan asked the clients to provide visual information that they felt represented their members. From this, a number of options were shown to the clients, and a design direction established. This resulted in the development of the finished fabric design, which incorporates the Institute logo, an Ehrlenmeyer flask, combined with a hexagon, symbolic of the basic structure of organic chemistry. The main limitation was that the design was to be handprinted. The process of design development through to finished product took about four months.

## Private Collections

The brief was given to Helen Wilson, a freelance textile designer. Private Collections is a bedding company with products designed for the middle market. Helen was asked to develop a floral design based on exotic flowers to be used in quilt covers, sheets and pillow cases. The brief provided by the client stated that the number of colours was not to exceed ten, and the quilt cover was to be a large scale all-over floral for the top, and a scattered floral with a **border** for the reverse. Helen has worked in the bedding industry for some time, so she was aware of the formats used for design layout; the repeat was to be standard rotary size of 64.2 cm. Colours were to have a strong, rich feel, in keeping with colour forecasts for bedding.

Helen chose to use books as the reference for the floral motifs, including *The Complete Book of*

### Susan Banks

#### Designer

*Handprinted fabric, reactive dyes. The design was developed for the Royal Australian Chemical Institute.*

