MODERN UPHOLSTERY
TECHNIQUES AND MATERIALS

Julian Pratt
ISS Institute/TAFE Fellowship

Fellowship funded by ETTE, Victorian Government
Furniture Upholstery
Julian Pratt

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1.0 Acknowledgements

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Fellowship sponsor: Office of Employment, Training and Tertiary Education (ETTE)
Assisting bodies: Furnishing Training Victoria and Moran of Melbourne

2.0 Introduction

2.1 The Australian Context

Due to the size of the local furniture manufacturing market investment into new and innovative techniques and equipment is very restrictive. Upholstery is the last area to be developed due to the production technologies and a lack of training in new skills. The recent CSIRO report ‘Manufacturing Technologies’ has identified the need for the industry to develop a manufacturing methodology instead of the cottage industry approach if it to survive. To enable this education needs to prepare graduates with the correct skills in modern production techniques and equipment.

The Australian furnishing industry aim over the next 5 to 10 years is to develop capacity to export to all major world markets. The main reasons for this are:

a. To combat the inroads imports are making into the domestic market, especially in the upholstery sector due to tax inconsistencies.
b. Larger markets enable economies of scale thus allowing better product development and production processes and giving greater returns.
c. Export levels are incredibly low compared with overall manufacturing volumes. Therefore, as competition increases and dollar values are competitive the industry has identified an opportunity to become a sustainable industry from a small base.

The usually common held belief that Asian countries dominate the import market is incorrect within the furnishing industry. Italy has the largest import market share. Large manufacturing bases, such as Natuzzi, in Europe export large volumes of upholstered furniture to Australia.

In Australia upholstery is a very labour intensive operation and requires a high degree of materials knowledge and skill to produce quality products. Even though upholsterers can earn a good wage there is a shortage of qualified tradesmen and a lack of people wanting to take up the three-year apprenticeship.
2.2 International Specialised Skills Institute Inc.

The International Specialised Skills Institute Inc. fills gaps in industries and enterprises where the means of doing so are not available through government programs or Australian TAFE institutes and universities. Operations are directed towards rebuilding specialised skills and knowledge, which are disappearing, or have been lost and brings leading-edge technologies to Australia. The way in which this is achieved is by building global partnerships through the Fellowship program, then the fellow sharing what he/she has learnt overseas through education and training activities – one fellowship; many benefits.

2.3 Organisations

Over the previous 10 years the major industry body for the furnishing industry was the Furnishing Industry Association of Australia. It is an organization which is state driven with a national representative body. With the commercial and nursery furniture sectors setting up their own organizations under the national banner the industry has further fragmented. Over the last two years the FIAA national has tried to unify the organization to respond to the federal governments ‘Action Agenda for the furnishing Industry’. The Federal Government has pledged 60 million dollars in funding to improve the ability of the sector to compete against aggressively priced imports. The major areas of the agenda were building capability, building capacity, innovation, market access, IT and the environment.

There are only two TAFE Institutes who offer an upholstery apprenticeship in Victoria, Holmesglen Institute and Kangan Batman Institute. Holmesglen have had to reduce their teaching staff down to only one and half teachers due to the lack of apprentice enrolments even though the industry has indicated a shortage of upholsterers and the FIAA and ITAB are actively promoting the vocational pathways to school leavers (see Appendix 1).

There are no providers of furniture design for upholstered furniture in Victoria. In a recent survey of the members of the FIAA Designers Collective not one is engaged in designing upholstered furniture. This illustrates two of the biggest areas of concern in this industry sector, the lack of design and development input into the production of upholstered furniture in Australia and the prevalence of Euro centric coping.

Materials research has mainly been undertaken by individual manufacturers. The foam market is controlled by two main players, Dunlop Foams and Joyce in Victoria. Foam is a large component in the cost of an upholstered unit therefore this market is very competitive. This has given rise to lean production and innovative products for the market. Recent introductions have been high resilient foams, anti-dust mite foams and fire retardant foams. In the fabric and leather area there has been a consolidation of suppliers and split between the contract (commercial) market and the domestic (retail) market. There are a few crossovers between the sectors but generally the main factor is price and wear of the product. Many of the innovations overseas have yet to appear in Australia due mainly to cost consideration even in the contract market.
Environmental considerations in the furnishing industry only extend to waste minimisation in the domestic product area. Yet in the contract product market government pressures within large contract have seen Life Cycle Assessment a common design methodology and packaging take back a major consideration. Even so we are well behind companies like Herman Miller in the USA when it come to environmental impact of production and product.

Major manufactures using modern upholstery methods in manufacture are limited due to onshore focused sales creating a small market size. Several manufactures such as Stem Industries have imported modern techniques and materials. These companies are nearly always in the contract market due to innovation in design and manufacturing a driver in sales.

The major controlling factor in the domestic market in Australia is the dominance of a few retail companies and buying groups driving the direction of product output. Branding is being suppressed and price is crucial in buying decisions.

2.4 Fellowship Details

The ISS Institute/TAFE Fellowship was awarded to Julian Pratt to undertake a program of study in the furnishing industry by visiting training and industry facilities in Italy and the United Kingdom. The Sponsor of this fellowship was the Office of Employment, Training and Tertiary Education.

2.5 The Skills Gaps that were researched were:

- Cold foam production
- Injection moulded plastic frames
- Material and tool development and substructures
- Modern production processes and associated safety standards
- Environmental and sustainability issues
3.0 The Fellowship Program

3.1 Introduction

This fellowship program was split into 3 parts, initial contact visit to the UK, Germany and France as part of a personal visit, the main study tour program visiting the United Kingdom, the Netherlands and Italy and thirdly an Australian component on return.

3.1.1 Initial Contacts

In December 2001 I traveled to Europe to investigate possible companies and organizations to visit in March 2002.

In this initial visit I cemented contacts with:

- The Design Museum in London – Collaborative teacher workshops with designers and industry. See Appendix 2
- David Grimshaw, Lecturer at Manchester Metropolitan University and a practicing furniture designer working in the upholstered manufacturing area.
- Peter Cornish, Head of School High Wycombe, Buckingham Chilterns University College.
- John Highman, Director of Ligne Roset UK.
- Gerard Liaze, Director VIA
- Mark Robinson, English Designer working in Paris on VIA Scholarship.
- Baleria Spa, Italian manufacturer of cold foam upholstered seating.

3.1.2 Main Body of Fellowship

Study tour of United Kingdom, Italy and the Netherlands.

United Kingdom:

- SCP – London, Sheridan Coakley retailer of up market domestic/contract upholstered furniture with designers including Jasper Morrison, Matthew Hilton, Tom Dixon and Jonathan Woodgate.
- Thetford Designs – Manufactures of SCP furniture under contract to see production and prototyping of new furniture products.
- Hitch Milius – Director, Tristram Milius, producers of upholstered furniture with a high design focus. Products were featured in Home Sweet Home a touring exhibition of Australia in 2002.
- British Vita – Foam products manufacturer, the largest in the United Kingdom.
- KLC – Simon Cavelle, Director of private Interior Design School in London
- Design Museum – Creativity and design teaching and historical context.
France:

Ligne Roset – Cancelled at last minute due to companies involvement in the Milan International Furniture Fair. [www.ligne-roset.com](http://www.ligne-roset.com)

Netherlands:

Trespa – Manufacturer of quality exterior and interior panel products where materials, innovation, lean manufacturing, environment and supply chain were investigated. Replaced Ligne Roset visit. [www.trespa.com](http://www.trespa.com)

Italy:

- B&B Italia – production facility using cold foam construction.
- Baleri Italia – Producer of cold foam/block foam construction.
- Biesse – Pesaro, CNC manufacturing methodology and technology.

3.1.3 Australian Context

Opportunities and availability of products, technology and equipment:

- Materials – Fabrics, Foams
- Equipment – Major suppliers
- Methodology – Automotive Upholstery and design for modern production.

3.2 Host Organisations:

There was no one organization that hosted me on the study tour of Europe but I based the tour from my parents home in Milton Keynes in the United Kingdom. Close to rail and airports allowed for savings in accommodation and flexibility in program. With Internet and phone access allowed for communications with possible and confirmed visits.

A special mention should be made here for the support I received from Sir James Gobbo AC CVO for establishing an opportunity to visit the Italian furniture factories and Marinda Smith for all her assistance across the miles. It is almost impossible to see inside companies like B&B Italia. I would also like to thank Dr Michele Perini the Managing director of SAGSA and the head of ASSO Lombardo and his assistant Susanna Monaldi, without their help and support the work Sir James Gobbo had done would have been wasted, Thankyou.
3.3 Program Content:

3.3.1 Initial Contacts

In December 2001 I traveled to Europe on a personal visit with my family to spend two months visiting family and to investigate possible companies and organizations to visit in March 2002. I also visited two major international furniture shows; Paris and Cologne. The Powerpoint presentation of those shows are included on the CD Rom accompanying this report.

Paris

It was interesting to see the difference in styles from the two shows; the French was very decorative while the German had a lot more functional element. Several companies showed at both shows, which was an incredible feat of organization, as the shows were back to back.

Paris had a great section on new material or materials used in a new way sponsored by VIA. Acrylics and other plastics were being explored. VIA in conjunction with major materials manufactures including Dupont sponsored 20 projects for young designer to product new furniture.

VIA had created a tent in the middle of the exhibition in which it could engage the public in the ideas it was moving forward with. This is were I met Mark Robson, an English Designer who was living in Paris and had developed a lounge chair made up of a new material from Dupont – Elastomer. It had been developed by Dupont for Ford in America in response to the problem American’s were wearing out the normal webbing in their Car Seats. The material has potential to be moved over into the contract furniture market easily. There were several other new products shown in the new designers section with interesting uses of upholstery ‘Pouf’ by Laurent Fontaire and Reva made from polyether foam and made of foam and Kvadrat wool/felt fabric.
The Eurosit Chair. [www.Bobseat.com](http://www.Bobseat.com)
This chair has been designed in collaboration with students of the Institut Superieur de Design.

Based on deconstruction the design of the Bob seat is clean and efficient on materials. Didier-Arnaud Borea the chief designer demonstrated how the interchange of part enables flexibility in product range without extra tooling. Didier said good design in France is about producing something new with a reference to the past for the consumer to link to.
Other interesting developments:

Foam cutting of mattresses and Gel seats: Emmegi, Italy

Cologne

The Koln International Furniture show ran straight after the Paris's Salon de Meuble. I spent only a day quickly looking if any furniture company looked good to visit in March. The three main upholstered furniture manufacturers there worth pursuing were Morroso with their Victoria and Albert range, Baleri with a range of formed foam pieces and plastic chair form Artelano.

The three images in fig 1.8 show modern upholstered furniture all using modern materials except Erik Jorgensen is using Charles and Ray Eames's fabric designs from the fifties and sixties. Baleri had good information about the construction of upholstered furniture using a mixture of cold foam and block construction. This will be covered later in the main body of the report.
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People:

David Grimshaw - Lecturer at Manchester Metropolitan University and a practicing furniture designer working in the upholstered furniture. www.grimshawdesign.co.uk

David studied 3D Design Degree in (Wood Metal Ceramics) at Manchester Polytechnic. After finishing in 1989 he set up G.A.P. Design Associates with myself and Guy Avery. In 1992 he set Grimshaw Design Associates working with large and small manufactures such as Allermuir, Davison Highley, HNB, Aero and Viaduct, with clients including Lloyds Bank, Harrods, BBC, McDonalds, Abbey Road Studios and British Telcolm. David started teaching at Manchester Metropolitan University 3 years ago.

He has a good understanding of the contract and domestic furniture market. His comments on the manufacturing of furniture in the modern global landscape are below:

- Designers need to understand the whole workings of a company from the production methods to the sales and marketing to develop suitable designs for the company.
- Designer should not be an artist separately coming up with an idea.
- Talking to the MD is not always the best way to find out what is really needed.
- Manufacturers must be flexible in their range of products.
- Large runs are no long viable.
- Quick lead times and innovation are the key.
- Furniture manufacturing has been decimated in the UK in the late 20th Century with very few large producers left.
- Nearly all upholstered furniture made in the UK uses traditional skills and techniques even ‘designer up-market’ products.
- Recommended me to contact Tristrum Mylius as he was a leading designer in upholstered furniture.

Peter Cornish - Head of School High Wycombe, Buckingham Chilterns University College.

High Wycombe is still the centre of furniture manufacture in Britain with manufactures such Ercol still closely linked with the college. The school offers a range of qualification form trade skills through to Phd research.

Peter Cornish established himself as a top maker of furniture in the 70’s and 80’s by setting up a production facility for Ligne Roset with John Highman the now Managing Director of Ligne Roset UK. Peter considered Ligne Roset as probably the best example of modern manufacturing of upholstered furniture. Roset is very innovative in it’s production techniques and will readily develop production machines around the product rather than the other way around. It’s product range is distinctive and is very difficult to copy.

When asked about innovative materials use Peter suggested I investigate Wilkham in Germany and FIRA (Furniture Industry Research Association).

Peter Contacted John Highman for me and we arranged to meet at the Salon de Meuble in Paris.

The Design Museum in London – Collaborative teacher workshops with designers and industry. See Appendix 2 and main study program.
3.3.2 Main Study Program

Sun 24th March

Arrived at Heathrow Airport London 6.30am
Luggage lost due to internal system failure
Picked up by parents and drove to Milton Keynes

Mon 25th March

Train to London

9.30am Meeting with Jane Snelling, Education Manager, Design Museum to investigate the relationship between education, design and industry in the United Kingdom.

Jane Snelling was trained as a teacher in technology and design (resistant materials). The Design Museum, [www.designmuseum.org](http://www.designmuseum.org) was set up by Terrance Coran in the early nineties and is a non-profit organization educating and informing Britain about design. It runs exhibitions and workshops that support both the Design and Technology and Art and Design curricula. The museum has set up “Designers in Action” workshops for teachers to provide knowledge and understanding of design in the “real” world. The workshop has been considered a success (see Appendix 2) as it shows professionals produce designs. It is focused on creativity, thinking skills and lateral thinking not design methodology.

The museum has produced 4 resources packs, Chairs, Memphis, Innovation and Verner Panton, aimed at school curriculum, which, have excellent materials for students and teacher. Copies of which can be bought direct from the web site.

Design has become an overriding theme flowing through most areas of education and manufacturing in the United Kingdom today, “Design or Die” was one comment. British industry cannot compete on price against Eastern European imports. Design is the difference industry believes will save them.

Jane described the UK like an adolescent who has just learnt a new skill, raw and showy but now maturing.

The major designers working in upholstery shown at the museum were two French brothers, Ronan and Erwan Bouroullec who recently worked for Cappellini Habitat and Vitra.

2pm Ideal Home Show, Earls Court London

There was an appalling standard of products on display to the public. There was a design consciousness in the upholstered furniture but most were imported products from Natuzi, Italy and Spanish companies.
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Tues 26th

9am London Simon Cavelle, KLC School of Design

KLC is a private finishing school for interior design and decorators. Simon is the
director and is also the president of the Interior Design and Decorating society of the
UK. KLC is situated at Chelsea Harbour next door to the design center, which includes
a textile house with 70 suppliers represented.

Creativity is the essence of KLC training and it was discussed that creativity is
underpinning to all areas of good business. The school is very successful as London
is booming with the English love of other cultures and inability to purchase larger
homes driving interior refurbishment. There are opportunities in Melbourne to develop
programs to teach creativity as there is a need to have a different mind set to cope
with competition and a change in customer needs.

Kingcome, Chelsea Harbour Design Centre

Kingcome is a top end upholstered furniture manufacturer based in Devon. They
produce their quality bespoke sofas using solid wooden frames.

They have found it difficult to get young workers to start in the upholstery trade. The
company through its founder and lead upholsterer recently developed a range of new
modern contemporary style furniture based on their product range. The innovation was
in the details and still had the quality of their other ranges. It was commented that to
move forward manufactures should look at fabrics, foams and dacrons and other
materials for innovation.

Fig 2.1, Leg feature.

Fig 2.2, Cushion detail showing loose cushions fitted to frame.
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26th March Continued

2pm Tristrum Mylius, Hitch Mylius, Enfield, London
Hitch Mylius has been operating for over 30 years with Tristrum as designer/director with one other designer. The company has been at its present premises for 6 years as it has expanded to outgrow its original premises. The company focuses on quality design upholstered furniture for the contract and high-end domestic markets. The company has exhibited at the Cologne International Furniture Fair for the last 2 years. It will concentrate on the 100% Design show at Earls Court from this year.
Most fabrics used are single coloured wool blends and leathers. They carry a small stock and make to order. Fabric is ordered on receipt of order and the products are produced on a 5-week time line (subject to fabric supply). The fabric is cut by hand and sewed on normal machines. The foam is standard block foam bought from converters. There are only three major suppliers of foam in the UK; Dunlop, British Vita and one other, which Tristrum could not remember. Hitch Mylius uses recycled foam as a hard substrate and is cut to shape on form. Fabrication is based on high skill with low-tech machinery and standard tools. Webbing and springs are normal and the beech frames are subcontracted out. Most shaped flat panels are CNC cut from Medium Density Fibre board panels.

For further products and outline see Appendix 3 or www.hitchmylius.co.uk
27th March

Research Day
- Confirm Thetford Design Meeting for 28th March
- 5pm Hire Car for travel to Thetford Design, Attleborough Norfolk
- Confirmed Trepsa Holland visit and booked airflights.
- Persisted with Ligne Roset through Gerard Liaze, Director of VIA, France
- Looked into visiting Biesse in Pesaro when in Milan if Visits fall through.
- Organised visit to Vitafoam Ltd, Middleton England.

28th March

Bruce Allen, Matthew Hilton and Jorge Quarta at Thetford Designs, Attleborough, Norfolk, England to see modern designed upholstered furniture being prototyped for the Salone del Mobile, Milan.

The visit entailed the viewing of the Balzac chair being upholstered and the prototyping of the buffalo chair for the SCP stand at the Milan show. Matthew Hilton is a world-renowned designer. He has work with many of the top European furniture manufactures. In 2001 the Geffyre Museum in London ran a one-man show showing his depth of work and quality of his design. Matthew studied furniture and three-dimensional design Degree at Kingston Polytechnic in 1979.

He worked industrial designer for Apricot Computers for the next four years. He first produced the Bow shelves for SCP and exhibited at the Salone del Mobile Milan 1986. He has worked with continental companies such as Driade since 1992.

Matthew turned up with his assistant, Jorge Quarta. There were only two days left to produce the prototype before it had to be shipped to Italy. It was very interesting to see how a top designer would prototype a new product. It was very much a trial and error process with the materials. Matthew Hilton had exactly what he wanted in his head and was able to work with Bruce Allen to sculpture the form. This was very much a low-tech approach with the upholsterer working on the form then the designer adjusting the form. Tools included standard nail gun, angle grinder, foam saw and scissors. The materials included underlay (Barrier cloth), Dacron, normal foam and a Felt wool mix Divana 2 from Kvadat.
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There was attention to detail with spending a lot of time making sure the curves were right. The chair went to Milan and then returned to be pulled apart to make patterns for the foam sub-contractors.

The Balzac chair manufacture demonstrated that the attention to detail in the upholstery was crucial to produce a quality product. When first introduced the chair did not sell well but over time it has developed into a top seller in the upper market bracket with Coran, SCP and Libertys all stocking it.

In the book form his Geffyre exhibition Matthew Hilton said

“I had great difficulty in understanding the designing and production of upholstery and I resisted the traditional method chairs and sofas which have been produced in Britain in a virtually unchanged way since the nineteenth century. It seemed to me to be a strange and very old-fashioned process which involves making a skeleton of wood and covering it layer by layer with springing and differing densities of foams and finally stretching a skin of leather or cloth over the body. It is rather like remaking from inside out the animal from which the leather had originally come.

I also had difficulty with the fusty, traditional establishment image that furniture conjured up when anyone mentioned that I might design some upholstery. A kind of capacious, sedate and very masculine chair appeared in my mind, which was reminiscent of a Bournemouth hotel and retired British Empire tea planters. It was seeing the work of Charles and Ray Eames, particularly the Lounge chair and footstool of 1966-7, which helped to change this perception. I could see the freedom of design possibilities, although the techniques and methods of production remained the same.

I wanted to make upholstery, which had more energy and movement. Upholstery, for me is about sculpture, shape, form, and about intimacy. A dining chair or office chair is about serious stuff: school, learning, dining, working, Sofas are about sex, chiling out, TV dinners, talking, sleeping.”

The Divina cloth is sold through Kvadrat, www.kvadrat.dk a Danish manufacture. It has great qualities for the designer and prototyper as it is very forgiving and will stretch well around foams. The topic of fabrics will be covered later in this report.

1 Matthew Hilton – Exhibition Catalogue, Geffyre Museum 2001
The Barrier Cloth is only used in Britain to produce a fire protective layer under non-compliant fabrics or leathers. Regulation was introduced in the late eighties after several fatal domestic fires caused by ignition of materials.

The leather sample is a standard quality leather.

The upholstery process

‘For Hilton the process of producing a new design starts with polystyrene model or a line drawing. The design is worked up through a series of prototypes. The frames for his sofas and chairs are produced by makers Rider and Dunnett, also in Attleborough, whose skill and experience are important to the development of a successful design. Oak is used for supporting legs and beech for the framework, forming a rigid structure of great strength and durability.

At Thetford Design the frames are covered with Hessian and fitted with springs in different gauges of zig-zag steel, the strongest being in the seat. High-density foam supports for the upholstery are cut to patterns and delivered to the workshop as standard pieces, ready to be glued to the frame with contact adhesive.

Making patterns for the upholstery is much the same as for dress-making, using calico pinned, marked and stitched, from which cardboard templates are made. The covering leather or fabric is cut using the templates, machine-stitched and stretched over the furniture and cushions, which are filled with duck feathers.²

² Matthew Hilton – Exhibition Catalogue, Geffyre Museum 2001
None of the development or production used by Thetford Designs relies on a modern upholstery technique, instead uses traditional ones but with a high skill and quality. Design and quality are a big reason for what makes the products highly sellable.

29th March
Good Friday, Personal break to 1st April

2nd April
British Vita, Middleton meeting with Peter Kinghorn

British Vita (web site) is part of the largest company in Europe producing foam products. There are three main considerations in foam production and use in Britain, these are:

- Fire retardancy – government legislation for safety reasons.
- Environmental considerations – chemical used and production safety.
- Production efficiency - cost sensitive to raw materials suppliers but consumer price points fixed.

Foam is a retail driven market with polarisation of manufacturing companies by consolidation of large companies and specialization growth. The big get bigger, the very small survive and the middle disappears.

CNC cutting equipment has created a capability to produce special gut foams. The idea is to allow the foam to collapse locally to give better overall support.
British Vita has introduced a pressure testing facility to compare pressure created while a person sits on the foam of a chair. Appendix 4 illustrates Reflexion VS, a slow recovery foam. It demonstrates how pressure builds up over time. Application could include call centers, hospitals, power plants and where people sit for long periods of time.

The company manufactured cold foam in Bollington, Cheshire and was very expensive to set up and inflexible in design. It would be suited to modular furniture. Block foam is much cheaper to produce and can be cut to any form as long as it was not compound. May be it is the conversion of the foam we can improve.

Reading the companies magazine there were two ideas:

1. “Air isn’t free” – the article discussed the improvement in compressor use.
   Doubling the pressure roughly quadrupled the cost of generating compressed air.
   a. Check for leaks
   b. Compressors turned off when not needed
   c. Reduce pressure if can
   d. Install a variable compressor.

2. “Energy efficient machines and waste reduction” – wake up to climate change.
Comments from Peter Kinghorn:

- British furniture manufactures lag behind in technology.
- They are very conservative ‘as long as it seems the same’ they would be happy
- Foam is not a big feature in the UK, the public like very soft with 6 inch cushions.
- Cost is a major driver.
- Vita cannot increase prices as customers would go elsewhere.
- Suppliers can raise their prices for the raw materials as they have are very large multi-nationals who control the market (Shell, Bayer).
- Legislation in fire retardancy reduces ability of innovation in products.

3rd April

Sheridan Coakley, owner/director, SCP, London

SCP [www.scp.com.uk](http://www.scp.com.uk) started as business in the early eighties selling second hand classic furniture in Shorditch, London. The rising stars of the late eighties and early nineties: Jasper Morrison, Matthew Hilton and Tom Dixon were engaged to design new products. The designers grew with the company to be a leading force in the resurgence of British design. SCP has shops in London and Manchester and exhibited at 100% design and the International Furniture, Salone del Mobile, Milan. Other products sold include high design pieces such as Fitz Hansan and Zanotta.

Sheridan being a high profile figure in the furniture retail sector had a great depth of knowledge of trends. He was really approachable and helpful with contacts in the industry and his assistant Kati Price also was extremely helpful and very interested in the fellowships ideas. Sheridan invited me to the opening night of their stand at the Salone del Mobile, Milan.
Sheridan’s comments include:

- All upholstered pieces are wool or wool/felt mix.
- Fabrics are plain (Kvadrat), which make them timeless and using wool/felt mix is good for covering imperfections.
- UK has very few “furniture manufacturers” left with nearly all subcontractors; tube benders, aluminum castors, upholsterers and cabinet-makers.
- Christopher Tyler is probably the largest in the UK.
- Design has now more influence on purchase considerations.
- High street retailers control the market.
- Quality and delivery on time are the most important buying drivers for SCP customer. Price is not an issue design is.
- Europeans tooled up – Britain went for quality or went bust.
- The cost of European furniture is just as high if not higher than top quality UK wooden framed pieces.
- Designed furniture in Europe is slightly thinner.
- Italian manufacturing model was discussed. (see below)
Contact with Natuzi, Bari, Italy.

Through Dr Michelle Perini SAGSA head of Asso Lombardo I contacted Natuzi to try to visit their factory the following week. Due to commercial confidentiality and not using cold foam in it’s manufacturing they declined but the production manager emailed me the processes they used to produce their sofas. The following is the paraphrasing of the Italian:

*In most cases, timber is used for the structural element in main framing whilst in areas without great importance/loading. In armrests, areas rear of the back-rest, and to the sides pressed cardboard and/or plastic laminates are used. In this phase, the sourcing of new materials such as metal-based materials for sustainability needs, to reduce the use of timber is being looked at. Some rare times cold polyurethane production is considered, but this solution is only relative to a particular niche of the market (or product design). The second phase of settee production consists of the construction of upholstery, which can be realised according to the designed function of the settee and the particular market. In the case of mass produced (low end of the market) the upholstery consists of back cushions of TNT (preformed polyurethane) which is covered in 18-36mm of Dacron to fill the cushion case; for the seating, the cushions are in polyurethane with a density 25-30 KG/M3, and rebound of 70-80, on a sole polyurethane strut 400g/m2, and placed on a base of elasticated straps grappled onto the edge of the timber frame. In the case of settees for the middle market, the padding of the back could consist only of Dacron (18-36mm) thick, or even made from a combination of reconstituted rubber lattice/waffle with feather and polyester fiber, placed in the internal sectioned/pockets of a cushion to optimise the back comfort. Seating upholstery often consist of polyurethane of various densities, potential with a ***** of 450-500 g/m2, and the different applications of the many grades of polyurethane is calculated by various testing machines to determine the required function and also comfort. For high end settees, the back upholstery consist of translucent cotton covered cushions, Multicamere, with an feather filling, often the back feather cushioning requires to be beaten/puffed to even out the feather density. The*
Furniture Upholstery
Julian Pratt

Seating consists of a lower grade polyurethane, (15 mm versus the 25-30 of others), however most importantly and successfully are cushions with a mixed filling of feather and rubber lattice waffle, are far more superior to that of feather alone.
At the end, they are covered in a pre-sewn leather cover, which is fixed to the divan frame by nail gun/clips.\textsuperscript{3}

4\textsuperscript{th} April
Travel to Weert, Netherland

5\textsuperscript{th} April
Trespa, Weert, Netherland
The information on this visit will be provided in a separate report on the flat panel industry and CNC machining

6\textsuperscript{th} April
Rest Day

7\textsuperscript{th} April
Travel to Milan then onto Bergamo

\textsuperscript{3} Translation from Italian by Diana Rosica from Bla Bla, Natuzi
Furniture Upholstery
Julian Pratt

8th April

Baleri, Bergamo www.baleri-italia.com

Baleri was founded in 1984 and is based in Bergamo 1 hour east of Milan. They sell a range of furniture produced from steel and foam as base materials. Engineering and construction is a very important element in their design and manufacturing philosophy.

I have included 5 designs to demonstrate the detail Baleri has gone to develop a product that looks complicated yet in a manufacturing environment the processes are simple to achieve.


To produce a small armchair that is extremely reliable in terms of durability and comfort.
The “Capri” series is also designed for public use, for conferences, museums, exclusive airport lounges, high-traffic spaces: the construction details, especially the reclining back, make it a very durable, reliable object, so much so that testing has guaranteed its durability for over well over 200,000 cycles. The five points of support, one of which is external, ensure stability and strength, in spite of the small size of the unit.4

4 Underwear, Baleri Italia 2001
Furniture Upholstery
Julian Pratt

2. Molly, Enrico Baleri 1993

*Maximum comfort in a minimal space, created in compliance with the rules of ecology, the standards of the future.*

Simultaneous challenge and homage to the forms of modern, using the technology and the forms of the Postmodern era: a system of upholstered furniture with removable slipcovers, but without the usual image of such products. The individual components are made with single blocks of foam rubber, produced without freon in keeping with the most rigid ethical and ecological standards, which will hopefully be those of the future.\(^5\)

\(^5\) Underwear, Baleri Italia 2001
Furniture Upholstery
Julian Pratt

Norman, Hannes Wettstein, 1996

How to further perfect a perfect sofa.
A divan with an internationally classic form, to "last a lifetime": the only way to improve such a product is to work on its internal structure. A sophisticated system of small variable-resistance leafsprings, together with the classic elastic belting, ensure maximum comfort for all types of users, without alterations or deformation over time.
Good design, good materials, optimal price-quality ratio.6

Image of Norman form Underwear. Baleri

6 Underwear, Baleri Italia 2001
Bill, Hannes Wettstein, 1994

_A divan with a defined form, infinitely adaptable to individual comfort needs._
The decisive element for the comfort of this divan is the cushion which together with the
structure, is a concentrate of technology qualities. The core and the internal filler shaped in eight trapezoidal parts and attached to a rigid, jointed grid, make it possible to obtain – in keeping with the cushion position selected by the user – gradual softness on one side and equally well-balanced support on the other.\(^7\)

\(^7\) Underwear, Baleri Italia, 2001
Furniture Upholstery
Julian Pratt

9th April
Biesse, Peraso [www.biesse.it/eng/menu.html]

The information on this visit will be provided in a separate report on the flat panel industry and CNC machining

10th April
Salon del Mobile, Milan [www.cosmit.it]

Zanotta
Cubica, Tito Agnoli

Flat pack upholstered furniture – space saving in transport

A folding chair with metal frame and hook and loop fastening methods.

Moroso [www.moroso.it]

Wool plains, netting fabric and sofas with low arms:

Kvadrat fabric is a dominant force in the contract market with the plain wools like Divina 2 and the netting fabric Action Fabric a used well at the show.
Rossi di Albizzate spa, [www.rossidialbizzate.it](http://www.rossidialbizzate.it)

No corners all rounds and creams and browns

Campeggi srl, [www.campeggi.it](http://www.campeggi.it)

Furniture with something else
Sofas to tables low tables to beds and lights to tables.

Ligne-Roset, [wwwligne-roset.com](http://wwwligne-roset.com)

Various products.
New products included lounge chair with magnetic cushioned pads on head-rest and seat. The magnets were in the frame and the pads had metal plates. The question would be does the magnetic field affect the body as it so close to the head?
Leolux Meubelfabriek bv, www.leolux.com

One manufacture that can produce so different products; Paris was high quality while Milan was fun and innovative.

Artifort, www.artifort.com
Seamed upholstery.
A Brief history.
B&B Italia start out in 1966 the same year I was born as C&B Italia, a partnership between Piero Busnelli and Cesare Cassina, hence the name. In 1973 Cassina wanted to buy out Busnelli but he refused and countered to buy Cassina out. With little capital to call upon Busnelli had to bring in two banks to finance the deal. Busnelli jokingly say that’s how B&B Italia started: Banks and Busnelli. One of the founding principles the company still holds to is realism: facts and results. The company is a combination of leading contemporary design and real production techniques using new production techniques and new materials. One of the most important parts of B&B success and longevity at the forefront of quality products is their Research and Development Centre. It has been a conjuate between designer and the industrial manufacturing that make B&B so profitable.

I wish to quote from the book given to me by Mr Gaviraghi on leaving the factory at Novedrate which talks about how the RDC operates:

‘First come the moulds for the furniture bodies, one of the first things to be mass produced by the company. They were a project choice because the production of the shells not only replaced the traditional method for the manufacture of padded furniture, it also changed the basic design. Another major feature of the innovation introduced to both design and production was the use of foam – the best answer yet to the problem of padding. The work conducted by the Research and Development Centre in this field is probably the most advanced in the sector. The structures will also be described because, of course, sofas and armchairs must support their own weight and that of others. This subject will be dealt with as if architectural structures. The next section deals with upholstery. The layman might think it unusual to apply terminology of the clothing industry to the production of furniture. However, the choice of cloth, leather, stitching, quilting and softness accounts for much of the work. Last, but not least, comes the part dealing with other materials, those not normally used in B&B Italia’s padded furniture production. The study in this area is one of the most distinctive features of the Research Centre.’

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I will not go into too much detail here as the information on the construction of the B&B Italia range is set out in the book listed below.

Reflections on the factory.

On entering the factory space my first impression was where were all the workers. On further discussion with Guido Besana, the quality control manager, the only manufacturing done onsite is the foam moldings, fabric and leather storage and check and cutting and the final assembly. All the metal frames are fabricated externally. All the sewing is outsourced which basically left assembly as a final B&B part. B&B Italia are still producing classic designs from the sixties as well as latest ranges of fully upholstered chairs. The key was flexibility as the foams and fabrics stayed pretty constant. The three areas I saw as ahead in production terms were:

1. Digitally Laser nested patterns on leather hides and a 10% better yield from each hide.
2. Hook and loop fasteners for most upholstered fabric units and using removable covers for all designs.
3. Dacron outer cover is sewn and stapled to plastic runners in the frame. The cover is polyester fabric backed to allow for the hook and loop to hold to.

Other comments:

- A very clean process as most is fabricated outside (metal work)
- The process only uses the foam needed so doing saving waste and cost.
- Reduced labour time in each sofa with no stapling and foam cutting.
- Quality checks at all stages. (The company has in store the first of every sofa made.
- Customer requirement in softness can be achieved easily.
- All seams are double stitched and over-locked to prevent fraying.
- Carry stock lines of fabric and strictly check all stock entering the factory.
- Can change foams quickly, Britain requires combustible modified foam.
- Use small section steel in frames to stop the frame being felt by the user.

The B&B model replicates Sherridan Coakley stated Italian model listed earlier in the report. The comment from some designers was it is near impossible to visit factories around Milan as nearly all are just marketers of assembled furniture. This allows freedom for them to change and adapt to market demands quicker as the capital in plant is less.
Furniture Upholstery
Julian Pratt

B&B Italia's new products

*Detail work From Milan*

Felt Wall  Lady Fat – Patricia Urquiola  Metropolitan – Jeffery Bennett
Photographer: Julian Pratt

Felt

Zipping
Furniture Upholstery

Julian Pratt

Folding

Compound corners

Inverted seams
Furniture Upholstery

Internal curves

Techno fabrics
VIA – (Valorisation of Innovation in furniture)

VIA was set up in 1979 on the initiative of the development committee of the French Furniture Industries with the support of the Ministry of Industry. Its mission is to valorize and promote contemporary creation in furniture design (furniture, lighting, tableware, decoration accessories, textiles...) both in France and abroad.  

In July 2000 I met Gerard Laize, the Chief executive of VIA when RMIT hosted a luncheon for Furnitex 2000 in Melbourne. Through contacts over time Gerard has been shown to have a great insight into the furnishing industry worldwide. In January, as stated before, I spent sometime talking with him and VIA at the Paris International furniture fair. So I arranged to meet up again at the VIA “Shed” off site from the main exhibition site. Most of the furniture displayed was not upholstered yet was very interesting from a design viewpoint. Probably the most relevant piece on display was the Pouf Doum Designed by Sophie Larger, www.inouidesign.com

Mobi Discovery Children project

VIA had just finished a project to put designers into primary schools and kindergartens around France. Gerard and his assistant were very excited about the Mobi project, as it had been a great success. The following is a paraphrased translation of the project outline and outcomes:
Operation: “Mobi-discovery” results of a close collaboration between the French Furnishing Industries and the French Ministry of Education (IFA)

**Aim:**
- Develop a “furniture creative spirit” in primary school children
- Training of a critical look at everyday objects in the everyday life of these children.

Thus, children discover a universe that is not that familiar to them. Two years experiment with a Parisian primary class, then a secondary one has helped teachers and designers build many pedagogical “bridges”.

It has come to fruition through the manufacturing and exhibiting of furniture prototypes imagined/designed by the pupils then brought into life-realised together with VIA.

(The importance of innovative furniture or the heightening awareness of innovation in furniture).

*A great visual display of the project follow this link and click on the MODE TV report icon.*

[http://www.via.asso.fr/geb/galerie/default.htm](http://www.via.asso.fr/geb/galerie/default.htm)
Mobi-Discovery

The success of first experiment brought about by the “Mobi-Discovery” program, could be attributed to the Ministry of Education’s 5 year plan in the development of Arts and culture in schools; “The establishment of artistic and Cultural Project in schools” (PAC).

The French Furnishing Industry has made available a budget of 304,900 euros. 40 primary classes or pre-primary classes (nursery school, Kinder) in 10 schools have been put in contact with designers and local communities, this being in line with a 30 year policy (of these Industries) aiming at stimulating the level of demands and requirements of French homes and their aesthetic sensitivity for their immediate environment.

Since birth, a child discovers a space where furniture is adapted to its size. (Cot, high-chair then a big bed etc). Often the magical aspect of these pieces of furniture are replaced by its functional one.

1998 Operation ‘Mobi – Discovery’ started with a primary school class that followed on into elementary certificate, (Yr 6 primary school). These children through their teacher’s + VIA’s helped discover the universe of furniture through workshops in expression and creation initiation into different styles and materials, visits to specialised museums.

The student’s desires, expectations being expressed, they participated in the conception of their dream furniture.

This operation culminated with the achieving of three pieces of furniture.

1. A chest of drawers recto/verso (back to back)
2. The boat-bed
3. Sofa/heads or tails.

All were exhibited in the VIA Gallery July/August 1999, 13th around Town Hall in Paris then in the Salon du Meuble (Paris, Jan 2000).

Furniture designed by the children and realised by designers was sculpted in polystyrene, then manufactured in one off samples/models.

2000/2002
A development of national scale and proportions

Ministry of Education created a five year plan of Arts and Culture development in schools. French Industry and the Ministry of Education wish to prolong this adventurous project, a partnership agreement could be signed in the near future.

This operation “children designers” brings about a deep reflection on the concept of furniture, its functions, work, study, teaching, sleeping and will allow us to collate the children’s expectations in the matters of design, aesthetics and comfort and the very discovery of furniture through meeting designers, visiting manufacturing sites eg. VIA Gallery.

Class projects encompassed lifestyles, history of styles and design creations. Workshop activities were adapted to children’s ages and class levels, adventure and play being the strong points in the learning process of general disciplines.
Creativity and Technologies

This involved the awakening of children to their daily environment’s and their participation in developing their critical minds when facing consumer movements/actions.

Design: Opportunity to better understand the world.

Ministry of Education envisages design to lead to a better discernment in communication procedures and consumer issues, developing children’s sensitivity in behavioural, relational (the children’s), environmental and economic issues, thus educating their critical capacities when confronted with consumerism issues. This concords and meets with the wishes of French Furnishing Industry for whom the development of the level of demands and requirements in the fields of quality and aesthetics is a priority.

Ministry of Education and French Furnishing Industry

This partnership includes enterprises which are keen to establish exchanges with the public and which are prepared to open their manufacturing sites to the children to introduce them to their professional skills. This involved 40 classes in approximately 10 schools, designers and design schools as well as professionals, technical high schools and local communities.

March 2002
Children designers

An exhibition in Paris Gallery VIA and a tour of France.
The years 2000 and 2001 have witnessed the achievements of

- The partnership between the Ministry of Education and French Ind. Of Furniture, the launching of the project and the start of activities in designer schools working in close collaboration with the teachers. As for the children it’s another look has penetrated the classroom*

* Note of translator. It could also mean the outer world looks at the classroom differently, both meanings could be taken
VIA: Thirty projects

The first selection of works and the manufacturing of the prototypes were carried out and 2002 exhibition project arrangements. VIA Gallery from 28 March to 16 June 2002 then a tour in the provinces.

With 'Mobi-Decouverte', furniture as emotional symbols of our culture and society has entered the school, involving every child in the recognition of sensitive and rational intelligence.

Pedagogical reinvestment into the educational implications of artists in schools, heightened the children’s sensibility thus French Furnishing Industry and the Ministry of Education joined forces in their wish to see an evolution of mentalities through Arts & Culture.

Quotes

“See the world through children’s eyes”
“See the furniture through children’s eyes”
“One day we were children”
“One day we will have children”

Let us allow them (finally) the possibility to express their approach
Let us establish a dialogue with them to experiment to construct [a hauteural eleve]
Who will learn more from the other?
Gerard Laize, VIA Manager

The originality of Mobi-Decouverte has touched VIA whose mission is to encourage innovation in all fields concerning our surroundings and lifestyles. Professionals are aware of the difficulty of planning furniture destined to children. Therefore inviting children to reflect about their environment allows the understanding of the logic with which young ones perceive their surroundings and to bring to the fore their formal codes and colour choices. Consideration by parents and teachers of the importance of their space management thus is a pedagogical plus.

This program invited adults to take into account the children’s expectations and demands by involving them in as far as choice is concerned (Isn’t that the case with clothing?)

First experiments have shown that children visualize objects with the concept down/up, the opposite applying to adults (up/down). We cannot constrain the children to static posture through rigid type furniture, as they (the children) tend to move every 45 seconds. It is not surprising therefore that they create, imagine and wish for round shapes favouring movement.

It is necessary to remind ourselves that the human body does not contain any right angle?

Colour codes destined for children cannot be set in simplistic terms. Preferences in colours are intimately linked to visual education (if TV screen situated with red). Other factors namely cultural as age will influence these choices often unconsciously.

Involving them in reflecting upon this process will certainly bring about consequences in how they will envisage their interior décor in the long run.

All these factors confirms the VIA aims to be an active partner in this project, sponsoring the first national retrospective of these activities from 28 March to 16 June 2002.
Two schools present their work.

Beuzeville and Pont-a-Marcq
Boat/Shelter and Star/sofa.

Proud children presented dictionaries, repertoires, moulds, internet site, CD Rom, plastic parts workshops, writing of a tales, historic friezes, detailed accounts of their different visits to the Salon du Meuble Paris 2001 and meetings with designers and craftsmen.

Buronomic Enterprise.

Beuzeville’s partner presented the first full size model: Wardrobe/hiding place. Aura Leblanc built one of the “branches” of their star/sofa for Pont-a-Marcq School. Pilot committees have set up a pedagogical profile through meetings which teachers, industrialists, designers outlining their objectives and constraints.

Children furnish their school library at Pont-a-Marcq.

Through the Mobi-project the pupils have actively participated in the furnishing of their library and the creation of seating. They were able to create a model to scale, taking into account the practical, aesthetic and warm aspects of the environment. It is through their participation, the students became aware of their interaction within their environment through layout and planning. Together they imagined a star/sofa which, thanks to its branches, allows a whole class to sit together or they invent a bus shelter in the form of a boat (at Beuzeville).
The Artistic and Cultural class Project (PAC) class. A realistic ambition

It aims to interact in school teaching, artistic and cultural education, this being built around 3 principles.

1. Building bridges between the artistic and cultural fields and other fields of knowledge of compulsory subjects.
2. It associates teachers with researchers and artists.
3. It allows as far as possible the achievement of an artistic project within student level/potential.

PAC classes are compulsory. Educators using competencies of an artist or cultural consultant elaborates a pedagogical/artistic project (8 – 15 hours) using the cultural resources within reach.

A full spectrum of fields

- Themes of PAC were left to the educator’s initiative, partly determined by the cultural projects of the school (music, plastic arts, cinema, audiovisual, dance, theatre, photographs, national heritage etc).
- A simple and accessible pedagogical framework of reference.
- General format of PAC classes were based on academic or departmental plans for Arts and Culture.
- Academic inspection (from kinder to High School) avoided formalistic excesses, respecting light, easy-going procedures and quality requirements.
- Every endorsed accepted project were given 610 euros per class per annum from Ministry of Education and it can receive additional contribution of other partners eg. Ministry of Culture and/or local communities.
Designers relating their meeting and working with children.

Cherif, Cherif Creations

When the children design a piece of furniture they relate to a story. Cherif has been highly interested by their innocent spontaneous approach and astonished by their practical very precise and creative mind. Children love furniture they can coil in, roll themselves in, attracted by that which can be touched.

The Designer, a guide, helps them to relate what they see, trying to reproduce not an object but a gesture, an act or a deed. The prototype is the result of the expression of their universe.

A. Fernoglio and F. Lecourt, Siamo design.

Very surprised by the children’s ability to express what they have observed; through dreaming they imagine furniture in a very realistic universe, a concept “a strong castle” or a boat/bed.

Many children saw themselves inside the furniture, eg. a little girl in her drawings pictured herself locked in a wardrobe, a few weeks later the door was opened and this matched the considerable progress she had achieved.

Sonio Deleani and Eric Fache – E & S Design

We are leading an in-depth reflection with the children starting from an analysis of the spaces at home establishing the differences between the furniture to the expressing of their dream-furniture.

We try to introduce them to the richness of materials: wood (for them a piece of furniture is made of wood) but also others: metals, plastics, foam as well as colours and shapes. In 3D objects Children tend to draw flat and making of models has been a delicate operation. Children start with anecdotal and personified drawings, cat/bed, whale/chest of drawers, man/armchair and they have to be given keys to overcome the first stage.

We were surprised by the way they transformed their surroundings: a wardrobe becomes interesting if they can enter and live in it, a carpet is fascinating if it can emit light etc...
Sophie Larger - Inoui design

Sophie Larger has realised that contemporary furniture is also a discovery for the adults. She expects a lot from the children; they possess a more simple vision, more spontaneous, quite precise- this fact helps her to simplify her professional approach.
12th April
Travel back to UK

13th April
Fly back to Melbourne

3.3.3 Australian Context

Since returning from Europe I have attempted to discover if any of the technologies and materials are already available here in Australia. I have also spent time discussing the design and upholstery of many of products I brought back in image form.

Pressure testing.

Herman Miller, [www.hermanmiller.com](http://www.hermanmiller.com)

This is a very interesting company who has been forward thinking in most areas of furniture for many years. The reports available over the internet on the environmental aspects of their production and products are immense. They are already using pressure testing of the foams in their office chairs.

Flowtex, Steven Kelly

Steven Kelly is an ex-student of mine from Box Hill TAFE Institute and is now working for a company producing chairs for the medical market using the same technology as Herman Miller and Vita in the UK. This has possibilities to be developed.

Environmental Fabrics.

I have spent a long time trying to track down the Kvadrat fabric in Melbourne. None of the fabric used in the ‘modern’ section at the European shows I considered to be forward thinking are not available as yet. The Messenger fabric marketed as an environmental fabric in Europe by Kvadrat is actually made by another company in the United States. There are ‘Environmentally Friendly’ fabrics based on the recycled material focus available in Melbourne: Designtex fabrics (from the US [www.dtex.com](http://www.dtex.com)) are available from Arlitex in Richmond [www.arkitex.com.au](http://www.arkitex.com.au). They have a “waste not, want not” 100% recycled solution dyed polyester fabric. At present I am discussing with several manufactures about the viability of using this type of fabric as it does not cope with heavy wear and therefore unsuitable for the contract market. Unfortunately this is the only sector that will pay the price the fabrics cost. Other suppliers of this type of fabric are Terratex, [www.Terratex.com](http://www.Terratex.com) and Nuno [www.nuno.com](http://www.nuno.com). Local manufactures of green processed fabric include Macquarie Textiles, [www.macquarietextiles.com.au](http://www.macquarietextiles.com.au).
Modern Techniques and machinery

There are two areas that need to be explored in this section:

- Automotive Upholstery
- Machinery imports

At present I am waiting to visit Holden to investigate the opportunities for cross over of technologies between the furniture and car industry. The automotive industry is driven by innovation and a manufacturing ethos so any possible benefits should be investigated fully as the furniture industry tries to compete on a world stage.

The import of complex machinery to improve productivity in the upholstery industry has mainly focused on CNC technology. The technology that I saw in B7B Italia was shown for the first time in Melbourne at Furnitex, the annual furnishing show case. Several major manufacturers, including Moran of Melbourne are very interested in trialing the technology.

3.4 Other places & People visited

10th April

Meeting with Tony and Peter Schiavello for evening meal at their hotel Hotel Meldia Milan

General conversation about why we were all at the Milan show. We did touch on the attitude of many of the workers coming in to the industry: very little pride in their work and understanding of basic construction and materials is lacking.

Schiavello is run on a quality principle, Tony described it as a cost saving as there are very few returns now as they try to minimize the poorly made product by designing in quality. Environmental issues will grow and the industry needs to pressure the suppliers to lift their game on waste reduction an product take back for source recycling, eg. Laminex and particle board.

Meeting with Susanna and Dr Michele Perini on the SAGSA stand in the contract section of the Salon del mobile, Milan.

They invited me to their 80th anniversary party on the 12th but I was unable to attend as I was flying out on the 12th back to the UK to collect all my belongings to fly back to Melbourne the next day. Dr Michele Perini was very helpful in organizing the B&B Italia visit at a time when he was incredibly busy with the Milan show.

Contacted James Irvine and talked on the phone about working as a designer with manufactures in Italy and mainly Milan. www.james_irvine.com
As stated before I visited Biesse in Peraso and Trespa in the Netherlands whilst on my study tour I will compiling another shorter report for these visits in January 2003.
4.0 FELLOWSHIP CONCLUSIONS

Lack of Design in Development of Upholstered Product

Europe is very different yet, has a lot of similarities to Australia. It has a larger market yet the industry is in the same boat as Victoria has found itself over the last five years: cheaper imports and skill shortages. Countries have responded differently. Britain has gone design or die, France is educating its youth to grow demand for quality design, Italy with its rich 20th history of design has specialised (craftsmen) the skills into subcontracting companies. Germany has always prided itself on the build of products so has only marginally been affected. Their use of technology is the key to competitive edge.

The UK relies on a traditional skill base with little CNC for components and focuses on the design (style) to increase sales. The Italian model relies on vision of subcontractors to set up business. Specialisation is starting to happen in Victoria. This production model will suit the shorter development and selling cycles we are now encountering in Australia. New is now.
5.0 Recommendations

**Series of workshops**

a. Upholstery construction and materials for designers 

b. Upholstery design for production

c. Design (creativity for teachers)

d. Joint projects designer/manufacturers produce upholstery prototypes for annual exhibition. **Sponsored**

Look at possibility of setting up a (upholstery) furniture research centre to investigate new ideas, techniques and materials.

Designers in schools project: **Funded** artists in residence in primary schools – products made by industry (colleges) RMIT.

Further study into auto upholstery, pressure testing and environmental design in upholstery.

Develop further links with B & B Italia’s Research Centre to see if ISSI can bring a person from their DRC to work in one of the workshops for designers.

Develop ways to combat retailers de-branding of product for the mass market.

**Feed ideas to industry and Education.**

**Increase design awareness of public**

**Improve product quality – lift level of product.**
What do Upholsterers do?

Upholsterers work with design, texture and colour to cover or recover furniture with fabric or other materials. They may also repair furniture.

Upholsterers may work on:
- high volume furniture components
- contemporary and period reproductions
- antique restoration
- modern furniture restoration

They generally work in workshops but occasionally they may be required to work in a client’s home, often in conjunction with interior designers. They normally stand to work on furniture which is placed on a table or bench top.

What’s so good about being an Upholsterer?

Upholsterers work in a clean, comfortable and creative environment.

Upholsterers are in demand.

Employment opportunities for Upholsterers are excellent and have been for many years. There is a currently worldwide shortage of upholsterers.

Upholsterers can work anywhere.

Australian upholsterers have a fine reputation and, with a trade qualification, can travel the world and work in most countries.

Upholstery is a highly skilled trade.

Upholsterers are required to perform a diverse range of skills, such as:
- preparing patterns and templates
- measuring and cutting fabric
- calculating materials costs and requirements
- repairing frames
- renovating and reupholstering antique upholstered furniture
- making and filling cushions
- covering domestic and office furniture.

Does Upholstery pay well?

Upholsterers earnings are good. At the end of a four year apprenticeship, they can expect to earn around $500 per week. An experienced upholsterer can expect to earn around $700 to $1200 per week.

What can Upholstery lead to?

Success in upholstery depends on your ability and motivation to master the trade. Opportunities are unlimited for the experienced, qualified upholsterer.

They may progress to opening their own furniture factory or becoming a self-employed sub-contractor.

They may become a supervisor or factory manager.

The choice is yours.

What personal attributes do Upholsterers need.

- an interest in making quality furniture
- an ability to perform manual tasks
- normal colour vision
- able to work accurately and neatly
- interest in fashion and style
- sound commercial skills
Case studies of successful apprentices who have established varied careers

Bradley Gillard

This is a natural progression for Bradley. To find a career in upholstery but to use the industry after being involved part time in an upholstery class while still at school.

During his school years, he undertook Certificate II in Furniture (Upholstery) at Holmeston Institute of TAFE whilst working an apprenticeship with Michael Gill Upholstery in Mornington.

He then won four major awards during his time at Holmeston. He was named 1994 and 1995 Holmeston Junior Apprentice of the Year for his first year upholstery apprenticeship, respectively.

He was also awarded a "High Attainment" award by Holmeston in 1994 during his second apprenticeship and additionally Brad won the Kounta White Award for Upholstery at the Furniture Training Institute Awards in 2000.

Upon completing his apprenticeship, Brad took over a furniture business called Brad's Furniture Designs. He currently runs a show room where he designs his own furniture designs.

Mousa Sabih

At 19 Mousa Sabih from Meadow Heights is already focused on a successful career in upholstery.

Mousa is completing his Certificate III in Upholstery at Kangan Batman TAFE, whilst completing his apprenticeship at Rupert Lounges in Craigieburn.

At work Mousa is involved in all aspects of the small business, where he has gained the trust of his boss who has left him in charge on many an occasion.

Mousa has been working in the upholstery industry since the age of 12, but he finds what he is learning at Kangan Batman TAFE to be invaluable.

"Doing my apprenticeship through Kangan Batman TAFE is helping me a lot. The skills I am learning at trade school I can immediately apply back into my work place", he says.

Mousa's hard work and dedication to his studies have earned him Kangan Batsman TAFE 2000 Most Improved Student of the Year award in Upholstery.

After completing his apprenticeship, Mousa plans to stay with the company for a couple of years while he learns more about the trade and the intricacies of running a small business but eventually he wants to open his own upholstery and furniture business.

"As I have been working in the industry since I was 12 I felt I knew a lot, but doing my Certificate III in Upholstery at Kangan Batman TAFE has taught me new skills. We use the most up-to-date equipment and it has made me competitive with the best out there. I am also gaining a qualification and at the end of it I will have a trade certificate which will be the first step towards a successful career."

Michelle Watson

Michelle Watson works at Reservoir Upholstery where she is involved in all aspects of this two person business. Her duties range from business operations, such as taking orders and phone calls to manufacturing activities such as cutting and sewing.

Michelle completed an upholstery apprenticeship at Holmeston Institute of TAFE in August 2000.

Michelle originally qualified with a textiles degree from RMIT with the aim of becoming a textile designer.

However, after completing the course she found that there were few openings for gaining work in the industry. She also desired to have a "hands on" career, so switched to upholstery.
Career Pathways for Upholsterers

Diploma of Furnishing  
(Furniture Technology)
Certificate IV in Furnishings  
(Furniture Production)
Further Education & Training  
Options eg Retail Training

Industry-Specific Courses
- Product Designer
- Retail Training
- Production Management
- Supervision

Upholstery Business  
Owner / Operator / Employer
Self Employed Upholsterer  
(restoring or making new furniture)
Upholstery Department  
Manager
Upholstery Department  
Supervisor
Leading Hand

QUALIFIED UPHOLSTERY  
TRADESPERSON

Upholstery Apprenticeship
Certificate III in Furnishing (Upholstery)

Pre-Apprenticeship
Certificate II in Furnishings  
(Upholstery)

What do I need to get an Upholstery Apprenticeship?

All the apprentice would complete Year 10 before applying. The apprenticeship takes 4 years. This can be reduced by the pre-apprenticeship training courses which are available through the TAFE Training providers. Industry placements can be provided to successful students. Pre-apprenticeship schemes can also employ apprentices. Under this program an apprentice can be moved around to a number of employers offering a range of training. For more details about upholstery apprenticeships talk to your Careers Teacher or contact the Job Network and Centrelink Agencies or fill in the form below.

For more information on careers in the Furnishing industry please visit our website: www.ltc.holmesglen.vic.edu.au

Information in this brochure was current at the time of printing.

Training Providers

Diploma Institute of TAFE  
Huron Rd 9561-1850

Holmesglen Institute of TAFE
Huron Rd 9561-1850

Kangan Institute of TAFE
Kangan Batman TAFE
Dandenong Campus
Huron Rd 9561-1850

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design museum

an evaluation of the 'designers in action' programme

Richard Kimbell, Kay Stables, Juliet Sprake

Technology Education Research Unit (TERU)
Goldsmiths University of London
r.kimbell@gold.ac.uk

Feb 2002

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design museum
an evaluation of ‘designers in action’ programme

Richard Kimbell, Kay Stables, Juliet Sprake
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Context
Consistently over the last 5 years, Ofsted reports on schools performance in design & technology have drawn attention to a major weakness. It concerns the teaching of designing; the processes of designing that students are taught. This weakness is manifest in several ways but is most obvious in the portfolios which design students use to develop and make explicit their design thinking. The criticism is that this process is unimaginative, unduly regimented (being both linear and mechanistic), and unnecessarily embroidered (labelled) with irrelevant graphic embellishment simply to influence examiners. There is an extensive and ever expanding literature providing ample testament to this problem and it is regularly highlighted as an issue in annual D&T Ofsted reports.

many still spend too much time on superfluous decoration of their design folders rather than on real design development.” (Ofsted 2002/a)

The Design Museum addressed itself to the task of ameliorating this problem, and as a result set up a series of ‘Designers in Action’ workshops for teachers. In these workshops, practising designers demonstrated their approaches to designing and explored with teachers how these approaches might beneficially be developed in the classroom. The workshops therefore had five objectives:

• to bridge the gap between education and the design industry;
• to give teachers confidence to present a more creative approach to design projects;
• to give practical strategies for implementing creative design approaches in the classroom;
• to stimulate creativity in teachers, enabling them to encourage creativity in the classroom;
• to raise standards in design & technology teaching.

TERU at Goldsmiths were asked to evaluate the impact and effectiveness of this series of workshops on participating teachers. We were asked to examine the workshops that ran during the Autumn term 2001.

Methodology
We examined the workshops from the standpoint of the teachers, the designers and the Design Museum staff themselves, and as a result we gathered data through:

• teacher questionnaires to be completed pre and post the workshop sessions;
• field notes from observation of the workshop sessions;
• structured interviews with a sample of the teachers, the designers and with the Design Museum personnel involved.
Together these enabled us to triangulate the data, ensuring reliable understanding of the extent to which the Design Museum's aims were being addressed. This triangulation is particularly important since the data was mainly of a qualitative nature, and our approach allowed us to cross reference one set of perceptions with the others to explore 'cause' and 'effect' issues. In the following paragraphs we outline the specific focuses of each research tool, how each was structured and the nature of the data that was derived.

Teacher questionnaires
The teachers were given two questionnaires, one at the start of the day and one at the end. Through these we gathered general background data about the teachers, data about their priorities for d\&t education, and data about their perception of the workshop session. The first of these enabled us to construct a demographic profile of participants in relation to gender, age, teaching experience and level of confidence in developing creative responses in learning and teaching situations. Priorities for d\&t were collected through a four point 'Likert' scale, through which teachers were given a list of aims of d\&t teaching (such as 'being practical', 'being innovators', 'communicating ideas') and a set of qualifiers for each ranging through strongly agree, agree, disagree and strongly disagree.

The third data set, about perceptions of the workshop session were collected through a series of questions, starting (in the pre-session questionnaire) by asking about their expectations for the day. This was followed up (in the post-session questionnaire) by a series of questions about the extent to which the aims of the workshop had been achieved, and what the best and worst things about the day had been. These questions were structured to provide both quantitative and qualitative data. This was achieved by providing teachers with the opportunity to give a quick rating in response to a question and also, where they wished, a narrative account of what they saw as the particular strengths and areas of weakness. This is illustrated below.

![Diagram of question and rating scale](image)

**Field notes from observation of the workshop sessions**
In order to provide some standardisation on the focus of the field notes from the sessions, a structured observation format was prepared. This was targeted around six broad headings:

1. Introduction/aims;
2. Participation;
3. Presentation/activities;
4. Questions and discussions;
5. Overall impression;
6. Additional comments.
• creativity: creative responses in participants;
• creativity: approaches to design processes;
• creativity: classroom implementation;
• industry/education gap: developing greater understanding;
• industry/education gap: classroom implementation.

Using a template of headings allowed for descriptive notes to be taken in a non linear way, giving us a comprehensive overview of the way sessions focused on each area throughout the day. Each heading was then further illuminated through a series of qualifiers aimed at gauging the depth, clarity and approach that was taken. In addition, a photographic record of two workshops was made. Notes taken at each session were transferred onto a spreadsheet format that enabled direct comparisons to be made.

Structured interviews:
In a similar way, a template was developed to enable each interview to provide insights into a series of aspects of the initiative. A set of themed questions, customised where necessary, was asked of all three groups: the teachers, the designers and the DM staff. The questions were structured to focus on developing creativity in schools, and the role of the design industry within d&i education. We explored the principles articulated by the teachers and the practices they currently employ. The three constituents (teachers, designers, DM staff) were asked some identical questions, e.g. “Do you think designing in schools ought to be more like designing in industry?” and we also used customised questions such as “Why did you initiate/get involved with/wish to attend this project/workshop?”.

As with the observation notes, the responses from the interviews were all recorded in a spreadsheet format that allowed perceptions and intentions of the three groups to be directly compared.

Through these three research instruments, we have the following data sources from which this report has been prepared:
• demographic data on workshop participants (36);
• qualitative and quantitative data on teachers’ perceptions of the workshop sessions;
• quantitative data on teachers’ priorities in d&i and how the workshop enabled these;
• qualitative data enabling comparison from observing the workshops;
• qualitative data enabling comparison from interviews with teachers (2), designers (2) and Design Museum staff (2).

Findings and issues arising
These findings are presented in two parts, first from the perspective of the ‘providers’ (Design Museum staff and designers), and second from the perspective of the ‘receivers’, the teachers. We hope in this way to illustrate the priorities and concerns of the providers and then to see to what extent and in what ways these have been reciprocated in the responses of the teachers.

Findings from the providers
The findings are drawn from the interviews (with DM staff and with the designers responsible for running the workshop) and from field-notes taken during the workshop sessions. We have structured the findings into three
illuminating the 'problem'

The DM staff were both experienced d&t teachers and familiar with the practice of d&t in schools. The designers were not directly familiar with d&t teaching in schools, but were familiar with working in collaboration with design programmes in higher education. Furthermore there were pre-existing links to schools; in one case through the experience of running teacher workshops for the Design Council 'Design in Education Week', and in the other case through their education office producing support materials for use in schools.

The designers impression of design teaching in schools (gleaned partly from this prior experience and partly from the interaction with teachers on the day) is that it is driven by very different priorities, and using very different practices to those that operate in industry. In particular they draw out the following points:

- it is not sufficiently 'real'
  - ie tasks are not based on real clients with real problems
- it is not sufficiently questioning
  - ie briefs are there to be challenged and stretched, not just accepted
- it is not sufficiently experimental
  - it remains on paper for too long, and then suddenly jumps to a final product

This latter point is perhaps the clearest single finding from all sources of data. The designers both assert the importance of modelling and prototyping - in many different forms. From very early on in the process they use all kinds of modelling to test out and enrich their emerging ideas; card models, breadboard models, foam models, fabric models, system models; behaviour models, CAD models. They recognise the importance of initial visualisation but in the case of both designers interviewed, they asserted that it is creative modelling activities that are central to their success as designers, since the models allow them to test out, refine, and think the initial ideas.

"We try to inspire a more experimental hand-on approach - testing, curiosity, adventure - making things work, then making them work better. The teachers say they have to have beautifully made final pieces - even if they are not well designed. That seems daft. We would value more the prototypes and the thinking behind them. Manufacturing is something different!" (Dyson designer)

This is an iterative process of modelling, testing, refining and re-modelling. The designers saw rapid-prototyping as being at the heart of their design development. The view was strongly held by DM staff that this was not normal practice in schools.

We explored why these very different model of practice existed, and most attention was focused on the assessment process. The designers had the clear impression that moving towards this more experimental model of designing was seen by teachers as 'risky'. The process of designing that is expected in schools is specified in a particular form in syllabuses (esp for GCSE) and teachers have customised their teaching accordingly. There is clearly a risk when this tried and tested process is dramatically changed. Would the examiners give due credit to designing in model form? Would student grades be at risk? Would the department's A-C grade percentage be damaged? The designers had the clear impression that teachers were not sure that this approach was 'allowed'.

The interviews were not recorded and transcribed, and the text appearing in single quotation marks is based on field-notes taken directly at the interviews. Whilst the text is therefore not direct quotation, it is a true reflection of the meaning of the exchange.
The approach adopted
The workshop sessions emerged through the collaboration of the designers with DM staff. The focus in each case was on understanding users, on questioning, on idea generation, and on rapid prototyping. These were the areas that DM staff felt had the greatest priority, and where the designers had special skills and could introduce particular techniques that it was felt might prove transferable into the classroom.

In each case the day was based on a series of 'hands-on' activities. As an example, one designer focused attention on 'users' through picture-profiles compiled from pictures taken (every hour of the day) by an unknown 'user'. Just by looking at the photographs (which did not show the user) the teachers had to try to build up an image of the user simply from the things illustrated in the picture-profile. Who is the user? What do they value? How do they live their lives? What objects do they like? Whose life is this?

'Our special interest is in user-centred design. School projects seem removed from real clients. They are not grounded in reality. We taught them about human-centred design, with an empathetic project based on a disposable camera' (IDEO designer)

The activity then moved on to the challenge of 'can you design something for this user?'

'Then we taught them prototyping techniques - simple ones - from board to plastic - and more tricky ones like behaviour prototyping' (IDEO designer)

The other designer gave them an existing product with a range of associated adaptions.

'We got them to come up with a new adaption. We started them brainstorming and then (pretty quickly) into modelling - especially with card. They made up lots of different card model adaptions...just using the glue gun.' (Dyson designer)

The activities were originated by the designers and mediated by the DM staff, which gave confidence to the designers that the tasks were appropriate to teachers. In both cases however the activities were variants on existing ones used for previous workshops; in one case 'clients-workshops' and in the other case a special workshop developed as part of the Design Council's Design in Education Week. Whilst the teachers were expected to engage in the activities as designers, there was also the explicit expectation that these activities could be transplanted into the classroom and used by the teachers to enhance the design skills of their students.

The perception of how it 'worked'
The designers felt that the response of the teachers was not only one of energetic enthusiasm, but also that the activities were transferable into the classroom.

'I think they were a bit shocked by some of it - but it's usable in schools' (IDEO designer)

'Yes - they said so - though there was some comment about the hot glue gun. It is also a bit sticky and messy and seemingly uncontrolled. But it's very creative.' (Dyson designer)

The DM staff were also confident that the outcome was as they had hoped.

'Very positive. Different responses to some extent on group dynamics. We feel personally existed. The workshops seem to really engage people. Everyone seemed happy to get stuck in and have a go.' (DM staff)

The greatest area of apprehension concerned the extent to which these approaches would result in work that is acceptable to the examination boards.

'The main fear they were concerned about was losing A-C grades by doing something that they were not used to allowing by the GCSE boards.' (Dyson designer)

'There is a strict curriculum in their schools - followed closely - with checklists of things to be done. They feel constricited by it. They need to get some fresh air into it. Definitely we think it would open classrooms and inspire a bit more creativity and imagination in kids designing.' (IDEO designer)
The perception of the providers was clearly that these days had worked, and had worked at two levels. First they had engaged the teachers, encouraging them to operate creatively for themselves as designers in the workshop environment. Second it had worked to encourage the teachers to think about bringing the practice of the leading-edge design industry into the realm of schools and classrooms.

We turn now to the data from teachers. What do they say about the day? How valuable was it to them?

**Findings from the teachers**

<table>
<thead>
<tr>
<th>i) the starting point of the teachers</th>
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<tbody>
<tr>
<td>At the start of the day, 61% of teachers rated their confidence in developing creative responses in students as ‘high’ or ‘very high’. None rated themselves as ‘poor’. However, when we asked teachers to identify their strengths and weaknesses in relation to this, there emerged two broad areas of weaknesses and uncertainty underlying this stated confidence. Specifically, teachers lacked knowledge of the design industry, and they were uncertain about how to develop design skills and inspiration.</td>
</tr>
<tr>
<td>Little knowledge of industry (weakness) T. No. D/1/1</td>
</tr>
<tr>
<td>‘Coming up with original/inspiring ideas’ (weakness) T. No. E/7/1</td>
</tr>
</tbody>
</table>

When asked teachers to prioritise their values for design & technology education (from a list we supplied in the questionnaire), their ranking was as follows:

1. Communicate ideas
2. Work creatively
3. Visualise objects/ideas
4. Have ideas
5. Make things
6. Develop research skills
7. Be practical
8. Understand needs/clients
9. Plan carefully
10. Think laterally
11. Be innovative
12. Present work professionally
13. Work in teams
14. Follow instructions
15. Consider industry

The low priority given to aspects that relate to the industry focus of the workshops (considering industry, teamwork, presenting work professionally) is revealing here, and we believe it reflects the low priority it takes currently in their practice. When asked about the ‘essential outcomes’ for the day, the teachers were very clear that they wanted to develop a richer ‘understanding of the design industry’ and also to learn techniques for developing creative responses in students.

Three dominant concerns were elaborated through their stated ‘desired’ outcomes for the day; specifically to have classroom resources and classroom implementation ideas to take away at the end of the day.

- Information/resources to take back to school. T. No. A/2/1
- Teaching materials/information to help develop good lessons relating to current design manufacturing. T. No. D/3/1
- Resource pack for KS4. T. No. D/4/1
- 'Transferring the skills gained for use within the classroom.' T. No. EM/1
i) achieving the objectives of the day

From each of the sessions observed, teachers commented enthusiastically on the clarity and value of the day: from the AKQA workshop 'clear progression through ideas' (T.No. A1/1); from the Dyson workshop 'clear overview at the beginning' (T.No. C8/1); from the Paul Smith workshop 'the agenda was well laid out' (T.No. D5/2) and from the IDEO workshop 'Aims were well covered' (T.No. E5/1).

The particular things valued by teachers were having presenters who 'know what they were talking about'; the emphasis on 'hands on' learning; the range of modelling techniques; the pace, the enthusiastic and stimulating nature of the day; and the way the teachers felt more able to deal with both creativity and the design industry in the classroom.

Creativity is quite difficult to teach, today's presentation has helped make this more easily delivered in school.' T. No. E5/1

ii) bridging the industry / education gap

The extent to which the workshop addressed the industry/education gap received very strong commendation, with 71% of teachers feeling this had been handled 'very well'. Teachers valued the fact that they were interacting with professional designers, commenting that this provided high quality information and a sense of realism. The comment also included on how positively the designers engaged with the situation.

'A fascinating insight into how Paul Smith works. I was very impressed by how willing Sue and Clare were to discuss the business.' T.No. D7/1

'Listening to someone on the shop floor who could answer so many questions.' T. No. D11/1

iii) linking back to the school curriculum

There is less clarity about the extent to which the workshops provided teachers with skills, resources and understandings to take back into schools.

For some the workshops had clearly been very successful.

'Sharing how real designers do things and realising we could easily take the same approach at school.' T No. C6/1

'Could definitely be done in a class of pupils.' T. No. C6/1

'Very good, useful for us within the class in all areas, KS 3/4 and A level.' T.No. E4/1

'Short focused tasks were relevant to classroom activities.' T. No. D11/1

'Examples used are easily adapted to classroom situation.' T. No. E6/1

Others saw this aspect of the workshops as less successful.

'Needed more application of how in school and where to place it.' T. No. D9/1

'Would have been useful to have more practicalugs to take back into the classroom' T. No. E7/1

'Lack of 'physical' take homes in handouts.' T. No. A1/1

iv) differences between KS3/4 and the 6th form

This difference of opinion may partly be due to individuals' levels of confidence, there are indications that teachers found it more possible to apply what they had done in the workshops to 6th form work 'with older students' than to work in KS3 and KS4. This came out in two ways.

A teacher who stated explicitly that it won't work for her at KS3/4.

'As an art and design/textiles teacher up to age 16, I can't get into the real gritty of the fashion industry.' T. No. D7/1

In addition, the comments from several teachers about the applicability of the workshops to activities in the 6th
form with AS and A2 programmes.

"An excellent day. The whole process would be useful for post 15+ students." T. No. C/8/1
"Quality of information (about design process) ideal for A2 work." T. No. D/8/1
"I think these examples will work well in the classroom with older pupils." T. No. D/8/1

This message was further elaborated in the two formal teacher interviews conducted later in their schools. Teacher A suggested quite specifically that the sessions should also be offered at KS 3 level (implying that the one she had attended had not been) where there is a huge need to develop more creative approaches to designing and making. Both teachers said that the activities weren't immediately transferable to this lower age group. Moreover it was felt that some of the ‘take-away’ materials needed to be ‘translated’ for classroom use at that level and that these could be developed further. They pointed out that the prompt cards, visual images and other resources that are so valuable to this approach are very time consuming and difficult to reproduce.

Both teachers were clearly enthusiastic about the sessions and had personally enjoyed the ‘immersion’ approach of many of the activities provided. The practical element of the workshops was seen as most beneficial and it was this that could be followed through at key stage 3 - and extended to teachers making handling collections for their own use with younger groups (for example, in smart textiles).

The ergonomic handling workshop for 6th formers could be extended for teachers - how to produce this handling collection and its scheme of work. (Teacher A, interview)

v) confidence in developing creative responses

Having asked teachers at the start of the day how they rated their confidence in developing creative responses in learners, this question was asked again at the end of the day, to see if there was any change in their views.

The shift in responses is shown below. The percentage of teachers rating their ‘high’ or ‘very high’ had risen from 61% at the start of the workshop to 92% by the end of the session. The teachers who were less certain of their ability in this area (the ‘OK’ group) had shrunk from 39% to 7%.

![Confidence in developing creative responses in learners](image)

It is important to identify the reasons for this positive impact, and in this case it was easy to do. There was a strong feeling that the principal reason for the clear success of the workshops lay in the value of ‘hands-on’ experience and practical strategies, specifically related to the modelling techniques that were presented and explored during the workshops.

"New ways to inspire creativity - not just sitting and trying to come up with something." T. No. C/8/1
"Tips for modelling." T. No. C/9/1
"I made a model which I am pleased with." T. No. C/5/1
"Gained understanding of generating ideas." T. No. D/7/1

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page 8
We asked teachers how the workshops had improved their ability to support learners. And we compared their responses to the rank order that we had produced from their responses at the start of the workshop.

It is interesting to note that ‘creativity’, ‘having ideas’ and ‘communicating ideas’ stay high in the ranking. But it is even more interesting that ‘being innovative’ has shot up the ranking and that this is mirrored by the industry related elements that the teachers had experienced during the day; notably ‘consider industry’ and ‘working in teams’. The biggest ‘losers’ in the rankings are ‘make things’ and ‘plan carefully’, and both of these give us insights that we explore below. The combined list is shown below with red arrows indicating the ‘losers’ and blue arrows for those that had been elevated in the rank order as a result of the workshops.

<table>
<thead>
<tr>
<th>RANKING IMPORTANT FOR D&amp;T</th>
<th>DEVELOPED THROUGH SESSION</th>
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<tbody>
<tr>
<td>1. Communicate ideas</td>
<td>Work creatively</td>
</tr>
<tr>
<td>2. Work creatively</td>
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</tr>
<tr>
<td>3. Visualise objects/ideas</td>
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An overcoming the ‘play-safe’ ethic

In developing teachers understanding and skills, we must always keep in mind the priorities that drive current practice in schools. There is an accumulating body of evidence that - in design terms - these practices are defined by the priority to ‘play safe’ in the face of the prevailing audit culture in schools. This priority operates as much for students as it does for teachers. Students are assessed in their project work against criteria established by examination boards (for GCSE, AS and A2 level awards), and teachers are assessed against related criteria and league-table performance scales. The resulting ethos is not supportive of creative risk-taking in the classroom, and indeed has been described as one of “coercive and authoritarian governmentality” (Shore...
and Wright 2000). It is in this setting that priorities like careful planning and careful making are elevated above risky modelling. So it is no small achievement that as a result of the workshops, the creative - and risky - ethic has (to some extent) prevailed in the minds of the teachers, reducing the priority of ‘safer’ practices.

We have already drawn attention (page 4) to the extent to which the designers and Design Museum staff were aware of these concerns.

- "The main risk they are concerned about was losing A-C grades by doing something that were not sure was allowed by the GCSE boards" (Dyson designer).

The extended interviews with teachers enabled us to get closer to this issue. Teacher B, who had recently completed a d&i degree, felt that design in schools didn’t allow opportunities for real creativity, being curtailed by exam board requirements that didn’t reflect how designers operate in industry.

- "The look beautiful syndrome operates at two levels - both in portfolios (where the graphics have to be beautiful) and in the final product (where the workmanship has to be beautiful). Both interviewees were clear in their shared understanding that assessment leads design in schools and that in order to satisfy grade criteria set by exam boards, designing was characterised by a ‘lock-stopping’ process. Both interviewees recognised that although teachers are uncertain about the reaction of examiners to the more experimental nature of designing exemplified in the workshops - there will be a tendency for teachers to ‘play safe’. In the prevailing audit culture, we can hardly expect otherwise.

In the light of these concerns and of the comments of Ofsted (see page 1) on the superfluous decoration of design folders, it is interesting to note the parallel comments of Ofsted on primary d&i, where there is not the same external assessment pressure.

- "By contrast with secondary schools, this assessment (formative observation) is less influenced by the visual quality of design portfolios and concentrates more on pupils’ ideas and their ability to develop them." (Ofsted 2002b) (our words)

Six interviewees enthused about the value of practical engagement with a design ethic that is dramatically in contrast with the approaches that typify school-based (examination-oriented) designing. Specifically the priority given to spontaneity, quick thinking, quick modelling, instant trying-out, and immediate modification as part of a process of iterative designing was warmly welcomed. They both thought that d&i would be much better if it incorporated more of the activities they had experienced in the workshops and that there should be an ethos of ‘making it better’ in schools rather than an emphasis on ‘pretty portfolios’ and on the manufacturing quality of the final product.

- The value of direct, hands-on activity

Teacher B highlighted the importance of having the opportunity to engage in these approaches herself at the beginning of her d&i course, although she was already a part of what she teaches at A2 level, the experience of being taught how to make a real design situation developed her knowledge about how to improve this aspect of her own teaching.

- "I am more confident in card modelling now - and in my own view of designing in making mistakes. The emphasis on iterative design reinforced this view." (Teacher B, interview).

Teacher also felt that the workshop had changed the way she thought about design at university and how it
could be better linked to 6th form study. Design competitions of the kind that exist at university could be introduced at AS and A2 level to give students a better understanding of the importance of prototyping. She felt that the modelling activities in the workshop were very relevant to practical activities in the classroom. To this end, the 'case study' approach from the Dyson team - looking at the development of the DC05 from breadboard to final prototype - was easily transferable to case study work in the classroom.

It is important to note in these interviews that both teachers talked at length about the value of the approach in the context of AS and A2 level study. They felt that working with relatively small groups of able students enabled them (the teachers) to operate more experimentally, encouraging the students to step out of the linear process characterised by GCSE d&i. For this purpose the sessions had provided 'springboards' for developing design in more challenging ways.

The 'game' ideas and how to set up situations for design gave me new approaches for stimulating thinking in the classroom. My A2 group look to this 100% - especially through extra curricular work with drama. I feel very confident in using some of the activities again - and have planned to do so.
(Teacher A, interview)

Conclusions & recommendations

1. **The programme was very effective and should be further developed.**
   There is absolutely no doubt that the Designers in Action programme of workshops has been received with great enthusiasm by teachers. Throughout the workshops, the attitudes of the designers, the hands-on experience, the practical strategies and the 'real world' design industry understanding came in for strong commendation. The teachers worked through the days with real energy and excitement and report in glowing terms about the value of the workshops in helping them to be more creative - both as individuals and in their teaching. To that extent, the objectives of the programme have been met - three of them comprehensively and the other two in part.

   Specifically, teachers report that they have a much fuller appreciation of practice in the design industry (objective 1); that they have greater personal confidence concerning creative approaches in the classroom (objective 2); and that their personal design practice has been stimulated and extended (objective 4). Given the comments of the Ofsted inspectors concerning the teaching of design processes in schools, teachers desperately need the kinds of experiences provided by these workshops. We commend the Design Museum for launching the relative, and unreservedly recommend that the programme be developed and extended so that it can be offered to many more teachers.

   - 'an excellent day - well done' (T. No. C/6/1)
   - 'excellent, hands-on work. Good sharing about industry' (T. No. D/1/1)
   - 'a nice insight' (T. No. C/2/1)
   - 'bolder understanding of generating ideas' (T. No. D/1/1)

2. **The link to classroom practice**
   Throughout the data there is evidence of the extent to which some of the teachers felt confident about taking materials into their classrooms (objective 3) so as to raise standards in design & technology (objective 5).

   - 'demonstrated activities: one could use in class' (T. No. D/7/1)
   - 'some different, adaptable to the classroom' (T. No. E/1/1)
   - 'very appropriate to schools' (T. No. C/2/1)

However, there was a significant number of teachers who were somewhat less convinced about the extent to
which the workshops provided practical strategies for school use. The clearest discriminator between these two groupings appears to centre on the age of the students. With 16+ groups the approach and the activities were seen to be appropriate and valuable, but with KS3 and KS4 they were seen to be in need of adaptation or translation.

Many of the teachers’ initial implementation activities have been with 6th form students, with whom they have in effect re-run the activities that were experienced in the workshop. To make this more readily manageable, it would have helped to have a take-home resource pack of activity sheets, resources and associated handouts from the day:

‘very useful for 16+ groups’ (T. No. E/3/1)
‘the whole process would be useful for post 16+ students’ (T. No. E/3/1)
‘little information on materials for rapid prototyping’ (T. No. C/3/1)
‘could have maybe purchased a video??’ (T. No. D/1/1)

But making the activities work with small groups of 6th form students is very different from making them work with large groups of KS3 students as part of the National Curriculum. Again there was a need for specific resource materials prepared in such a way that they could ‘translate’ the day’s workshop activities into manageable KS3 activities. Equally there is a case for some time to discuss the potential and application of such classroom activities within the workshops. Again there was evidence that it was happening, but teachers report that they would have appreciated more:

‘not really related to the national curriculum’ (T. No. D/6/1)
‘need more application of how in school, and where to place it’ (T. No. D/6/1)
‘would have been useful to have more practical examples to take back into the classroom’ (T. No. E/7/1)

The interface between industry practice and classrooms was lubricated by the presence of the Design Museum staff. This was helpful, but could have been richer if they had been able to provide real classroom resource materials that derived from the activities in the workshops. We are conscious that some of the later workshops did include some guidance materials, but these could have been more detailed; related to actual practice; and discussed in discussion during the workshops.

Accordingly we have two recommendations in this area. First, that the existing workshops would be more effective for school implementation if teachers were able to go away with a pack of materials and resources derived from the day, but specifically designed for use in the classroom and discussed during the workshop. Second, that these resources should be designed in such a way that they clearly identify how the approaches can be adapted to KS3 practice with large groups of non-specialist students.

J  Dealing with examinations and examiners (particularly at GCSE)

There is considerable evidence from the workshops that teachers are nervous about taking risks with the examination success of their students. They need the A-C grade pass rates to be maintained. Accordingly they will not make dramatic changes to their existing ‘successful’ classroom practice without the certain knowledge that any new approach would gain equal credit (or greater credit) with examiners:

‘the exam boards lack creativity awareness in marking schemes’ (T. No. E/1/1)
‘the main risk they were concerned about was losing A-C grades by doing something that they were not sure was allowed by the GCSE boards’ (Byson designer)

This background influence is one of the major factors in some of the worst practices highlighted by Ofsted inspectors in design & technology; in particular the ‘prettying-up’ of formulaic paper-based portfolios. GCSE examiners need to see (i) that this is a pernicious influence in design & technology, and (ii) that it is nothing like
real design practice.

We recommend that the Design Museum takes this issue head-on by running a workshop (or series of workshops) of this kind specifically for GCSE examiners. This in turn needs to lead to an opening-up of the concept of design as reflected in examination syllabuses, embracing the approaches presented in the workshops. In particular it is essential for examiners to see it as appropriate that designing can be done predominantly through models and prototypes. Quoting David Kelley, the co-founder of IDEO, Myerson (2001) reports of the IDEO approach to designing.

We build lots and lots of imperfect prototypes not because we think we’ve got the right answer, but to get responses from buyers and users…. We’re into multiple realisations of what the future can be. ‘Faking the future’ describes the rough and ready IDEO formula of building lots of crude prototypes…. ‘fast fearless prototyping’ (Myerson 2001 p32)

GCSE assessment criteria need to take this approach seriously and give it full credit. We recommend that the Design Museum should take on this challenge through workshops of the kind that teachers have experienced in this series.

and finally

The teachers were asked to identify the ‘best’ and the ‘worst’ things about the workshops. Their lists of ‘best’ things have been used throughout this report as illustrative of their responses. Teachers found it much harder to identify the ‘worst’ features of the workshops (there weren’t many), but, when pressed to do so, they did their best. The list is telling;

‘not having ALL the department here to experience this’ (T. No, E/1/1)
‘not long enough’ (T. No, D/5/1)
‘it having to end’ (T. No, E/1/1).

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The Home : new fields of creation

Influences of changes in society on spatial use & product design

by

Gérard Laizé
Chief executive of VIA*

* VIA (Valorization of innovation in furniture) was set up in 1979 on the initiative of the Development committee of the French Furniture Industries with the support of the Ministry of Industry. Its mission is to valorize and promote contemporary creation in furniture design (furniture, lighting, tableware, decoration accessories, textiles...) both in France and abroad.
People have been talking about the crisis in society for a long time. Little by little, we have come to realize that what we are experiencing is in fact a profound and accelerated change.

If markets are in glut, it is often because there is too much of the same thing on offer - too much being made in the same way.

But people, meaning users, have changed in their behavior habits, individually and collectively, and this has significant influence on the functionality of the objects that they use.

So beyond accepted ideas and principles, and words that have lost their meaning, how can we imagine and design the objects that surround us using a different logic?

At the dawn of this millennium, even moreso than with the new century, there is no doubt that the influence of historic dating is an incentive to call things into question, change, create and invent... since evolution phenomena in our society seem to be speeding up.

This implies identifying – in the context of change itself – the main currents of sociological evolution (new lifestyles, family structures, currents of thought...) liable to have lasting effects on our everyday environment, professional and private, concerning both our main activity and our leisure.

With regard to fundamental new functional logics, this approach puts people at the center of thought, the main aim being to improve their well-being and comfort.

This approach uses the principles of ethology, the science of behavior patterns of a species in its natural environment, extended to humans*. It considers political and social organization, environment, means of transport and communications, architecture, interior layout and decoration, furniture and clothing – everything that is part of the evolution of humankind.

An approach of this type ignores passing fads and style effects, even if it leaves them total liberty of application.

It also breaks with purely formal concerns, whose superficial nature has often been criticized.

* See the works of Thierry GAUDIN, a specialist of prospective ethology, and of Boris CYRULNIK, who has introduced clinical ethology to a wider public.
Projecting not forecasting

If it is true that we cannot even hope to say what the future will bring with any certainty, we can at least pinpoint certain factors already at work in any context, which prefigure the purposeful currents of evolution of our society and their influence on human behavior.

Thus each civilization generates the one that follows it by allowing the seeds of change to grow (willingly or otherwise).

Today, a number of clues suggest what tomorrow will be made of.

We are now in the flow civilization, having moved on from the machine civilization (a product of 18th century changes in technology) that followed on from the agricultural age (which lasted for thousands of years).

Flows of information that swell our fields of knowledge; flows of people that favor exchanges (France is the first travel destination in the world: 70 million tourists in 1998, up 7% on 1997); flows of merchandise opening the world market (61 countries supply the average supermarket).

New tools accompany these changes (desktops, cell phones, on-line networks...) calling into question work organization. Working in groups or at distance is becoming a reality, the status hierarchy is giving way to the skills hierarchy. The border between professional and private life is becoming indistinct (18,5% of French families owned a computer in 1998, a 30% rise on figures for 1997, with 22% for 1999; in 1998 for the first time sales of computers exceeded those of TV sets; 15% of the labor force work half their time in their own homes; there were some 11 million cell phones in France in 1998, with 19% of French users). 3 million people used the Net in France in 1998, the figure is up to 10 million in 2000.

Time and space no longer have the same value

The border between professional and private life is becoming less distinct in the face of new means of communication and new ways of managing material and human flows.

This evolution of our society is accelerating, forcing us to question our management of time. Under the impetus of new information technologies, everything is speeding up, and because we tend to think globally now, in our space-time management it is worthwhile to differentiate what is destined to go on speeding up (data flows, transports...) and what will always demand a certain amount of time to guarantee added value (such as fundamental research or the making of a one-off piece...).

A civilization of intelligence in which knowledge constitutes the prime resource, where technologies are used in better ways and materials are becoming more intelligent.

Nowadays a technological generation lasts five years. From 2000 on it will last three years. The mass of data doubles every seven years. No wonder Encyclopaedia Universalis no longer publishes annually (it now comes out every decade) but is updated every week on the Web.

In 2040 the mass of data will double every seventy days.
On graduation day, 50% of the teaching a student has received is outdated.

We are moving from an economy of brute force to an economy of intelligence. Knowledge is the prime resource.

People are better educated (the matriculation objective for 1998 was 70% pass) and better informed, and are thus liable to be more sensitive, critical and demanding.

A plural civilization made up of capable educated individuals, well-informed thanks to the media (online networks, satellites, phones...), mixed on the ethnic and cultural plane (in the space of three generations, a quarter of French people have been immigrants; 13.5 million French people went on holidays abroad last year), and with a heightened critical awareness that incites them to seek a more truthful way of thinking. People willing to question accepted models and who are open to new concepts that appeal to a wide range of individual personalities, following the principle of elected affinities.

Landless peoples are emerging, creating diasporas: the Kurds, for example...

Minority cultures are breaking out of their borders: Celtic music, for instance...

A civilization of extremes, extending the limits from the smallest to the largest. The world of the invisible is becoming visible. We can observe galaxies 165 million light years away (VLT observatory, Mount Paranal, Chile). We can measure time to 0,000,000,000,001 of a second, a record broken in 1996 by the Times and Frequencies lab at the Paris Observatory.

Storage capacities in computers have also expanded phenomenally in recent years: IBM’s microdisc, which is the size of a penny, now has a capacity of 380 mega octets, whereas the first generation of desktops in 1980 had only a 10 mega octet memory. At the same time things are getting smaller (up to a billion components in a chip in 1997). In 2020 skyliners will carry 1000 passengers on 20,000 kilometer hauls – Aerospatiale’s ‘Manta Ray’ project is an example. Hotels will have 3000 rooms or more to cater to congress participants and tourists, on the model of the Paris Hilton in Las Vegas.

Weaponry is also increasingly powerful, and strikes with more precision.

Multi-national corporations already represent financial might in excess of world powers (for example, General Motors, the world leader, has an annual turnover of 175 billion dollars, which is three times the budget of France; Elf-Aquitaine, the leading French group, has an annual turnover of 46 billion dollars, the equivalent of the French budget; and we’ve all heard of the increasing financial power of pension funds).

On March 1st, 1999, the Société Générale-Paribas group became the leading French financial group, the third on the European level and the fourth on the world scene.

The megalomaniac budget of the movie ‘Titanic’ (215 million dollars) no doubt contributed to its success – 20 million people saw it in France alone.

In distribution, megastores are here to stay (Virgin, FNAC, Sephora, Grand Optical...) to cater to a public that demands the widest possible range.
Major worksites also tend to be outsize: the François Mitterrand library and the Stade de France in Paris are examples.

We are also living in a society of widening fractures between rich countries (G7) and developing countries (in 50 years, the number of rich people has doubled, while those of poor people have tripled; there are said to be 7 million disadvantaged people in France). There are great discrepancies between high birth rate countries, such as Algeria, where 50% of the population is aged under 20, and low birth rate countries like France, where by the year 2030 around 30% of couples will be aged over 60. Three babies are born in the world every second. There are breaks between city centers and urban peripheries, between big cities and rural areas (urban areas concentrate 90% of France’s population). There are differences between so-called ‘normal’ couples and those formed by people ‘living together’ (5 million men and women, representing 15% of couples), and between ‘normal’ two-parent families and remarried or single-parent families (one marriage in two ends in divorce in Paris, 2 million children live with a single parent, one woman in three lives with her child of less than 15 years of age). And there are widening rifts between people who work and those looking for work (12% of the active population in July 1998).

World markets, which encourage mergers between groups to increase their size, often have disastrous effects on employment (the Boeing-McDonnell Douglas merger meant a loss of 48 000 jobs; the Hoechst-Rhône Poulenc deal generated a loss of about 10 000).

We are living in a society of old people who don’t want to get old (in France there are 6000 people over the age of 100, and by the year 2050 they should number 250 000; 12 million people are grand-parents). At the same time many young people have trouble finding their first job (25% of the 25-to-30 age group live with their parents).

Today, there are 6 billion people living on the earth; 400 million of them are aged over 65 (including 35 million in the USA). In 2015 there will be 11 billion people on our planet with 3 billion aged over 65. In October 1998, the first international conference for elderly people was held in Paris. The main topic of discussion was the need to develop solidarity between generations.

Apart from all this we are living in a society that can no longer control its excesses. For some time now, nature’s cycle can no longer absorb the waste produced by humankind. Advances in science, notably in genetics, raise more and more moral issues.

Water, a natural resource vital to life yet often wasted, is becoming increasingly rare (200 liters are used per person every day). And it is becoming more and more expensive (up 150% between 1985 and 1998). Water shortages threaten a third of humanity.
Factors of society that influence human behavior

The influences mentioned here, which are by no means complete, may constitute working hypotheses to create new products or adapt existing products on the basis of potential new needs that respond to latent demands rooted in behavior patterns and functional logics.

1 - Changes in human morphology in recent generations

Today, a young man at the end of his growth cycle is an average 4.5 centimeters taller than his father and 7.5 cm taller than his grandfather. Young women are an average 3 cm taller than their mothers and 5 cm taller than their grandmothers.

In 1970 one man in every ten measured 1.80 cm; in 1991 the figure was over one in five, and over one in three among young adults.

The reasons for this are manifold:

- While certain genetic factors may be in play, our life styles are more directly responsible.
- People live more and more in cities, exposed to light. This means that hyphosis glands, which control growth hormones, are increasingly stimulated.
- Holidays in the sun also contribute to this trend, since sunlight generates vitamin D vital to bone formation.
- Food is another cause: young people eat more meat and cheese than older generations did at the same age. The increase in calcium and proteins is significant. Interestingly, Western eating habits in Japan (notably the arrival of the hamburger) have led ready-to-wear garment makers to modify standard sizes for the Japanese market.

Since the morphology of humankind is changing (young people are an average 6 cm taller than they were 40 years ago), it is questionable whether standard dimensions for seats are still valid. Bed manufacturers have already spotted this trend, even if the makers of bed linen are trailing behind.

Big or small, thin or fat – is it possible for us to imagine a seat with variable dimensions for the comfort of one and all? Comparatively, tee-shirts in Taiwan come in five different sizes. And are work surfaces in kitchens and bathrooms still at the right height?

2 - New principles of upbringing

We must also take into account principles of upbringing, which have changed a lot since the 19th century, when it was frowned upon to 'offend the back of a chair'.

Today, few parents tell young people to ‘sit up’.

And just as this laid-back posture is accepted for young people, it is also becoming a norm for workers who use multimedia devices (such as exchange bank tellers or computer operators).

Have the functions of seating evolved in phase with evolutions in both the professional and the private spheres? For example, are relaxing chairs for senior citizens only?
3 – The influence of new multi-media devices

In December 1998:
- 95.6% of French families owned at least one TV set,
- 37% owned two,
- 18.5% owned a desktop computer,
- 19% used a portable phone.

Evolutions in information technologies, what with cable and satellite, will mean hundreds of TV channels (many interactive) in every home in the not too distant future.

On-line networks will proliferate, enabling people to communicate worldwide. TV sets and desktops will probably merge, though it is hard to say which will evolve towards the other.

Today, French people spend an average three and a half hours in front of their sets (four and a half for people over 60), even though most adults were born before the coming of television. (People aged 100 in 1996 first watched TV at the age of 65). Tomorrow new generations will grow up with both TV sets and desktops at their fingertips, and will be even more familiar with these IT devices.

18 million electronic games were sold in France in 1998 (up 50% on ’97).

Apart from the time spent using these devices, the reason for their use is considerably influencing the behavior of users, and in turn the furniture environment that surrounds them.

Ergonomic considerations linked to behavior patterns with regard to these new devices (from passive reception to interactivity) will imply a shift from passive comfort to active comfort.

How can we furnish the relationship between people and the media world?
- Where will we place or integrate these devices?
- What will they be associated to?
- How can we accompany active and/or passive viewing/use?
- What ergonomics will improve the comfort linked to these movements?

These are some of the questions that lead us to reconsider the furniture environment linked to new components of everyday life.

They imply:
- that we should revise our ideas of comfort, both individual and collective,
- that we should take into account changes in human morphology and its consequences on the dimensions of furniture,
- that we should design responses in the form of global environments to meet user demands (seats + supports + utility pieces + lighting + accessories) and according to potential locations (living room, bedroom...).
4 – The development of work at home

The organization of work is also undergoing rapid change.

15% of the French workforce work 50% of the time in their home.

The use of new IT devices is influencing the behavior patterns and posture of users. 18.5% of French families have a desktop (39% in the US, 25% in Germany); there are 400,000 fax machines in French homes (the market has doubled in two years).

Ironically, there is talk of extending the active work period of certain categories, and of reducing the number of working hours for others.

The division between individual and collective work is having an increasing influence on the layout of spaces as much as on furniture design.

Cultural, charity, social or leisure activities are developing in a complementary manner or in parallel to paid work, calling into question ideas of status linked to human activity.

Telephone work is expanding (optimal forecast: 300,000 jobs in 2000).

Drive-in offices are being set up.

Excepting for children (66% of the desks bought by private people are for kids), there does not seem to be a real demand for ‘work surfaces’ on the part of adults who work at home.

Adults tend to practise a sort of nomadism in the home, moving from table to table depending on the work to be done.

This does not mean that there is no market for adult desks. But if people want one, it is often less for its functional qualities than for the meaning it conveys (hence the interest in highly evocative styles).

How can storage be optimized?

Storing personal documents (paper documents, diskettes, video, computer & sound equipment) is a growing concern, since there is a need for discretion and confidentiality at the same time as a problem of space-saving (vertical arrangements).

This is an incentive to study supports for computer equipment and small mobile storage cabinets in which equipment can be put away after use.

How can we design an ergonomic seat using domestic aesthetic codes?

The second preoccupation concerns comfortable seating for work (active comfort versus passive comfort) with devices that demand both rotation and tilting of the seat as well as horizontal movement.
These functions are of course already designed into professional seating, but they will now have to be dealt with using domestic aesthetic codes.

How can furniture contribute to conditioning people for work?

Getting to work in an environment designed for leisure isn’t always easy. This is why people who work independently have always felt the need, whether conscious or unconscious, to create an airlock between their home life and their professional activity. The journey by car or public transport, the few steps that separate the home from the office, the double door that isolates the professional person’s work premises from his or her living space.

When a professional activity is carried on in the home without there being a special room allocated to it, support furniture has to fill an extra function by conditioning the person for work (for example, the cabinet).

The solution seems to lie in taking into account the idea of ‘ritual’ that is linked in an indispensable way to all activity in the home, like a warming up process.

5 - Furniture environments for senior citizens

In 1996 there were 12 million retired people in France (8 million in 1980) representing 20% of families.

There are 6000 people aged over 100 in France today. By 2050 there should be some 250,000. Every year people gain an average three months in life expectancy.

A third of the budget of retired people is spent on padded seating. They account for 50% of the easy chair market and 35% of the armchair market.

Sleep comfort is also a prime concern for this target group. They purchase a quarter of mattress lifting beds (in units), representing 40% of the sales value (compared with the overall market for these products).

Besides the question of comfort, which does not concern retired people alone, the increase in life expectancy and the evolution of geriatric care tends to encourage elderly people to remain at home. On one hand there is the advice of the doctors, on the other the chronic deficit of the Social Security system. So designers should be thinking about specific furniture design for 'hospital care in the home'.

This entails taking into account the functional factors of hospital environments as well as domestic aesthetic codes, so that designs fit in with furniture already present, whatever the stylistic registers used may be.

- Individual beds that allow care around the patient with a raised reclining position to facilitate moving the patient.
- Chairs with armrests and with a back on which a walking stick may be hung.
- Easy chairs with systems that enable raising.
- Rounded forms and edges so as to avoid bruises.
Family structures and allocation of space in the home

Living space has always evolved in phase with the evolution of life styles, and in respect of the customs and rituals of people.

Today, as in the past, these influences remain visible.

Even so, the adaptations that recent developments demand, in terms of space sharing in rooms or in terms of the 'status' of each room (main room as against secondary room), often meet with resistances that delay their application.

For instance, in an inherited family home, people will often hesitate for a long time before changing the layout, even though the expense involved is not prohibitive. We are naturally reluctant to upend so called ‘topographic’ landmarks.

In the case of the construction of a new building, principles and constraining administrative norms often force architects to reproduce architectural models that are out of date, even where more initiative is desirable.

Apart from rare exceptions, this is no doubt why an ideal share-out of space is generally achieved only by successive touches on the part of occupants, who have had time to think out how to adapt space to their way of living and have been able to integrate new rules (for example, for the birth of a child).

When it is not possible to lay out space in a new way, people often compensate by using furniture that suggests the idea in a virtual manner (for example, space-saving solutions such as foldaway beds). This is a fill-in solution pending the move to a new home or the renovation of the old place.

What is the situation today?

The family cell, whatever its status, is more and more ‘encumbered’.

We have seen that young people now stay much longer with their parents (in 1996, a quarter of the 25-30 age group still lived with Mum and Dad) waiting for their first real job. Which doesn’t mean that they don’t need independence.

At the same time, the potential reintegration of elderly family members, even on a part-time basis, is not as utopian as it once seemed to be, given the increase in life expectancy (people over 65 now represent 20% of French families). There is added incentive for this with the decline of resources of retired people, the advice of family doctors, and the budget constraints of the Social Security system.

We must add to these considerations certain realities linked to the remarriage of divorced couples (one marriage in two ends in divorce in the Parisian region), which cause fluctuation in the family cell from the working week to the weekend: the temporary presence of children belonging to one partner or the other, along with the permanent presence of other children. In terms of space-sharing, the scenario might be as follows:
1 - The **living room**, as the common space, is occupied by more family members for longer spaces of time. It becomes an intersection shared by several generations and many activities go on there: meals, entertaining, relaxing, watching TV, using multimedia devices, playing games and even working...

Thanks to advances in technology (such as headsets) some of these individual activities can already take place in group contexts, whereas in the past they would have meant a disturbance for the other people present.

The living room is **above all a convivial area**. If there is a table there, it can fold out to adapt to all sorts of uses or to accommodate guests. And there are all manner of similar mobile surfaces to allow easy reconfiguration of space.

By their modularity and their layout, seats should enable both concentric and eccentric positions, depending on whether the family members occupying them are engaged in a group or an individual activity (for example, talking, reading, listening to music, watching TV). They should also allow varied postures depending on the activity, the age of the occupant, or the given moment: sitting up, laid back, legs stretched out...

2 - When parents need peace and quiet, instead of sending the kids to their rooms, they withdraw to their own room to leave the living room to the kids and their friends.

Because of this, the **parents’ room** is more than a mere bedroom. It is a **private boudoir** for the couple, a place for relaxing and introspection, for talking or reading, and even for working or having a meal together.

This is why, besides the function of sleeping, for which expenditure can only be justified by a concern for comfort, people often buy unit chairs, daybeds or easy chairs for their bedroom, or even desks and bookshelves, or small tables and chairs for snacks.

Over and above the functional aspects linked to these activities, the bedroom is also exalted on the symbolic level (note for instance the success of canopy beds).

3 - When are they going to grow up? While they’re collecting diplomas and waiting for their first real job, many young people enjoy the comfort and security of living with Mum & Dad, even if they lay legitimate claim to their independence, are ready to break with them, and resent principles of upbringing which they think are too conventional.

In the young person’s room, the kid’s bed is replaced by a bench or a platform. Young people want to be autonomous and need their own things: ‘puter, CD player, TV set.
When service rooms become main rooms

‘Wet rooms’ are where the biggest changes are taking place, since changing lifestyles are soon reflected in these living spaces.

The kitchen

In the late 18th century, what with industrialization, urbanization and ideas about hygiene propagated by the Age of Enlightenment, in bourgeois town apartments the kitchen was removed from the rest of the house while the dining room extended the aristocratic model.

Kitchens were synonymous with servant work, like the ‘souilardes’ in the Bordeaux region.

Since that time bourgeois lifestyles have spread and changed. With the development of the middle classes and new ways of living, domesticity has tended to recede. Nowadays there is less ‘servant work’ and the preparation of food is not hidden, on the contrary, following the American model, kitchen and dining room now communicate.

Technical advances have also modified kitchen design. The rationalist designers of the 30s and the influence of professional cooks, with the laboratory-kitchen, have brought improved spatial layout and better control of certain nuisances such as evacuation of smoke and smells.

The advent of electrical appliances has also freed housewives from many repetitive tasks, a movement that has continued with deep-frozen pre-prepared vegetables and meal trays.

Today, what with the aesthetic concern for utensils and improvements in preparation methods, working in the kitchen is more of a pleasure than a chore.

Housewives have made kitchens intelligent and user-friendly, and it is no surprise that men are much more present there now.

Cooking has becoming a valorizing activity, almost an art, as is evidenced by the scores of books and TV shows dedicated to it.

Besides the rise in status of gourmet and festive meal preparation, everyday meals have been simplified to cater to the needs of busy people with varied tastes.

Pre-prepared meals come in an increasingly wide variety to cater to the life styles and eating habits of people.

Advances in the kitchen of the future should concern an optimization of storage facilities, in phase with new food concepts, their mode of conservation and shelf life. At the same time there will be a reduction in the number of utensils needed for preparation owing to the presence of new devices (micro-wave ovens for instance).

Adaptations may also concern functions such as capacities and dimensions of appliances, or the height and configuration of work surfaces.
There are also environmental factors to consider, such as:

- water-saving, one of the prime issues of the 21st century, which will induce makers of kitchen accessories to aim at cutting all waste of ‘liquid gold’ and reducing consumption.
- recycling of waste products, what with the growing awareness among consumers of the need to respect nature, which can no longer absorb the waste produced by humankind.

The bathroom

The puritanism of the 19th century, which discouraged people from giving too much attention to their bodies, and the uneven distribution of water supply to houses (Saint Martial-le-Vieux in the Creuse department, population 130, only got running water in January 99), meant that not until the mid-20th century did the bathroom move away from the bedroom or kitchen (depending on the social class). The room where people washed soon got a WC and proper bath and shower fittings.

In France, the development of private home ownership did much to encourage modern design in bathrooms.
Today, eight families out of ten enjoy ‘complete comfort’ (WC, shower & bath, heating). The figure was only 48% in 1975.

Like the kitchen, the functional aspect of the bathroom has led designers to study the basic human movements linked to personal hygiene. Fittings are updates of traditional elements: the wash stand extends the basin, the bath the old tub. The big innovation is running water.

The furniture in bathrooms is much the same as that found in kitchens.

But in the past two decades there has been growing interest in body care. The development of sporting activities and the increased offer of dietary and body care products testify to this.

The status of the bathroom is now not so much that of a place for washing as of a place for body care, where people revitalize themselves.

The new activities that go on there, and the longer time people spend there have influenced the spatial layout and functional configuration of certain fittings. The make-up table at seat height is a good example. Other changes include shower roses that have massage jets or that cut water waste, which tend to oust the full bath tub that softens the body and wastes water.

Wave tubs and jacuzzis are marking time, since the focus is now on the shower recess and its sophisticated fittings inspired by spa resorts. The recess is now a room within the bathroom.

Besides functional changes, the new interest in bathrooms also gives designers and makers the chance to experiment with new symbolics, as bases for expressing decorative registers.

Unlike other rooms, which may be judged solely on their decorative merits, kitchens and bathrooms blend aesthetics with efficiency and levels of amenity in fittings. Innovations in devices and materials are more easily accepted there.
Last but not least, **gardens and balconies** are now seen as **spaces for living**.

There are 13 million private gardens in France (11 million in homes) and some 4 million terraces and balconies.

Families spend an average of 240 dollars per annum on garden furniture.

People have always liked to potter about in the garden.

Whether it is a pleasure garden or a kitchen garden, the same care is taken. Communion between inspiring and all-healing nature, undisciplined and exuberant, and humankind, all-conquering and passionate, often degenerates into a struggle to tame what cannot be tamed.

Because nature takes over as soon as humans sit back.

There is no domination, no dominator, and even if humans think they are stronger than nature, they learn humility by having to start all over again each day.

In this uneven combat, it is easy to see that gardens are a good means of evacuating the stress and aggression of the outside world.

And since gardens have always evolved with people, besides feeding their bodies they also feed their minds.

In the world of today they provide a vital source of pleasure and regeneration.

Gardens are places for living, and are often laid out like rooms. People entertain and relax there, alone, with the family or with friends. And since gardens mean peace and quiet, people like to prolong the pleasure: gardens enter the house in the form of verandahs and sidetracked garden accessories.
Conclusion

As in every age, knowing how to observe and analyse the social phenomena (scientific, technical, political, philosophical, religious, moral, cultural, aesthetic...) that influence our lives enables us to adapt existing products and create new ones. The aim is always to accompany changes and to improve the comfort and well-being of people.

In this disconcerting and yet promising context, how can we acquire an instinct for imagining what does not yet exist, and that will shape the immediate future?

We have to realize that four products out of five of this new millennium have yet to be invented. Today, 35% of income is spent on products that did not even exist four years ago.

Even if certain designers are determined to innovate, notably by using new materials, the fact that their initiative is not informed by the will to supply a genuine benefit for the user often reduces creation to a purely formal game that can only satisfy its inventor.

In the world of today, products that have strong cultural or pleasure-giving values and that allow innovation, whether by new materials or new technologies, can only be justified by the will to improve user comfort and well-being, regardless of intrinsic performance levels.

This entails creating the absolutely necessary products of tomorrow, finding new benefits of use and esteem that will make products already on offer obsolete:
- by covering new functional needs linked to new behavior patterns, new activities and new media devices,
- by inventing new formulae and product concepts; by using new materials, technologies and processes,
- by re-formulating the conceptual presentation of offer (products & services); by re-thinking packaging & distribution methods,
- by directing the attention of the public towards new values of esteem, new symbols adapted to present-day culture...

...while taking into account the functional, ergonomic, sensorial and psychological factors that justify possession based on preference rather than mere necessity.

All these things invite us to reassess our principles, to think out new products conceptually before imagining their form.

The solution lies not so much in the number of products on offer as in their suitability to the real or latent demands of the moment.
The new product must be a response and/or an invitation to use.

The extent to which its pertinence is in phase with the cultural aspirations of the public will govern its social recognition and success.

This quest for the approval of the public demands more generosity in the act of creating, founded on a shared vision of things and of life.

We should never forget that the objects that surround us constitute supports for the mind.
We should put people at the center of our concerns, and see them as free individuals rather than categories that respond to the caricatures of statistic models.

If many of the components that knowledge is made of - words, numbers, sounds and images - can be assumed by technological means, the same will never be true of imagination, intuition and emotion.

One thing alone is certain, the world of the future belongs to creation and innovation. And it is not in the hands of the people who talk about it, but in those of the people who make it.

This is a big opportunity for the world of creation.

Thank you,
European Design Directions

A presentation by Mr. Philippe A. Mayer
President of V.I.A. (Valorisation of Innovation in French Furniture Industry)

1999 Melbourne Furnishing Festival
1 - Presentation of V.I.A.: its role within the French Furniture Industry

V.I.A. (Valorisation of Innovation in Home Furnishing) was created in 1979 by the CODIFA (Committee for the Development of French Furniture Industry) and the Minister of Industry.

V.I.A. has the vocation of valorising and promoting design in home furnishing (furniture, lighting, tableware, decorative accessories, carpet, textile,...) in France as well as abroad.

Following this ideal, V.I.A. has set four goals:

1- VIA diagnoses evolution trends in lifestyle matters and anticipates their consequences in home furnishing, on man’s attitude facing new technological tools, family structures, human morphology and agronomy and technology and their consequences in home furnishing. These analyses bring Via into publishing.

2- VIA collaborates to the studies of art school in France and abroad. The "appels permanents" Via commission analyses over 1000 creative files each year and finances prototypes for the most outstanding projects.
   Moreover, this commission awards a research grant called “Carte Blanche” to young designers elected for the originality and maturity of their creative approach.
   All these different projects are shown at Salon du Meuble à Paris (Paris Furniture Fair) and in Via Gallery.

3- Via advises manufacturers in the field of strategy and creation management; it can be whether structuring and optimising a collection, redesigning existing products, designing, colouring or valorise the supply through shows and catalogues.
   Via acts as a relationship platform between designers, manufacturers and retailers.

4- VIA organises exhibitions in the field of creation in its gallery in Paris and throughout the world.
   In the last twenty years, V.I.A. has acquired indisputable world-wide notoriety as a representative of creativity in contemporary home furnishing and has permitted numerous designers, who today have gained international recognition, to create in the home furnishing sector.

Christian Astuguevieille, Marc Berthier, Ronan Bouroullec, Jean-Charles de Castelbajac, Pierre Charpin, Chérief, Matali Crasset, Thibault Desombre, Rena Dumas, Sylvain Dubuisson, Christian Duc, Hans Hopfer, Elizabeth Garouste and Mattia Bonetti, Olivier Gagnère, Jean-Paul Gaultier, Kristian Gavaille, Eric Jourdan, Christian Liaigre, Jean-Marie Massaud, Xavier Matégat, Pascal Mourgue, Jean Nouvel, Joon Sik Oh, Patrick Pagnon and Claude Pelhâtre, Christophe Pillet, Andrée Putman, Eric Raffy, Irena Rosinski, Philippe Starck, Tsé & Tsé, Jean-Michel Wilmotte...
2- Panorama of the European Market

Today, a unified Europe is an economic, cultural and political reality.

It has the potential to be the number one market in the world (75.1 million Ecu, statistics from 1997).

Compared to other continents, it is made up of a patchwork of countries of ancestral and very diverse cultures.

The opening of interior borders of the European market favors, first of all, commercial exchanges (Europe remains the primary export market for each country within the E.C. representing 70% of trade, cf: exchange chart) and it exacerbates more and more the emergence of regional particularities.

Considering this reality, the European market divides its offering into three major branches:

- classic styles inspired by the historical patrimony of each region (38% of the French market in 1998).

- a so-called modern style, made up of trendy products of mass distribution (57% of the French market in 1998).

- contemporary products created by designers (approximately 5% of the French in 1998).

Talking about mentalities, contemporary creation is much more accepted in Nordic countries, Scandinavian and Germanic than in southern Europe. Development is braked in this field, more than in any other else by historical patrimonies.

To comprehend the European market, it is important to consider the role played by distribution and notably the market share of the large discount chains which tend to debase the product offering while constantly lowering prices.

(45% of the French market in 1998).

This is mostly true in France, country where 45% of the market (1998 value) is made by stores like CONFORAMA, BUT, IKEA and FLY.
3 - European creation trends

In today's European market, two major factors constitute, among others, a justification of the current emergence of a multitude of creation trends carried out by the new generation of designers.

1 - The diversity of European cultures leads to a profusion of cross cultural blends which translate into multiple new trends in creation.

2 - The increase in the education level of the masses, a result of efforts implemented by different states over several generations in the field of teaching as well as increasing the means of communication, favors the need to personalize of a public which is more cultivated, better informed and thus more critical in regards to a product offering, which the consumer demands to be more and more diversified.

This proliferation of styles of creative expression bestows upon Europe an indisputable world leadership.

Since the end of World War II, Italy has been at the head of this movement. Its creative bias is international renown, carried on by the great names of design such as Mendini, Magistretti or Sottsass. This very particular style is experiencing difficulties in self-renewal.

Today, France and England can be considered as two countries with strong potential in the field of design due notably to the quality of teaching abundantly found in such institutions as l'Ecole Nationale Supérieure des Arts Décoratifs in Paris or the Royal College in London.

After a first generation that got to international celebrity (Philippe Starck, Pascal Mourgue, Jean-Michel Wilmotte, Jean Nouvel, Martin Szekely, Christophe Pillet, Ron Arad, Ross Lovegrove, Jasper Morrison, Tom Dixon, Mathew Hilton...) a new generation appears (Ronan Bouroullec, Jean-Marie Massaud, Christian Biecher, Matali Crasset...).

Finally, recent movements have aroused a growing interest in Germany on one hand, where groups in Berlin, the fruit of a young generation culturally cross-bred and fundamentally of international spirit, break away from Germanic functionalism (Jakob Gebert, Garage Blau) but in the Netherlands too (Droog Design).

On the other hand, we have the new generation of Scandinavian design, which perfectly inserts itself into the period without parting from Nordic values.
At the heart of this general picture, 10 different trends of European creation can be identified:

1 - High-tech design

It is often the fruit of architects or industrial designers. Founded on the intrinsic qualities of the material or the technique of which they sublimated the qualities (ex: chair and table – Chaix and Morel, Jean-Michel Wilmotte, Ross Lovegrove, Martin Szekely, Jean Nouvel, Pascal Mourgue).

2 - Soft design

This trend is based on the appropriation of new materials and new technologies. The former are used for their organic virtues which facilitate an acceptance by the user. We appreciate even more so the latter as they help miniaturize to favor integration. The mastering of these materials and techniques results in a greater frugality of their use which generates a formal creative bias naturally refined, the result of a precision of line which aims at the essential (Ronan Bouroullec, Jean-Marie Massaud, Christophe Pillet ...).

3 - Neo-classic design

Currently, this type most accurately portrays the French spirit of the decorative arts in the sense that it develops lines of decorative products, which integrate the whole of the items, which make up our surroundings (furniture and accessories). It is characterized by interior architects and decorators who deal with each room individually (Christian Liaigre, Henri Becq, Philippe Parent, Nicolas Aubagnac, Philippe Hurel).

4 - Humor design

It is the result of a non-conformist thinking, which can go so far as mockery. Create a surprise in a no-frills fashion. It is efficient because it is so intelligent and so friendly (Droog design, Rudi designers).

5 - Neo-rustic design

All nostalgia aside, this recent movement is attached to natural materials, which by no means excludes a true contemporary outline (Philippe Daney, Bruno Dubois, Eric Pouliquen).

6 - Brand-name design

Many grand and prestigious European brands, notably French, wager on designers of renown to promote a dynamic international image (LIGNE ROSET and Pascal Mourgue or Didier Gomez, CASSINA and Philippe Starck, BERNARDAUD and Olivier Gagnère or Hervé Van Der Straeten, CHRISTOFLE and FOURNITURE with Sylvain Dubuisson, Christian Biecher for BACCARAT, Hilton McConnico for DAUM).
7 - Neo-baroque design

This style lays claim to the most pure ornamentals tradition for which Europe has always been the host venue.
Contrary to the minimalist works of the 80’s, influenced by desired gains in productivity, it has become a plus for personalizing product lines to meet the desires of a certain public searching for individuality (Van Der Straeten, Olivier Gagnère, Garouste & Bonetti, Thomas Bögg, Mathias).

8 - Artistic design

It is, without a doubt, the most marginal in regards to the definition of design. It always integrates a function, while using handcraft techniques resulting in limited series. It prefers a very strong creative bias with no concessions. (Ron Arad, Ingo Maurer, Pucci de Rossi, Gaetano Pesce).

Lately have appeared two new phenomena:

9 - Eco-Design

This new stream more than any else considers the subjects of environmental respect and recycling of the things produced. He expresses itself as much as in saving of material and used components in the conception of the products than by the use of recycled materials (Jane Attfield).

10 - Antique design

It is a new phenomenon which explains, if need be, just how much the validation of history is important to confirm creative trends.
This year, for the first time in France, several exhibitors have presented works from the first generation of designers, in the professional trade shows, (Charlotte Perriand, Le Corbusier, Mies van der Rohe, Prouvé, Paulin).
Conclusion:

Despite this proliferation of creative trends, European markets in the furniture sector, remain rather reluctant to the contemporary propositions for several reasons:

1- Furniture consumption can be characterized by an extremely slow biorhythm (we purchase a sofa once every 15 years, a kitchen every 30 years).

2- Contrary to other sectors of activity, namely appliances, hi-fi, automobiles ..., contemporary creation in furniture does not implicate a proportion of innovation sufficient to provoke the obsolescence of existing products, hence their substitution by new products.

3- Distribution remains hesitant in regards to contemporary creation and does not react to evolution, in contrast to other fields such as fashion or alimentary services, notably in imagining ways to seduce consumer desire rather than need.

4- Certain European populations, first and foremost France and then England, due to their historic heritage, demonstrate a cultural resistance to change.

Because of this, as it was the case for the Italian movement in the 60's, all new trends in creation must pursue international recognition before acquiring significant national acceptance.

All this must not be considered a handicap, but just the contrary, since it is a known fact that companies investing in innovation and creation experience above average growth (often in double digit figures) and export more than their competitors (in most cases, between 70 and 80% of their annual turnover).

In addition, only innovation and creation give to the countries they are coming from a dynamic and modern image on an international level that happens to be superior to the economical impact that they engender at a national level.
VIA

Introduction

VIA - which stands for Valorization of Innovation in Furniture - was set up in 1979 by the CODIFA (the Committee for the Development of French Furniture Industries), with the approval of the then minister of Industry André Giraud.

Assignment

VIA has a mandate to promote creation in contemporary French furniture in France and abroad. This entails exploring new prospects, supporting creation, giving strategic advice, conducting communication and promotion campaigns worldwide, and publishing related literature. The aim of these activities is to develop French furniture, and they concern everyone working in this field, from the industrial groups and the small and medium-sized firms to the craftsmen and the designers.

Analysis

The 1980s brought a wave of renewal in form and expression to the furniture industry, a movement to which VIA contributed substantially by enabling many creators to work in furniture design. But today there is still a gulf between the media recognition that comes from furniture designing and the market realities. This is due to a great many factors, whether economic (turnover), sociological (cultural appeal), consumerist (low percentage of family budgets), technological (a slow-moving industry), or ethnological (the lag between changes in lifestyles and new technologies and furniture at large). As a result, VIA has a wide field of intervention.
However generally accepted the idea of creation may be, in order to be effective and economically viable it needs the support of preliminary thought concerning the logic of functions and the contribution of new materials and advanced technologies, all of which influence the definition of models and their social status. Creation also needs post-production assistance, notably for distribution, to ensure the integration and diffusion of designer products among the public.

Preliminary assistance often reveals new possibilities and a rich field of experimentation for both designers and manufacturers. Strategically positioned for both observation and reflection, VIA has become a turntable for all those concerned by furniture production. Working near to the sources of creation, technology and invention, VIA encourages merging and interaction between techniques, the know-how of furniture professionals, and the innovation potential of new materials.

Whether the matter in hand be materials, function or production methods, creation itself begins long before the form concept. Similarly, the economic finality of furniture integrates ideas that are functional, cultural, scientific, technological, esthetic, symbolic and semantic.

Conscious of these different dimensions, VIA serves the profession at large by exploring new directions in research. These vistas widen the scope of furniture production from the object itself to the ideas that inscribe it in a more sharply defined harmonic register and reality.
Assistance to creation

VIA also has a mandate to support and promote French creation, serving as a go-between for the industrialists and the creators, revealing new talents, and bringing together confirmed designers with industrialists, manufacturers, or producers. Whatever the context, and whether the creators be industrial designers, fashion designers or artists, and the furniture the most highly technical equipment or models for daily life or imaginary worlds, VIA encourages exchanges, reveals market opportunities, and helps to position and define the identity of labels. Turning ideas into reality, VIA pre-finances creators' prototypes, which are subsequently proposed to producers, supports schools with subsidies for prototype construction, organizes design competitions, and ensures that new products do not simply end up on museum shelves but become a part of daily life.

Prospective thought

On function

The study of lifestyles and the analysis of the way space is used and divided up in the modern world, whether in the home or the office, inevitably raises questions of function.

In order to envisage new logics of function, furniture production has to confront the major changes in modern manners and lifestyles, since they alone reveal what the near future and its concerns may be. VIA pursues this goal by engaging in prospective investigation, interviewing key figures not only in design, architecture, industry and distribution, but also in philosophy, sociology, fashion and communication. The results of this investigation concerning people, their well-being, and the adaptation of the habitat to current and future trends, are given in publications and seminars.
On materials

Creation is a term that covers a field far wider than the plastic arts, just as questions of form and style in esthetics are the expressions of far wider issues. The big changes in creation are always based on innovations in materials or technologies. And while major innovations are mainly technical, they soon become cultural before moving into esthetics and semantics. Conscious of this, VIA conducts research into materials in collaboration with the big industrial suppliers, and with research and development departments.

By federating specific research into plastics, wood, glass, textiles, coverings, surface treatments and even metal fittings, which constitute the compulsory standardized technical vocabulary for designers of medium and large series, VIA emphasizes the potential character of a material even before it becomes the object of a proposal in form.

Strategic advice

As the outgrowth of a profession, VIA has a mandate to work on the leading edge of thought and research. An interface between industry, craftsmanship and creation, VIA diffuses the results of its market knowledge and plays an advisory role for industrialists, manufacturers and craftsmen. Creation as an innovative line of action is thus part of corporate policy. But in order to be effective, creation has to be looked at globally, from the choice of the product to its sale, and it must include concerted strategy in questions of price, range, distribution, service and product communication. Working towards this, VIA helps firms to define clear specification sheets for products according to their specific identity and the accompanying means vital to their marketing.
Promotion
In parallel to these activities VIA also helps to promote and enhance the creative and innovative image of the French Furniture Industries, both in France and abroad. VIA stages events at the big fairs of Paris, Milan, Cologne, Tokyo... and designs and mounts itinerant theme exhibitions in museums, cultural centers and galleries worldwide. The VIA gallery - the Viaduc des Arts on avenue Daumesnil in Paris - is a showroom for creation. It also hosts events organized by people working in the furniture business and in related sectors.

The Carte Blanche awards
Every year the VIA committee distinguishes one or several creators with this award, for the pertinence of their creative approach. VIA gives them financial support to produce prototypes and assistance in seeking out manufacturers and producers, thus enabling projects which demand specific technological or formal research to come to the fore. In this way too VIA assists research.

Since 1981, forty-one creators have received Carte Blanche awards:
The Permanent Calls
VIA also has a Permanent Call commission, grouping industrialists, manufacturers and creators, which examines all the projects sent spontaneously to VIA (about 1000 every year) in the form of drawings, models, or photos of prototypes. Fifteen or so of the best projects are selected for quality of esthetics and technical design. The pre-financing of a prototype may result, to enable concrete dialogue between the creator and the manufacturer or producer in view of a commercial result.

The Specific Calls
On the basis of a specifications sheet drawn up by an industrialist, producer or distributor, VIA solicits responses from creators and design schools and organizes the selection of models, taking into account market constraints. Examples of this collaboration are:

IKEA “KIT furniture”
UGAP “Furniture”
UNIFA “Chairs”
Conforama “Basic furniture for the home”
Chambre Syndicale de l’ameublement “Associable furniture for the habitat”
 Manufacturers and dealers of Western France “Attentive furniture”
Bloomingdale’s “Attentive seat”
Habitat “Furniture compatible with the Habitat range”
Aid to schools

VIA also gives financial aid to training establishments that teach furniture design, to enable students to build prototypes, and thus involve industrialists in the training of young creators. Among these schools are:

ENSAD, 31 rue de l’Ulm, 75005 Paris, Tel. 43 29 86 79
ECM, 11 rue du Séminaire-de-Conflans, 92220 Charenton-le-Pont,
Tel. 43 68 00 55
Camondo, 266 boulevard Raspail, 75014 Paris, Tel. 43 27 18 00
Strasbourg Grand Garage School of Architecture, 8 boulevard Wilson, 67000 Strasbourg,
Tel. 88 32 25 35
School of Architecture of Grenoble, 10 Galerie des Baladins, 38100 Grenoble, Tel. 76 23 31 72
School of Architecture of Rennes, 44 boulevard de Chezy, 35000 Rennes,
Tel. 99 29 68 00
VIA of Orleans, 14 rue Dupanloup, 45000 Orléans, Tel. 38 42 24 67

The Labels

Every year, from the entire range of contemporary production on show at the professional furniture fairs, VIA selects the models most representative of French creation. A VIA label displayed on a panel accompanies each model selected, to present and support the contemporary image of the French Furniture Industries and enable them to communicate more easily with the press, the institutions and the general public.
The VIA gallery
Viaduc des Arts
29-37 avenue Daumesnil, 75012 Paris
Tel. 46 28 11 11 Fax. 46 38 13 13

The VIA gallery extends over 900 m², and includes an exhibition area of 450 m² and a Documentation centre for the French Furniture Industries.

Gallery space is available for rental by firms and institutions to host events and exhibitions, or hold exclusive previews of new ranges.
A few VIA references

Professional furniture fairs in Paris, Milan, Cologne, Copenhagen, New York, Hong Kong, Singapore, Tokyo, Montreal...

Bloomingdale’s - New York - USA
Seibu - Tokyo - Japan
Broadway - Los Angeles - USA
Harrod’s - London - Great Britain
Artek - Helsinki - Finland
Design Centre - Montreal - Canada
Vincon - Barcelona - Spain
Metro - Singapore
Asbaek - Copenhagen - Denmark
Artifort - Maastricht - Netherlands
Kunstgewerbe Museum - Berlin - Germany
A.B.Nordiskakompaniet - Stockholm - Sweden
Victoria and Albert Museum - London - Great Britain
Kunstindustimuseet - Oslo - Norway
Cooper Hewitt Museum - New York - USA
Musum of Decorative Arts - Helsinki - Finland
Marshall Field’s - Chicago - USA
Modern Art Museum - Tel Aviv - Israel
Museum of Decorative Arts - Montreal - Canada
Cultural Centre - Athens - Greece
Furniture of the Twentieth Century - New York - USA
Limn - San Francisco - USA
Nest - Seibu - Tokyo
Alfeo - Tokyo - Japan
Pesch - Cologne - Germany
Conran - London - Great Britain
Kyoto French Institute - Tokyo - Japan
Museum of Decorative Arts - Ghent - Belgium
Mackintosh Museum - Glasgow - Great Britain
French Institute - Edinburgh - Great Britain
Hanover Institute - Germany
AFAA - SAD - Beirut - Lebanon
Cultural Centre - Beijing - China
Jetro - Tokyo - Japan
Harumi Fair - VIA - GEM - AFAA - Tokyo
French Institutes - Barcelona - Madrid - Valencia - Spain
Habitat gallery - Tel Aviv - Israel
French Institute - Thessalonica - Greece
Your VIA contacts

Philippe A. Mayer  Président
Gérard Laizé  General manager
Yves Gradelet  Interior architect for exhibitions
Philip Beroske  Assistant for exhibitions
Philippe Jarniat  Consultant
Michel Bouisson  Relations with creators
Vesta Mauch  Press relations
Ils sont designers, ils témoignent de leur intervention avec les enfants...

Chérif, Chérif Créations
« Quand les enfants dessinent un meuble, ils racontent une histoire ». Partenaire de l'opération depuis son commencement, Chérif ne se lasse pas de son travail avec les enfants. Dès sa première rencontre avec eux, il a été vivement intéressé par leur approche innocente et spontanée du mobilier, et étonné de leur esprit pratique, très précis, doublé d'une capacité créatrice très présente. Il a pu constater que les enfants aiment les meubles dans lesquels ils peuvent se lover, se rouler, qu'ils éprouvent une grande attirance pour ce qui se touche : ils ont déjà une notion du confort ! Pour Chérif, le designer doit être un guide pour les enfants. Sans les influencer, il les aide à raconter ce qu'ils voient, sans chercher à reproduire un objet mais plutôt un geste. « Le prototype est le résultat d'une expression de leur univers ». Le designer se fait ensuite l'interprète des idées des enfants auprès de l'entreprise.

Antoine Fenoglio et Frédéric Le Court - Sismo Design
Ils se déclarent très surpris par la facilité qu'ont les enfants à exprimer ce qu'ils ont observé chez eux, chez des amis ou dans les magasins. Tout en rêvant ils imaginent souvent le meuble dans un univers très réaliste : un concept « château-fort », un lit-bateau... « Ces enfants nous apprennent l'écoute, l'évolution et la diversité ». La surprise des designers fut totale lorsqu'ils ont constaté que plusieurs enfants d'une classe de perfectionnement se représentaient à l'intérieur des meubles. Une petite fille tout particulièrement les a interpellés : dans ses premiers dessins, elle s'envoyait dans une armoire ; quelques semaines plus tard, la porte était ouverte et cette évolution s'accordait aux progrès considérables qu'elle avait effectués !

Sonia Déléani et Éric Fache - E et S Design
« Nous menons une réflexion en profondeur avec les enfants depuis le renseignement des espaces de la maison, la différenciation entre les meubles jusqu'à l'expression des meubles de "leur rêve"... Nous introduisons également une profusion d'informations nouvelles pour montrer aux enfants la richesse et l'étendue des possibles dans le domaine des matériaux : bois (pour eux un meuble est en bois !) ; mais aussi stratifiés, métaux, plastiques, silicium, moissus, tissus... des couleurs, des formes. Quant aux opérations suivantes, passage en 3D (les enfants dessinent généralement à plat) et construction de maquettes, elles ont été délicates. Ce qui nous paraissait important était que les enfants trouvent des solutions pour que "tout ça" tienne debout ! Les enfants commencent souvent par dessiner des meubles très anecdotiques et personnels (lit chat, commode-balaine, lutin-bonhomme...) et il faut leur donner des clés pour qu'ils puissent dépasser ce premier stade.
Nous avons aussi été très surpris de la façon dont ils pouvaient transformer et se réapproprier certains meubles de leur environnement : une armoire prend de l'intérêt s'ils peuvent y entre, en "habiter" une partie ou en faire un placard, un tapis est passionnant s'il peut émettre de la lumière, etc. »

Sophie Larger - Inoui Design
En voyant, il y a deux ans, l'exposition au VIA des premiers meubles imaginés par les enfants de l'école de la Providence, accompagnés par le VIA, Sophie Larger a trouvé l'idée du projet remarquable. « C'est un très joli partenariat dont l'aspect affectif la concerna particulièrement. En présentant son travail ludique et coloré, particulièrement dans l'air du temps, aux enseignants avec lesquels elle allait travailler, elle s'est aperçue que le meuble contemporain était aussi une découverte pour les adultes ! Des enfants, elle attend beaucoup : ils ont une « vision plus simple, plus spontanée, très juste » qui la conduit à simplifier au maximum son approche professionnelle. »