

Verner Panton

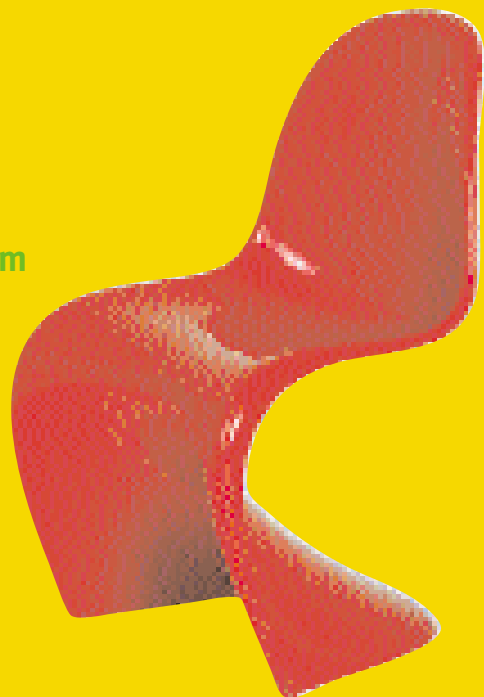
RESOURCE PACK

This Verner Panton resource pack aims to help students increase their knowledge and understanding of the working methods of an innovative designer. It also aims to provide students with inspiration for their own design projects. The pack is suitable for teaching students at Key Stage 3 and above. It is part of a series comprising resource packs on the following subjects:

← **Innovation**
Verner Panton
Chairs
Memphis

Packs are supplied in photocopiable loose-leaf format and are designed to be interchangeable, so that common elements of each may be combined. In this way it is possible to assemble packs on:

Designing
Innovation
Manufacturing & materials
Ergonomics
Handling collection
– creating your own Design Museum
Activities





for teachers' notes

About this pack

Verner Panton was one of the most innovative and colourful designers of the twentieth century. He broke from the craft-based traditions of Scandinavian furniture-making and experimented with new materials and concepts. His work has become instantly recognisable and has influenced many of today's designers.

This Design Museum Resource Pack is for teachers and students at Key Stage 3 and above. It aims to provide an insight into Panton's life and career and his ability to excite and influence other designers. Many students will be inspired by his unconventional attitudes towards living environments and design.

Aims and contents

The sheets on designing, ergonomics, innovation, materials and manufacturing outline Panton's own designs and theories and provide a basis for tackling the activities. These can be used as a creative springboard at the start of the students' own projects. Suggestions for assembling a handling collection for use in the classroom complete the pack.

The different sheets directly relate to each other and the information and ideas on them sometimes overlap. Sections from other packs can also be combined with the contents of this pack to form a comprehensive resource.



Opal glass lamp by Poul Henningsen, 1926, Vitra

Early career influences

In his early career Panton worked with two prominent designers, Poul Henningsen and Arne Jacobsen. Panton met Henningsen while still studying in Copenhagen and they worked together at lighting company Louis Poulsen & Co.

It was during this period that Panton developed his aim to design lighting that was relaxed and intimate and that integrated with the environment in which it was situated.

In 1950 Panton began working in the studio of Arne Jacobsen and on the development of the Ant Chair, the first mass-produced chair to have the seat and back formed from a single piece. Although Panton often played down his involvement with the Ant Chair, the influence of new materials and single-unit forms is evident in much of his own work.

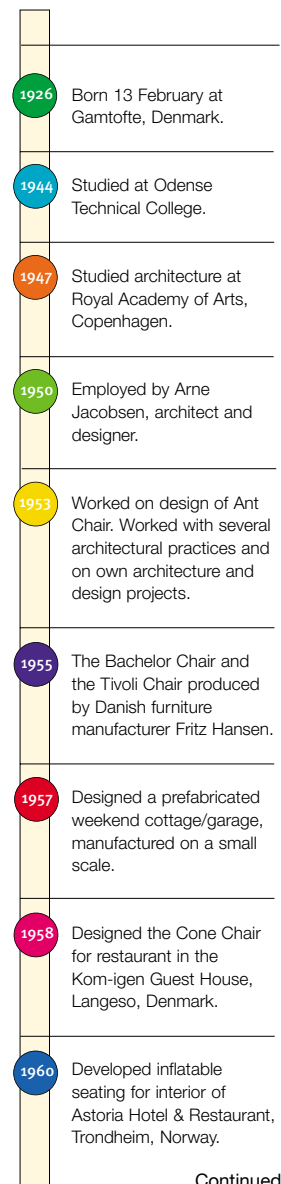
A For a lighting design brief see **A** for activities

M For Panton's approach to new materials see **M** for manufacturing & materials



Ant Chair by Arne Jacobsen, 1952, Vitra

Timeline: BIOGRAPHY



Continued ...

Biography: FINN STONE

Born 18 April 1971, London.

Education Studied ceramics at Preston and Middlesex University.

Finn Stone has been heavily influenced by Verner Panton's use of colour and organic shapes. He sees himself as primarily a sculptor and shape, texture and sculptural forms are most important to him in his work. Stone began exploring different materials and moulding techniques while at college and he eventually developed a preference for working in fibreglass.

He started by making furniture for private commissions. The commercial success and demand for his Ball Chair (below) has required the development of alternative manufacturing techniques using a different material. This chair is produced in polypropylene.



Data FILE:

Other designers from Panton's time:

- Eero Aarnio
- Gunnar Aagaard Anderson
- Luigi Colani
- Joe Colombo
- Poul Kjaerholm
- Mary Quant



Anna Castelli
Ferrieri's stacking
storage unit

Similar products designed during Panton's time:

Anna Castelli Ferrieri's stacking storage units
Pierre Paulin's No. 577 foam-padded frame chair
Roger Dean's Teddy Bear chair
Gaetano Pesce's Donna Chair
Alan Fletcher's Clam ashtray

H See handling collection for a case study
of the Clam ashtray

“The feeling that he had for colour, shape and fun was a fantasy... like a child with a new toy”
Finn Stone, 2001

Links ...

Websites:

Louis Poulsen:
www.louis-poulsen.co.uk

Design history:
www.designmuseum.org
(Enter Flash version/click on Design at the Design Museum)

Books:

Alexander von Vegesack and Mathias Remmele, *Verner Panton: The Collected Works*, Vitra Design Museum, 2000.
Verner Panton, *Verner Panton: Liset og Farven (Light and Colour)*, Kolding, 1998.
Verner Panton, *Lidt om Farven (Notes on Colour)*, Copenhagen, 1997.

Buzz words

Cantilever – a beam or girder fixed at only one end.

Collaborate – work with others on a joint project.

Fibreglass – a plastic reinforced by glass fibres.

Form – a shape; an arrangement of parts.

Function – the intended purpose of a thing.

Innovative – inventing or applying new methods, ideas.

Plywood – a strong thin board consisting of two or more layers of wood glued and pressed together, with the direction of the grain alternating.

Prefabricated – made of parts manufactured before their assembly elsewhere (especially buildings).

Prestigious – having respect or a reputation.

Polypropylene – a group of thermoplastics used to make moulded objects and fibres.

- 1963 Began to collaborate with furniture manufacturers Herman Miller and Vitra.
- 1964 Shell Lamps and Flying Chairs shown at Cologne Furniture Fair.
- 1965 S Chair – first cantilevered chair made from moulded plywood – produced by Thonet.
- 1966 Development of Panton Chair at Herman Miller/Vitra.
- 1967 Panton Chair featured in Danish design journal *Mobilia*. Modular Furnishing System produced by Kill/Metzeler.
- 1969 Group exhibition with Charles Eames, Joe Colombo and others showcased the Living Tower in Paris. Began working with textile manufacturer Mira-X.
- 1970s Commissioned for interior design projects and had many furniture, lighting and textile designs commercially produced by various manufacturers. Won many prestigious design awards.
- 1979 Special exhibition at the International Swiss Furniture Fair in Basle entitled 'Pantorama'.
- 1980s Continued to be awarded recognition for his designs.
- 1984 Became guest professor at the Offenbach School of Design.
- 1990 Vitra resumed production of the Panton Chair.
- 1994 Vilbert Chair produced by IKEA.
- 1995 Commissioned for various interior design projects.
- 1998 Pantopop and multifunctional Phantom furniture modified and relaunched by Innovation Randers.
- 1998 Died 5 September, twelve days before opening of 'Light and Colour' exhibition at the Trapholt Museum.



for designing 1

A multi-disciplinary approach

Verner Panton initially trained as an architect but his interest in the creation of interiors and furniture ensured that he took a multi-disciplinary approach to his design practices. Inevitably it is difficult to separate the different strands of his work but in this section an attempt has been made to represent the various areas of design that he addressed, in order to illustrate his versatility.

Furniture design

Panton designed furniture in a variety of materials, always trying to push the accepted boundaries of materials and manufacturing.

In one of his early chair designs he used a steel-wire frame in a similar way to his contemporaries in the USA, Charles and Ray Eames and Harry Bertoia. The development of the use of steel-wire in furniture had directly evolved from the development of the material and the processes for its manufacture during the Second World War, and although the Eameses and Bertoia had designed their own chairs in this material, Panton's Cone Chair was new in its innovative use of shape. The cone structure illustrates Panton's early use of geometric structure and typifies his designs for chairs without legs.

“Verner made sure he never got stuck in the restrictive pigeonholes that constrain the rest of us. He never ended up as a textile designer or architect, because he was also a colour theorist and artist – he seemed just as happy doing interior décor or sculpture as he did working on lighting or chairs.”

Tom Dixon, product designer

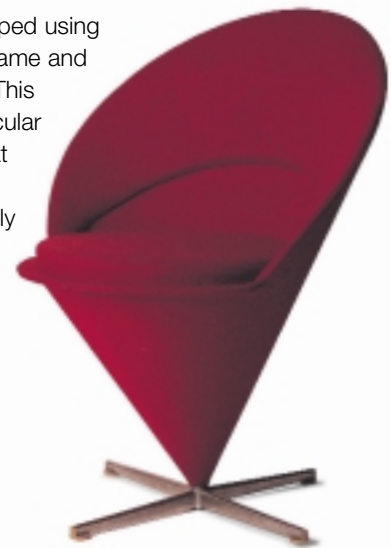
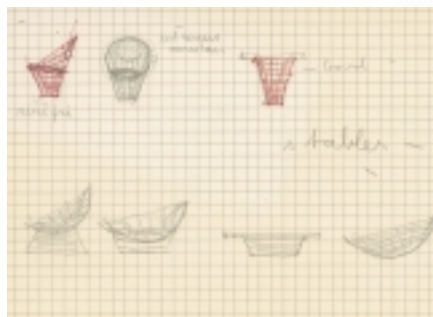
Case study: Cone Chair

The Cone Chair was originally created in 1958 for the interior of the restaurant of the Kom-igen Guest House in Langeso, Denmark.

The original version of the chair was constructed from a conical shell of bent steel plate with a bent chromium-plated steel base. The shell pivoted on the cross-shaped base. Both the shell and foam cushion were upholstered in woollen fabric. A variation of the design was produced using a heart-shaped back.

In 1960 the Wire Cone Chair was developed using chromium-plated spun steel wire for the frame and bent chromium-plated steel for the base. This version of the Cone Chair rotated on a circular base. It had a loose foam-upholstered seat and back cushions.

The design of the Wire Cone Chair visually combines the seat with the base making the structure appear to be of one piece.

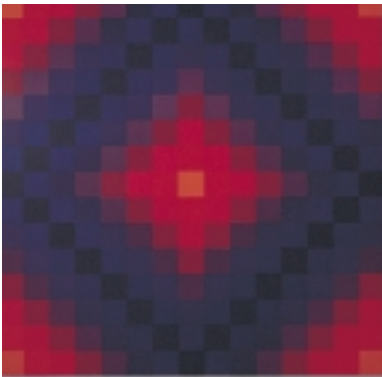


Sketches showing initial ideas for the wire series: variations of geometric shapes, late 1950s

Textile design

Although Verner Panton is most famous for his integrated approach to interior design, his development as a textile designer cannot be ignored. He most famously started working with Swiss textiles manufacturer Mira-X in 1969. Mira-X shared Pantan's desire to create integrated environments with the use of textiles.

Case study: Collection Décor



Panton's first collection in 1969, Mira-X Set, included two qualities of furnishing fabric, a large selection of single colour carpets and curtain fabrics.

This collection enabled Pantan to develop his theories on colour and use his rather complicated combinations of colours to great effect. The patterns consisted of eight colours graded to a further eight levels of brightness and incorporated five geometric motifs which were graded also to eight levels. Each design was produced in three sizes and the colours were combined in either a single design or a single colour broken down into eight levels of brightness.

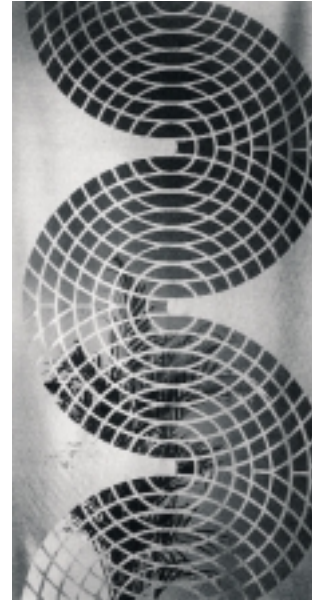
The properties of the cotton velour material further added to the diversity of colour. The designs were printed motifs and were independent of the material's structure.

Case study: Creation

Panton saw the 'burnt-out' process (an American term for devoré) as an opportunity to use the structure of a textile to enhance its printed design. In the 1970s he created a range of materials featuring geometric patterns and using the process in a variety of ways.

In the curtain fabric 'Creation' (1972), the burnt-out process was used to change the structural qualities of a wool/polyester mix to produce a variance in the surface pattern of squares, circles and curves.

In 'Finesse' (1974) Pantan used the burnt-out process to leave only the warp threads in certain parts of the fabric, creating transparent areas. Again the surface pattern was a combination of squares, circles and curves but a much finer, viscose/polyester gauze was used.

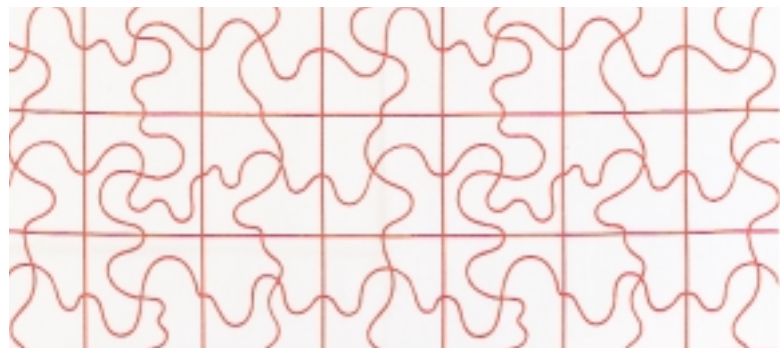


For 'Grande' (1975) the surface pattern was restricted to circles and curves on a viscose/polyester gauze. The large format of the design enabled very large areas of fabric to be burnt-out.

Case study: Modulo 4

In the 1980s Pantan had become an established textile designer at Mira-X and the Modulo series of designs illustrate his attention to repeat patterns. The pattern

consists of a square grid that contains a curved design. The repeat of this grid on the fabric creates an effect similar to that of a collection of jumbled pieces from a jigsaw puzzle.





for designing 2

A multi-disciplinary approach

Pantan's integrated approach to design is best illustrated in his work for various restaurants, hotels and exhibitions. In these installations the importance of the whole experience was paramount and he considered the design of furniture, lighting, textiles and the relationship between the products, colour and the user as a complete package.

A See activities sheet for Pantan-inspired interior design

Case study: Topan Lamp



The Topan pendant lamp was Pantan's first mass-produced lamp. Although it functioned on a basic level by giving off direct light, Pantan suspended it at different heights so that the light could reflect directly off surfaces placed below it. It could also be hung singly or in groups.

Its geometric shade – a sphere with the bottom third cut away – was originally produced in polished or brushed aluminium although in later versions the metal was also lacquered in red, orange, blue or turquoise, and the lead was encased in a coloured textile.

Lighting design

Pantan's lights played an important role in his interior designs. They not only operated on a purely functional level but were designed to interact with the space around them, thus creating a variety of atmospheric situations.

His lights fall into two main categories: geometric and organic forms, as seen in the case studies on this sheet.

“... appearance of course plays an important role. But I always begin with a lighting aspect. After that there are of course a number of things to be decided: which environment is the lamp to be used in, the materials, the surface finish, colours, price, etc.”

Verner Pantan, 1985

Timeline: INTERIOR DESIGN

1958	The Kom-igen Guest House, Langeso, Denmark Colour: five shades of red Furniture: Cone Chair/Tivoli Chair Lighting: prototype pendant lamps
1960	The Astoria hotel and restaurant, Trondheim, Norway Colour: yellow/orange/red or violet/green Furniture: Heart Cone Chair/Wire Cone Chair Carpet/ceiling and wall covering: Geometri I & II Lighting: Topan Lamp
1961	Sales exhibition in Pfister Furnishing Store, Zurich, Switzerland Colour: black/white Furniture: Heart Cone Chair/Wire Cone Chair/Conical sofa table/Wire stools Carpet/ceiling and wall covering: Geometri I & II Lighting: Topan Lamp
1968	Visiona O exhibition at the Cologne Furniture Fair, Germany (a series of individual show rooms) Lobster Bar Colour: red Furniture: prototype round tables and benches covered in red synthetic material Lighting: Shell Lamps
1969	Der Spiegel publishing house, Hamburg, Germany (each floor given a specific colour scheme) Colour: editorial floor – a variety of cool colours; administration floor – yellow/orange; conference rooms – lilac; bar – red; canteen – orange/red/violet Furniture: mainly by other designers (chosen by Pantan); canteen – wire chairs by Harry Bertioia; conference rooms – chairs by Eero Saarinen; lobby – wire grid armchairs by Warren Platner Lighting: Mirror Lamps, Flower Pot Lamps, Shell Lamps
1971	Visiona 2 exhibition at the Cologne Furniture Fair, Germany (a series of individual show rooms) Phantasy Landscape Colour: varied bright colours with warmer colours in the middle and colder colours to the edge Furniture: whole room sculpted and textile covered Lighting: Spiral Lamps
1973	Varna restaurant, Arhus, Denmark Colour: red/violet Furniture: Pantan Chair, Pantanova conference chair Lighting: Spiral Lamps Canteen, Grüner & Jahr publishing house, Hamburg, Germany (Pantan approached this in a similar way to the Der Spiegel commission) Colour: multi-coloured but predominantly red Furniture: chair 420C by Harry Bertioia Lighting: Flower Pot Lamps Carpet: Wave design
1978	Hay Stack exhibition, Kortrijk, Belgium (moved away from the predominance of colourful synthetic materials, introducing natural materials in a very alternative design) Colour: natural straw and shiny metal Furniture: constructed from hay bales Lighting: metallic Spiral lamps, metallic Flower Pot Lamps, Shell Lamps Floor and wall covering: hay

Case study: Shell Lamp



Panton's design for these lamps was inspired by the wind chimes traditionally made by fishermen in the Andaman Islands. The lamps were made from a series of discs cut from shell and hung on chains made of metal rings. The chains were assembled in groups to form organic-inspired shapes: in small numbers they resembled bunches of grapes, and en masse formed stalactite-type structures hanging from the ceiling.

When the lamps were hung together the movement of air through them caused the discs to produce a soft tinkling noise and their mother of pearl surfaces to reflect the light.

It was unusual for Panton to use a natural material as he did for this lamp. He also produced a version using aluminium discs.



Andaman Wind Chimes sold by Habitat, 2001

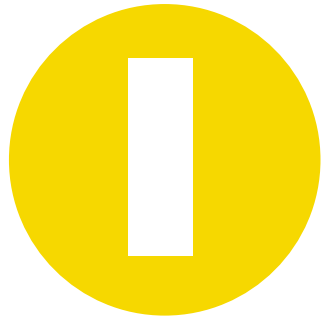
“ Looking at one of Verner Panton’s interiors today, we are amazed by the colour and the vision of a truly original mind. Just imagine the impact his work had when it was first seen and you have some idea of the scale of his achievement.”

Jasper Morrison, designer

Buzz words

- Burnt-out** – chemical removal of material fibres, also known as *devoré*.
- Chromium** – a hard, white metallic element that can be highly polished, used as a decorative and protective coating on other metals.
- Integrated** – combined into a whole.
- Organic** – relating to animals and plants; influenced by their forms.
- Pendant** – hanging down (e.g. a light fitting).
- Prototype** – a trial model, made so that a design can be tested before it is produced.
- Spun steel** – steel that has been formed by spinning.
- Stalactite** – a tapering form hanging like an icicle from the roof of a cave, formed by dripping water containing calcium carbonate.
- Synthetic** – made artificially.
- Velour** – a woven fabric or felt with a pile (threads that stick out from the weave), resembling velvet.

A See A for activities: Lighting design brief for inspiration for your own lighting product.



I for innovation

Challenging convention

Verner Panton was a truly innovative designer. In Denmark after the Second World War he had the opportunity to work with new materials and technologies that had been developed during the war. In response to this he began his own development of designs that broke from traditional Danish crafted furniture.

Although he admired the expertise and techniques of prominent Danish designers, his style and ideas were in complete contrast. Design in the 1950s was

generally functional and simple.

His designs, based on both geometric and organic shapes, incorporated function with more challenging forms.

Phantom Chair, 1967



Form

Although Panton wrote that 'colour is more important than form' he did not ignore the importance of form. His passion for experimentation led him to use form as the means to suggest new ways to enhance living space.

From the Cone Chair to the Inflatable Cube seat to the hanging Flower Pot Lamp, Panton's simple geometric shapes showed that furniture and furnishings could be more playful and effortless. When first introduced in the late 1950s, his Cone Chair was considered revolutionary and shocking because it went beyond the convention of what a chair could look like. The idea came to Panton while sketching a chair in profile. The shape of the chair grew out of an



Double seat, 1968

idea to join the back to the base thus creating a continuous form.

Panton also incorporated organic and anthropomorphic shapes that seemed to grow out of their surroundings and remind the observer of his or her own body and movement. His desire to create shapes that were unified and continuous led him to incorporate the cantilever principle so that some pieces seemed fixed only at one end - and not always at the bottom!

“

At school, when we had to paint something,

I always tried

to do things in a

different way...

I have always tried

to find other ways,

and have simply not

been able to refrain.

It has also been a

handicap; it is easier

to do what the others

want. You don't make

yourself popular if

you have other ideas.”

Verner Panton, Interview, 1977



Inspiration

Panton broke from tradition in many ways. He was inspired by both contemporary art and the everyday products which he saw around him. In fact, a fibreglass helmet near a plastic bucket provided ample inspiration for what would later become Panton's most famous work: the Panton Chair.

New technology

Verner Panton initially experimented by designing and producing a stackable cantilevered chair in plywood in 1956 and the S-Chair, made from moulded plywood, was put into production in 1965.

The development of new plastic materials and production techniques in the late 1950s was of great interest to Panton.

Initial sketches for the Panton Chair

They opened up the opportunity to develop a chair that could be mass-produced from just one piece of material.

Panton worked for over 30 years towards his goal to create an industrial product of beauty, durability and economy. Fortunately, before his death in 1998 he was able to show how innovative technology is a true aspect of great design. The development of polypropylene has enabled the Panton Chair to be manufactured in the way that Panton first envisaged over 50 years ago.

M See manufacturing & materials for a timeline on the development of the chair



Case study: Organic chairs



The range of Caster Easy Chairs (1962) had an elegant sculptural form that was enhanced by the actual construction. The wooden frames, on casters, were low to the ground and covered with foam padding over which elastic fabric was pulled tightly. Included in the range were a couch, a couch with a high back, an easy chair and a stool.

The Flying Chair (1963) was never actually put into production. Panton intended the chairs and loungers to

encourage a more playful, informal use of seating and he displayed them in groups to create an alternative social environment.

Although there is no record of the materials he used for the prototypes they were probably wood with upholstered foam padding. The curved, banana-shaped frame hung from the ceiling on cables and could be lowered for use or raised with ceiling-mounted pulleys.



Buzz words

- Anthropomorphic** – resembling the human form.
- Cantilever** – a beam or girder fixed at only one end.
- Convention** – a view or belief accepted by the greatest number of people.
- Contemporary** – existing at the same time; following modern ideas or fashion.
- Durability** – the ability to last, be hard-wearing.
- Enhance** – to improve or increase.
- Fibreglass** – a plastic reinforced by glass fibres.
- Geometric** – characterised by simple, regular lines and shapes.
- Inspiration** – a sudden brilliant, creative or timely idea.
- Plywood** – a strong board consisting of two or more thin layers of wood glued and pressed together, with the direction of the grain alternating.
- Polypropylene** – a group of thermoplastics used to make moulded objects and fibres.



for manufacturing & materials

Panton's work was inspired by modern materials and processes

Panton was captivated by unconventional forms that could be made using new materials such as foam, tubular steel and plastic. This led to a lifelong commitment to the exploration and development of new materials and processes.

Foam

Although foam had been used as padding in chairs since the 1950s, designers of the 60s including Pierre Paulin and Gaetano Pesce began designing and making seating made entirely of foam.

By using foam Panton was able to create designs that, whilst being typical of the period, demonstrated



Modular chair, 1960

his belief in alternative approaches to seating and living environments.

After his first foam-padded piece in 1963, Panton continued using the material to produce different-shaped furniture as well as entire interior 'landscapes' such as the 1967 Series 420 and the Modular Furniture System for the Kaufhof department store.

“Steel tubes, foam, springs and covers have been so developed technically that we can create forms which were unthinkable just a few years ago. Designers should now use these materials to create objects which up to now they could only see in their dreams.”

Verner Panton, 1984

Case Study: Bachelor Chair

This chair was first designed in 1953 and put into production in 1955.

The chairs were constructed of chromium-plated tubular steel frames with textile or leather seats. The positioning of the material gave the impression that the frame was constructed from one continuous tube although it was in fact made from six tubes joined together to form

four V-shaped legs. The chair was a 'knock-down' structure making it simple to manufacture and to be sold 'flatpacked' as a kit of parts to be assembled by the customer.

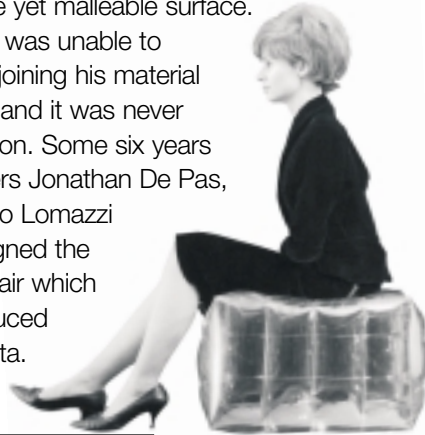
As an extension to the range Panton designed a model with armrests, a foot stool and a table.



Welded plastic seating

By 1960, Panton had already introduced inflatable plastic seats without backs that could be effortlessly moved about and adapted to suit different circumstances and spaces. These were made using transparent welded plastic film. Not only did the material allow for mobility, it also increased the seating's functional utility since it could act as both a cushioned support to sit upon or lean against and as a stable yet malleable surface.

Unfortunately Panton was unable to perfect the method of joining his material for the Inflatable Cube and it was never put into mass production. Some six years later, however, designers Jonathan De Pas, Donato D'Urbino, Paolo Lomazzi and Carla Scolari designed the now famous 'Blow' chair which was successfully produced by manufacturer Zanotta.



The Inflatable Cube

Case Study Blow Armchair

The inspiration for this armchair came from the function of the materials for an inflatable boat. The designers believed that it was essential that the chair was light, easy to store, inexpensive and transparent. It was to be manufactured in transparent PVC foil but as it was not possible to glue this material, it was necessary to develop an alternative joining method. After much research and testing it was discovered that the PVC could be joined by electronic welding. This chair is still in production today.



Manufacture of the Panton Chair in polystyrene



Timeline:

PANTON CHAIR DEVELOPMENT

- 1956 Stackable one-piece cantilevered chair in plywood designed for the WK European Furniture Design Competition.
- 1960 Prototype model in extruded polystyrene manufactured by the Dansk Acryl Teknik.
- 1963 Development phase – ten experimental models produced from hand-laminated fibreglass-reinforced polyester.
- 1967 Manufactured in limited numbers from cold-pressed fibreglass-reinforced polyester. The chair was very heavy and needed to be sanded and lacquered by hand.
- 1968 Mass-manufactured in polyurethane hardfoam ('Baydur' raw). This was lighter and easier to work with but still had to be hand finished.
- 1968 Production continued in polyurethane hardfoam ('Baydur' lacquered) in seven colours. Each unit took 30 minutes to produce.
- 1971 Mass-produced in thermoplastic polyester (called 'Luran-S', made by BASF), injection-moulded and machine-finished. This chair retailed at a lower price. Ribs were added at the base of the sitting area to ensure stability. The material was not durable and this version of the chair was discontinued.
- 1983 Production resumed in polyurethane hardfoam.
- 1999 Mass-produced in polypropylene with a matt finish due to the material's susceptibility to scratching.



Prototype model in polystyrene

Moulded plastic

The Panton Chair is the most recognisable example of his dedication to the use of new materials. In fact, the first one-piece chair to be made entirely of synthetic material went through over four major phases to refine its composition and production method.

Buzz words

- Cantilever** – a beam or girder fixed at only one end.
- Composition** – the parts from which something is formed or constructed.
- Durable** – able to last, be hard-wearing.
- Extrude** – to shape a material by forcing it through a nozzle or die.
- Fibreglass** – a plastic reinforced by glass fibres.
- Injection moulding** – a manufacturing process used to make complex shapes from thermoplastics by squeezing heated plastic powder into a mould.
- Laminate** – to manufacture by placing layer on layer.
- Malleable** – pliable, flexible, able to be worked upon without breaking.
- Plywood** – a strong board consisting of two or more thin layers of wood glued and pressed together, with the direction of the grain alternating.
- Polyester** – one of a group of synthetic materials including plastics, textiles and glues.
- Polypropylene** – one of a group of thermoplastics used to make moulded objects and fibres.
- Polystyrene** – one of a group of thermoplastics formed by extrusion.
- Polyurethane** – one of a group of synthetic materials which can be used in the form of foam, hard coatings, fibres or flexible mouldings.
- Prototype** – a trial model, made so that a design can be tested before it is produced.
- Thermoplastic** – a group of commonly used plastics which soften when heated.
- Welded** – hammered or fused (heated but not melted) into one piece.

Links ...

Websites:

Materials:
www.bpf.co.uk
www.tep.co.uk
www.bayer.com



for ergonomics

Interaction with environments

Although the dictionary defines ergonomics as 'the study of the efficiency of persons in their working environment' the term is often used more broadly to describe the way people interact with their living environment.

Verner Panton addressed this in many of his most innovative designs. He believed that a living environment should be less conventional to enable the user to interact in a variety of ways depending on his or her needs.

Interacting with space

Throughout his career Panton experimented with alternative spatial arrangements, always suggesting new ways of incorporating furniture and encouraging people to observe their surroundings in different ways – to have a 3-D dialogue with space. For example, at the 1959 Kobestaevnet Fair in Fredericia, Denmark, Panton exhibited the furniture by hanging it from the ceiling.

Panton's Flying Chairs (1963) and Caster Easy Chairs (1962) were early examples of mobile and free-form furniture. Beyond creating seating that took advantage of unused space in a room, Panton



Varna Restaurant

believed that a room and its furniture must be regarded as a fusion of dimensions, surfaces, forms and optical effects. He designed integrated furniture spaces such as the Living Tower and Phantasy Landscape and worked extensively with textiles, lighting and sculpture to incorporate walls and ceilings. Terms such as 'three-dimensional carpet', 'storey sofa', 'sitting tower' and 'sitting cave' not only referred to specific pieces, each phrase described a new way of interacting with interior surroundings and furniture.



Phantasy Landscape



Multifunctional Unit

Case Study: Living Tower



An example of Panton's desire to counter preconceived ideas of seating design, the Living Tower (Pantower) combined his love of both geometric and organic shapes. It was a large cuboid containing seating over several levels which encouraged the user to either sit, squat, lie or climb on its natural curves. It was constructed from a wooden frame upholstered with foam padding covered with woollen textile. When it was first designed in 1969 the Pantower was considered a very alternative style of seating.

Interacting with colour

It was in the late 1950s with his work on the Cone Chair that Pantan truly began to exercise his distinctive views on colour, form and the ways humans could interact with their environments.

Indeed, vibrant colours – red, orange, yellow, green, turquoise, blue and violet – guided his designs and his rainbow palette became a trademark. Pantan was able to give an effect of richer colour by using particular fabrics such as velvet or special geometric patterns. He used colour not only to create and affect mood, but also to project a unified spatial impression, sometimes bathing entire interiors in monochrome. He was also sensitive to the relationship between colour and lighting design since different lighting schemes affect the impact of colour.


With respect to colour alone, Pantan is considered a trailblazer and in 1997, his lifelong fascination with it was captured in his booklet, *Notes on Colour*, with the pronouncement 'Colour is more important than form.'

Buzz words

- Incorporate** – to include as part of a united whole.
- Interact** – to act on, react to or influence.
- Invigorate** – give vigour or strength.
- Monochrome** – a single colour, or tones of that colour.
- Spatial** – of or concerning space.
- Spectrum** – the different colours found in white light (as seen in a rainbow).
- Tone** – the shade of a colour, depending on how much white or black is mixed with it.

“One sits more comfortably on a colour that one likes”

Verner Pantan

step by step	A guide to colour effects		
	Yellow adds cheeriness to dull rooms and expands their apparent size. Yellows can also be used to increase energy.		Orange cheers, stimulates appetite and conversation.
	Red is a power colour, often used to invigorate the environment. Used in dining rooms it can stimulate discussion.		Purple comforts and creates mystery.
	Blue relaxes and cools. It can make you feel sad.		Warm colours make rooms feel smaller.
	Green balances and refreshes. It can make you feel quiet and thoughtful.		Cool colours make rooms seem larger. Pantan believed that cool colours were suitable for intellectual work.

“Colour planning is of utmost importance ... It is not enough to say that red is red and blue blue. I myself normally work with parallel colours whose tones follow consecutively according to the order of the spectrum. In this way, I can control the character of the room in terms of warmth and coolness and thereby create the desired atmosphere.”

Verner Pantan

Data FILE: 'Smart paint'

→ Research scientists in China are developing a paint that responds to alterations in temperature by changing colour. The paint contains crystal violet lactone, a chemical that enables it to reflect or absorb heat. The colour of the paint ranges from blue tones in hot weather to deep red in cold.



for handling collection

Create your own Design Museum

The development of a variety of handling collections that enable product evaluation and stimulate inspiration is of enormous value. Product analysis can be a vehicle for the discussion of many issues in the classroom: the research and design of like products, inspiration and creativity, evaluation and the need for modification. It is also an excellent way of increasing knowledge of materials, manufacturing techniques and function.

Creating a Verner Panton handling collection

A collection of products designed by Verner Panton would be expensive, but it is possible to put together a range of similar products and images to create a 'feel' for his work.

Images found elsewhere in this resource pack could be used to complement the visual material in the handling collection.

A See activities sheet for: Panton inspired interior design, product analysis guidelines, lighting design and website design.

The products suggested are all small items so that storage is not an issue.

Printed materials:

- Verner Panton: *The Collected Works*, Vitra Design Museum, 2000
- Design Museum poster (available on request from the Design Museum Education Department)
- Design Museum postcard (available from the Design Museum Shop)
- Home style magazine articles
- Wallpaper samples

Objects:

- Vitra Design Museum miniature Panton Chairs
- Clam ashtray by Alan Fletcher

Visuals:

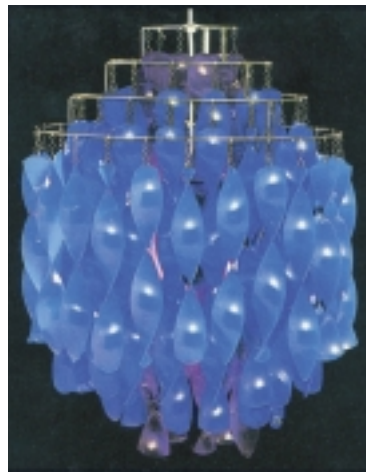
To give students even more of an insight into the design of the 1960s and 70s, selected video footage of James Bond and other movies of the era would aid the creation of an atmosphere reflective of the period.

Current products in the style of Panton:

Hanging Lamp SP1, 1969

Material: Cellidor

Construction: Cluster of spiral elements attached to chromium-plated ceiling plate.



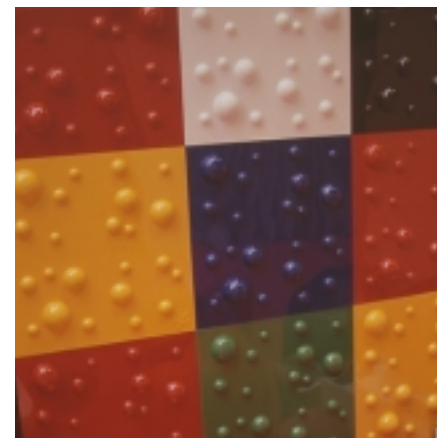
'Twist' by Habitat

This cheaply produced bright plastic twirl is based on the decorations used in Thailand during festivals and celebrations. (It could easily be made in a workshop.)

Bubble Tile by Finn Stone, 2001

These vacuum-formed plastic tiles have been heavily influenced by Panton's own wall elements designed in the late 1960s and 70s. The tiles are available in various colours with a high-gloss finish and can also be lit from behind.

Wall plaques similar to those sold by the Swedish home store IKEA in could be used to create a similar wall decoration; assemble four of them to form a backdrop to the handling collection.



Using a Panton handling collection

The contents of the Panton handling collection could provide a source of inspiration and ideas for the design of small plastic products. Panton's work also lends itself to the analysis of the design of interiors, lighting, furniture and textiles and the handling collection could stimulate interest not only in resistant materials but also in other aspects of the Design and Technology curriculum, such as textiles and interior design.

Creative projects using 1960s and 1970s design as a starting point could use the handling collection very successfully and could also generate a deeper study of the lifestyle, current affairs and technology of the time.

Case Study: Clam Ashtray

The British art director and graphic designer Alan Fletcher is probably best known for his logos for the Victoria and Albert Museum and the news agency Reuters. Like many graphic designers he has also been involved in product design.



The inspiration for this ashtray came from Dutch Edam cheese. The designer visualised its serrated teeth both holding the cigarette and locking the two identical parts together. Originally designed in the late 1960s, this product has been reissued by Habitat in 2000.

Data FILE:

Re-issues of Verner Panton's work:

- Habitat:
Peacock Chair Carpet
- Innovation Randers A/S, Denmark:
Phantom multi-purpose furniture
Pantopop Chair
- Vitra: The Panton Chair
Re-issues of Verner Panton's work

Buzz words

Analysis – a detailed examination; a method to work out how individual parts of a thing or idea relate to the whole.

Cellidor – brand name of a thermoplastic.

Chromium – a hard, white metallic element that can be highly polished, used as a decorative and protective coating on other metals.

Evaluation – a judgement on the worth or price of something.

Serrated – having an edge with notches or 'teeth'.

Stimulate – to provoke a reaction or increase an activity.

Links ...

Books:

Verner Panton, *Lidt om Farver/Notes on Colour*, Copenhagen, 1997.
Philippe Garner, *Sixties Design*, Cologne, 1996.
Lesley Jackson, *The Sixties – decade of a design revolution*, London, 1998.
Mobilia (international monthly magazine for interior design), editions from 1961 to 1980, particularly 73/1961, 93/1963, 117/1965, 141/1967, 145/1967, 174/1970, 236/1975.
Alexander von Vegesack, Mathias Schwartz-Claus and Peter Dunas, *100 Masterpieces from the collection of the Vitra Design Museum*, Weil am Rhein, 1996.

Websites:

Habitat:
www.habitat.net

For other eminent furniture designers see also:

www.artnet.com
www.acmestudio.com
www.designaddict.com
www.designmuseum.org
www.dside.yucom.be
www.finnstone.com
www.iserv.net/~plucas/classics.htm
www.io.tudelft.nl/public/vdm/fda/panton/index.htm
www.scandinaviandesign.com
www.skandium.com
www.vernerpanton.com



for activities

Things to do in the classroom

A Interior design brief

Verner Pantan took a very alternative view on the design of all products, especially interiors.

Design a 'learning' environment (e.g. a classroom or library) based on Pantan's theories about colour and interior design.

Things to consider:

Function of the environment
Target user
Disabled users

Dimensions of the space available
Relationship between contents

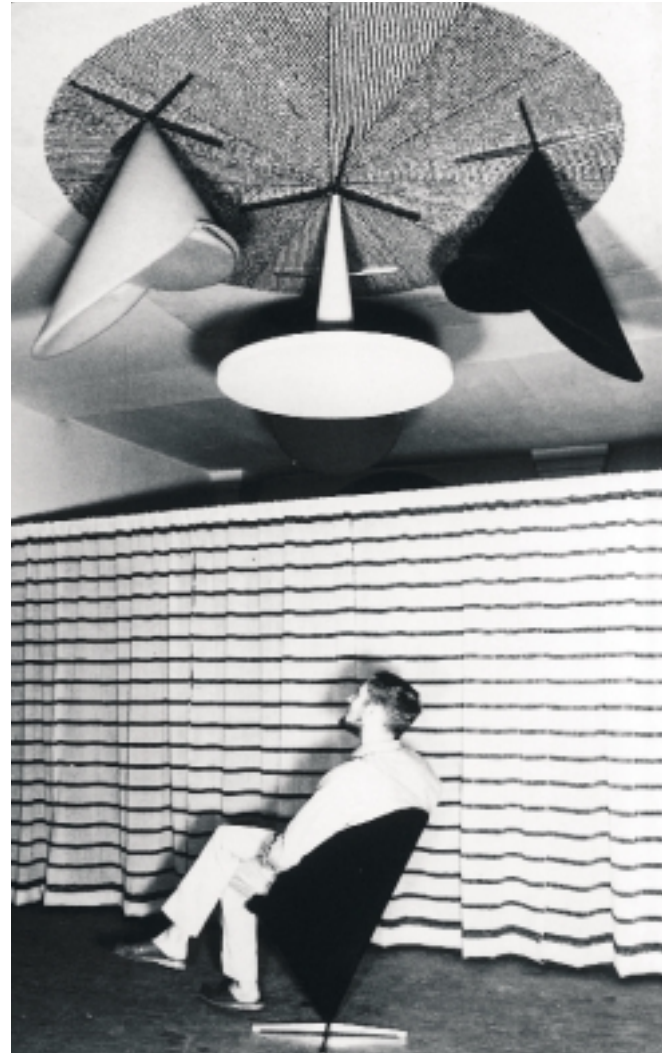
Senses
Stimulus

Colour
Pattern

Style of contents
Fabrics and textiles

“

I can't bear to enter a room and see the **sofa** and **coffee table** and **two armchairs** immediately knowing that we are going to be **stuck** there for an **entire evening**. I made furniture that could be **raised** and **lowered** in space so that one could have a **different view** of the surroundings and a **new angle on life.**”



Kobestaeqvnet fair, Fredericia, Denmark, 1959

Buzz words

Creativity – inventiveness and imaginative thought processes.

Dimension – a measurement (e.g. length, breadth, depth).

Function – the intended purpose of a thing.

Spatial – of or concerning space.

Stimulus – something that provokes a reaction or increases an activity.

In this pack, see

I for Pantan's groundbreaking ideas

H for products in his style

D for images of his interiors

E for his colour theories and views about spatial environments

M for information about his use of materials

For activities to aid your creativity, see the Design Museum's Innovation resource pack.

A Website design brief

Verner Panton died just before the internet became a feature of many people's home and working lives. Consider how he might have approached website design, and create a web page about Panton for other students. Aim to be innovative!

Research

Visit different websites for inspiration. (Start with some of the websites listed in this resource pack.)

Buzz words

Internet – an international network linking computers from educational institutions, government agencies, industry.

A Product analysis

Use the guidelines on this sheet to analyse a design inspired by the style of Verner Panton.

Form – describe the product: a sketch will help.

Materials – what is the product made from?

Manufacturing techniques – how do you think that it has been made?

Function – what is the product used for? Where will it be used?

Be specific about the sort of environment.

Target group – who is the product designed for? Why?

Cost – try to estimate how much this product would retail for. How have you reached this decision?

Aesthetics – is the product pleasing to look at and to touch?

Safety – do you think the product is safe to use?

Modifications – what improvements could you recommend? Draw your

ideas and annotate your drawing.

Style – what makes this product representative of Verner Panton's style?

Buzz words

Aesthetics – a set of principles of good taste and the appreciation of beauty.

Analysis – a detailed examination; a method to work out how individual parts of a thing or idea relate to the whole.

Annotate – to add a written explanation to a drawing or text.

Estimate – to form a rough idea of something (size, cost, etc.).

Form – a shape; an arrangement of parts.

Modification – a change or adjustment.

Representative – typical of.

A Lighting design brief

Using Verner Panton's examples of lighting as a starting point, design a light/lamp that is adaptable to different environments and situations.

A Look at the images and product information about the two Panton lights shown here and evaluate them using the guidelines in Product analysis (above).



Pantop Lamp, 1980

Yamagiwa Lamp, 1977

The lamp is made of layers of compressed lacquered metal manipulated into an onion-shaped shade that produces an indirect light.

Variation: It comes in two sizes.

The shade can also be halved and wall mounted.

Pantop Lamp range, 1980

The lamp has a metal, bell-shaped shade which is either chromium-plated or lacquered in colours or in gold.



Yamagiwa Lamp, 1977

Variation: It can be either hung from the ceiling or mounted on a stand. The shade can be inverted and used as an up-lighter.

Research

Visit your local high street. How many lights can you see that are similar in design to the lights featured on this sheet and on D for designing 2.

Collect information about lights that are multi-functional or adaptable to different situations.

In what different kinds of situation are lights used?

Look around your own environment. How many different types of light can you see?

Buzz words

Analysis – a detailed examination; a method to work out how individual parts of a thing or idea relate to the whole.

Chromium – a hard, white metallic element that can be highly polished, used as a decorative and protective coating on other metals.

Compressed – squeezed together.

Evaluate – to judge the worth or price of something.

Inverted – turned upside down or inside out.

Lacquer – a liquid made of natural resins dissolved in alcohol, or of man-made substances, that dries to form a hard protective coating.

Manipulate – to handle, treat or use, especially skillfully.