

A2 LEVEL Section C

FACT FILES

Technology & Design

For first teaching from September 2011

For first award in Summer 2013

The Work of Product
Designers



tech
nology
and
design



Learning Outcomes

Students should be able to:

- develop knowledge and understanding of the influence of the following designers and movements in product design:
 - Dyson;
 - Bayliss;
 - Memphis.
- describe examples of designs which incorporate moral economic, social and environmental factors.



Course Content

James Dyson

James Dyson is a British industrial designer responsible for the invention of the Dyson Cyclone Hoover. He initially studied furniture and interior design before making the decision to move into the engineering sector.

Dyson's invention came about because he was fed up with the poor suction performance of the Hoover he was using.



Dyson considered factors such as cost, durability and the environmental impact the product would have throughout its design. The success of the Dyson Hoover in the UK was a result of a clever marketing campaign which highlighted the 'bagless' nature of the Hoover 10 years after the initial idea was developed. Prior to this campaign the success in the UK market had been poor, which forced Dyson to focus his sales in the Japanese markets, the success in this market allowed Dyson to invest money and set up his own manufacturing company in England.



Having been initially rejected by all other major Hoover companies during the early stages of his product life-cycle, Dyson's competitors are now being outsold by his Hoover worldwide.

Other inventions developed by Dyson to date are:

- The 'Ballbarrow' a barrow that's wheel has been replaced by a ball. This ball design is reflected in more modern versions of the Dyson Hoover.
- The 'trolley ball' a trolley that helps launch boats in water.
- The 'Wheel boat' a boat that travels on both the land and water.

Trevor Baylis

Trevor Baylis is the British inventor responsible for the design and development of the Baylis Freeplay radio. He studied mechanical and structural engineering at a local technical college.



After watching a programme on the effect and spread of AIDS in Africa Trevor Baylis got to thinking and started the design process of developing a wind up radio. His rationale was that radio was the only means of communication in Africa, the problem was the need for batteries to power the radio, as batteries were not readily available and would prove too expensive for people living in Africa. Baylis felt that the ability to communicate information to those in rural and poor locations would make a huge difference to the people of Africa. His first prototype of the freeplay radio ran for fourteen minutes on a two minute wind up and was made from an electric motor from a toy car and clockwork mechanism from a music box.



When the product was featured on the BBC programme 'Tomorrows World' two people immediately saw the potential in Trevor's product. They proceeded to broadcast the radio design in South Africa. The head of the Liberty Life Group saw the potential of the radio, as people in Africa had:

- Little to no access to electricity;
- Were too poor to afford the upkeep of battery radios; and
- Lived in rural locations.

With funding from the Liberty Group the company BayGen Power was set up to begin manufacture of the wind up radios.

Since then Trevor Baylis has gone on to produce more designs with all of them having an eco-friendly focus in their design for example the 'eco-friendly media player' and 'electric shoes'.



Memphis

The Memphis Group was an Italian group of designers that worked together and were based in Milan during the 1980's.

The Memphis group produced and showcased furniture, and other design based products such as ceramics, glass, fabrics and so on. Their design's focused on the post modernism style where the work reflected the principle of modern movement.



Basic principals of Post Modernism include:

- The aesthetics is the focus of the product rather than the products function.
- Ornamental and decorative features are used to enhance products aesthetics.
- The mixing and borrowing of other styles and themes from other periods.
- Products are designed to appeal to fashion, youth culture and popular consumerism.
- Influences from the media and fashion.



An example of a Memphis group design is the Carlton Dresser designed by Sottsass in 1981 it provides aesthetic appeal over function by providing a striking visual impact, with the mixture of bright colours and a very angular structure. The angular structure and shapes of the shelves make the dresser impractical as a dresser as it provides very little usable space.

Another perfect example of the post-modernism style is the Etruscan chair, designed by Danny Lane for a gallery exhibition the chair provides some function as a chair but is more a work of art than a product.

The post modernism influences in the chair's design can be seen in the material that has been used to create the chair. Glass is normally associated with other functions and products rather in the design of a chair; a chair is normally viewed as something that should be sturdy, comfortable and carry weight. The glass used in its design is cold and uncomfortable to sit on but allows the aesthetic and sculptural qualities of the chair to be seen.

Environmental Design

An example of a food company that has developed a sustainability strategy to encourage its consumers to purchase their more environmentally friendly products is Kraft Foods Kenco Coffee. This business created a new type of packaging for its coffee product Kenco which uses 97% less packaging than the old packaging. Other products that consider the environmental impact their design has are:

- The Smart Car – A two-seater car designed for 'city driving' with the impact on the environment being considered throughout it's design.
- Wood pellet burners – Alternative heating energy source to oil and gas burners.



Social Design

Some architectural designs and projects address social issues in their designs. Social architecture is the design of an environment that encourages positive social behavior. An example of good social architecture is the Izola Social housing project in Slovenia. These cleverly designed stylish apartment blocks are uniquely designed taking into consideration a range of factors including social issues, such as changing the environment in which low income families live in.



Other examples of social designs are:

- Social networking sites such as Facebook and flickr;
- Wheelchairs;
- Public service advertising; a technique that is used to convey social messages to the general public for example; Trocaire adverts; and
- Sainsbury's products nearly 80% of all Sainsbury's fresh products are grown in the UK. Their 'Supply something new' initiative helps local farmers and suppliers providing them with a platform for selling their products to the mass market.



During times of recession companies and governments attempt to encourage the purchasing of domestic product's over imported products to help boost and ensure the safety of local jobs and the economy.

Economic Design

Consumers buying power is dictated by their income, those consumers with little disposable income cannot access high end products such as expensive cars e.g.: Mercedes Benz, Jaguars etc. As a result of this lower end products are developed by companies for example; Ford Ka's, Renault Clio's, Ford fiesta's etc to satisfy the demand and purchasing power of these consumers.



The public's purchasing power and income is directly affected by the health of the economy. At a time of recession when factors such as inflation and unemployment are high, the purchasing power of the public is greatly reduced and as a result of this consumers' willingness to spend their money on expensive products and services is greatly reduced. Shops such as Poundworld have experienced huge commercial success during the recent recession, as more and more consumers realise that they can purchase cheaper alternatives to products.



Moral/Ethical Design

An example of an ethical design is the air-bag or safety belt functions in cars. Safety of drivers and passengers is an ethical issue which is addressed by every car manufacturer. The first example of an air bag was developed by Ford in 1971, however it wasn't until 1973 that the first air bag included in a car for public use was released for sale. Since then both safety belts and air bags are essential features of every vehicle.



Other examples of ethical designs are products that are considered to be good for the environment or poorer communities and third world countries for example:

- Electric Car's
- Wind Turbines
- Wind up radios
- Solar Panels



Revision questions

1. The Post Modernism style was associated with a group of designers – who were they?
2. Choose a piece created by one of these designers and critically analyse it to show why it meets the Post Modernism style.
3. Identify a designer who has reduced the environmental impact of their products.
4. Give an example of a product which has done this and discuss how.

