THE GREENING OF FASHION?

by

Adelle Hickey

March 1991

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ICI plans to recycle tights

By Karen Falconer

ICI, the chemicals and fibres giant, has tentative plans to launch limited trials of hosiery banks within the next six months.

According to ICI Fibres managing director and president of the British Textile Confederation, Scott Davidson, thousands of pairs of stockings and tights are placed in the bin each day when they could easily be recycled.

"The rag and bone man is part of British history," he says, "so why aren't we doing anything about recycling nylons or putting old suits into textile banks?

"Ladies tights could be recycled and go back to where they started from. Reprocessing would obviously knock the edge off our growth but if you combine it with an increase in clothing engineering, such as producing clothes for energy saving or keeping cool, then that could rectify the balance."

Scott Davidson

The plan is to test hosiery banks within strict geographical confines in the UK as part of the company's determined attempts to rectify its image as a poor environmentalist. The banks would operate in a similar way to existing bottle banks, when consumers dump bottles in a bank. These are later picked up and taken on for re-processing.

The fibres division has now got an in-house Green team in place to monitor ICI developments in relation to the environment, whilst the chemicals division has recently committed £5m to developing a new waterbed plant to clean up effluent.

However, not all companies are convinced that British consumers are concerned enough with the environment to go out of their way for environmentally-sound products, as Martin Taylor, managing director of Courtaulds Textiles explained recently. "I don't believe that the British consumer is interested in environmental clothing nor that they will pay for

ICI Plans to Recycle Tights

This article was taken from Fashion Weekly (September 17, 1990). The article discusses the plans that ICI (Chemical and Fibres Plant) have to launch a hosiery bank. Scott Davidson, ICI Managing Director, says that thousands of pairs of tights are placed in the bin every day that could be recycled.

THE NATIONAL COLLEGE OF ART AND DESIGN

A THESIS SUBMITTED TO

THE FACULTY OF HISTORY OF ART AND DESIGN

IN CANDIDACY FOR DEGREE

By

Adelle Hickey

Department of Fashions & Textiles
Faculty of Design

March 1991

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INTRODUCTION

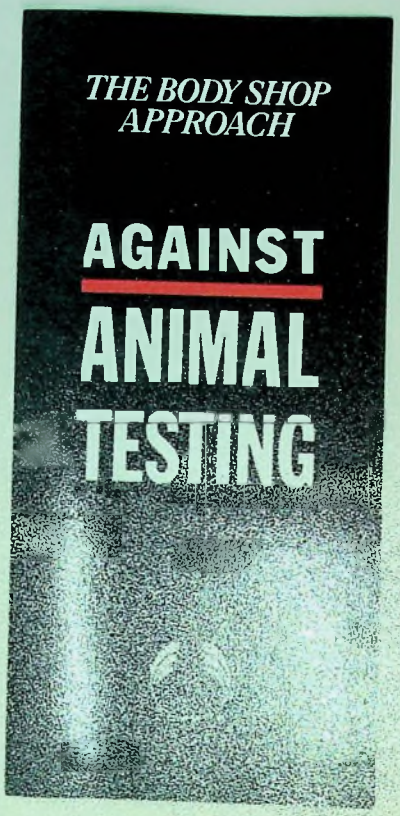
Green Campaigning: Why?

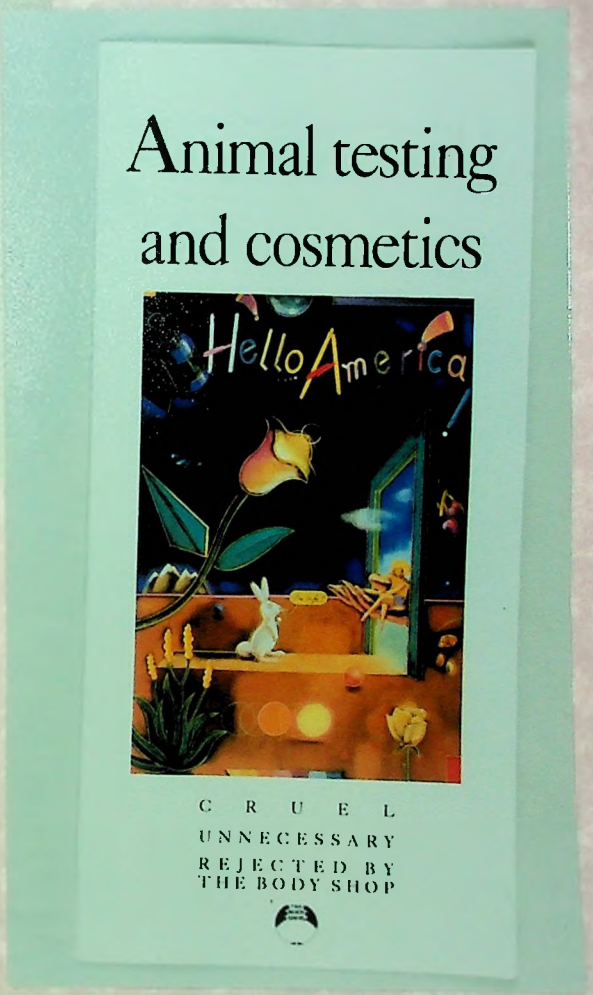
"The Green Momentum is building up and this is probably the most profound transformation in our way of life since 1945."[1]

The fight for a better environment, whether in terms of waste, pollution or noise, the Campaign for Nuclear Disarmament (CND) and different events and protests, to challenge the establishment emerged in Germany, Holland and Britain in the late 1950s. In America after the Korean war ended in 1953, an "underground" movement began to emerge. Consisting of writers and intellectuals, they rejected authority and establishment using peace, drugs, sex and mysticism as the only means of protest.

It was during the 1980s, especially the final half, that environmental concerns and issues have been of great interest to me and I have built up a considerable amount of information on these matters. My very first gatherings were from the Body Shop [Appendix 1] (founded by Anita Roddick, the first Body Shop opened in Brighton, East Sussex in 1976) mainly against animal testing in the cosmetic industry (see Illustrations 2 and 3, page 2). Then, through the media, both on television and in the newspapers, I became aware of the pressure organisation Greenpeace [Appendix 2] and the campaigning they did to protect the environment (see Illustration 4, page 4).

The arrival of the Body Shop in Ireland in the early 1980s enabled me to learn of the ongoing experiments and tests carried out on animals in the cosmetic industry. For example, every year the cosmetics industry is responsible for the suffering and death of thousands of animals. In 1986 in Britain alone, 16,000 animals were used in some form of testing. The animals serve two main functions for the mainstream cosmetic industry: they provide raw ingredients for formulations and perfumes, and they are submitted to laboratory testing in the names of innovation





Illustrations 2 & 3

Body Shop Leaflets

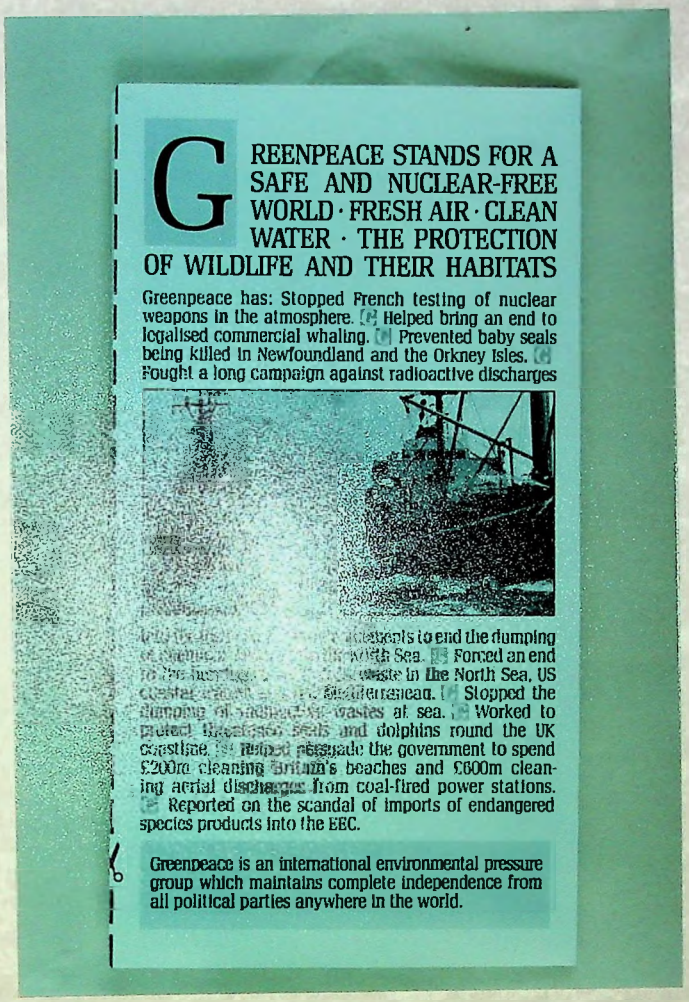
These leaflets are available in all the Body Shops as part of their ongoing campaign against animal testing for cosmetics. Because the Body Shop do not advertise in magazines, etc, information about The Body Shop can only be obtained inside the shop.

and human safety. The three main types of tests carried out are to measure levels of toxicity and to look for eye and skin irritation. The Body Shop has always felt that these tests were wrong, cruel and unnecessary. As well as the Body Shop insisting on all products being natural and running a complete refill service, with all containers and packaging being biodegradable, it has fought against animal testing and this is one of the main principles why it began to trade.

"The question is not, can they reason? Nor, can they talk? But, can they suffer?"[2]

Then, through Greenpeace, the international environmental pressure group which started in Britain in 1971 and maintains complete independence from all political parties anywhere in the world, I became aware of the environmental damage being caused globally. Industrial pollution, the destruction of the rain forests, the commercial hunting of our wildlife and marine life, the pumping of radioactive discharges into the Irish Sea from the nuclear plant at Sellafield and the testing of nuclear weapons in the atmosphere are examples of some of the terrible damage being caused to the environment. This is putting the earth at risk and many species of animals and plants are facing extinction. Greenpeace began their first protest in 1971, in the form of a voyage into a nuclear test zone. The test was disrupted and today the site at Amchutka in the Aleutian Islands is a bird sanctuary. Since then, they have received a lot of publicity and have been headlined on television and in the press for their daring approach to environmental issues. For example, in 1986 Greenpeace volunteers attempted to block the pipes at the nuclear energy plant at Sellafield. These pipes pump radioactive discharge into the Irish Sea, threatening the marine life and affecting human lives. This action taken by Greenpeace volunteers received news coverage on television, creating a lot of public attention.

While at first the Body Shop and Greenpeace were my only outlets to information in this area, it was through these that I started to contact other environmental groups in Britain.



GREENPEACE STANDS FOR A SAFE AND NUCLEAR-FREE WORLD · FRESH AIR · CLEAN WATER · THE PROTECTION OF WILDLIFE AND THEIR HABITATS

Greenpeace has: Stopped French testing of nuclear weapons in the atmosphere. Helped bring an end to legalised commercial whaling. Prevented baby seals being killed in Newfoundland and the Orkney Isles. Fought a long campaign against radioactive discharges

governments to end the dumping ... North Sea. Forced an end ... waste in the North Sea, US ... Mediterranean. Stopped the dumping of radioactive wastes at sea. Worked to protect threatened seals and dolphins round the UK coastline. Helped persuade the government to spend £200m cleaning Britain's beaches and £600m cleaning aerial discharges from coal-fired power stations. Reported on the scandal of imports of endangered species products into the EEC.

Greenpeace is an international environmental pressure group which maintains complete independence from all political parties anywhere in the world.

Illustration No 4 - Greenpeace

This is a leaflet published by Greenpeace in 1981 discussing the work that they do and what they have achieved.

I first approached Friends of the Earth (FOE) [Appendix 3] (see Illustration 5. page 6), also set up in 1971 and one of the leading environmental groups in the UK. Their wildlife campaigns in the 1970s resulted in bans on the sale of furs from endangered tigers, cheetahs and leopards. In 1976 FOE promoted the Endangered Species Act and forced through it a European-wide ban on the sale of all whale products in 1982. Their campaign to protect the ozone layer started in the mid-1970s but it was not until 1987 that politicians worldwide decided that they would have to cut down on and finally ban, by 1997, the use of CFCs. CFCs (chlorofluerocarbons) are chemicals which are found in cleaning solvents, refrigerators, foam packaging and, outside America, aerosols are the biggest single use of CFCs. These chemicals, when released into the atmosphere, can last for more than a hundred years. They eventually break down to release chlorine which eats up the ozone molecules. It is this procedure that has shocked scientists worldwide at the size of the hole in the ozone layer. (In 1987 a hole the size of the United States appeared above Antarctica.) The hole in the ozone layer increases our exposure to harmful ultraviolet radiation from the sun and threatens all life on earth.

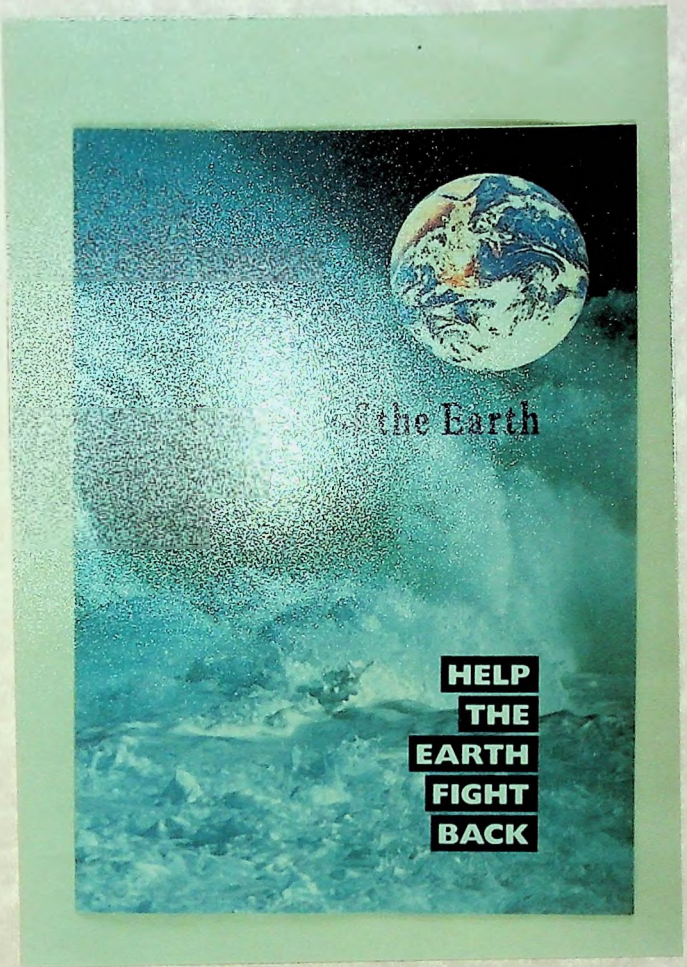
FOE are also well-known for their recycling campaigns. In 1971 they hit the headlines when they dumped thousands of non-returnable bottles on the doorstep of Schweppes, and they have taken many different measures in putting direct pressure on industry and encouraging retailers to reduce today's appallingly wasteful packaging.

"One of the least attractive by-products of our modern consumer society is that we live in an age of unprecedented waste. We produce more rubbish than ever before in this history of mankind."[3]

"One of the basic laws of nature is that nothing actually disappears when it's thrown away, and this is what lies at the root of many environmental problems we experience today."[4]

Illustration No 5

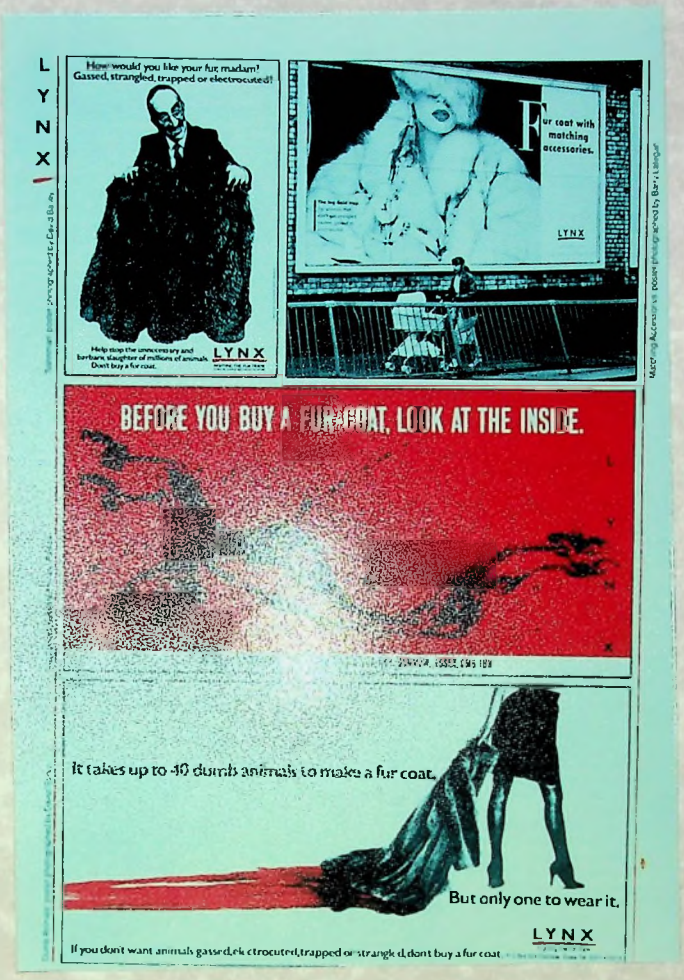
Friends of the Earth



This leaflet was published by FOE in 1987 to inform the public of their aims and how people can help them with their campaigns.

We only have to think of plastic to understand this. There are at least 30 different types of plastic currently being used in a variety of applications, ranging from building materials to drink bottles and carrier bags. The proliferation of plastic, a highly processed petroleum-based product, for carrier bags began back in the 1960s when Coloroll, which was the largest traditional shopping bag manufacturers in Britain, foresaw the consumer revolution. In 1988 in Britain alone, the total usage reached 2.6 million tonnes, of which 36% was used specifically for packaging. Over the past decade, the cost to the environment of such a prolific consumption has resulted in plastics constituting a fifth of all our waste. Over-packaged goods like chocolates and cosmetics and all luxury gifts, plus the many disposable items that exist, for example, plastic carrier bags, various office and catering equipment, bathroom utensils, etc. continue to flood the market, automatically becoming permanent garbage. It is this garbage that will continue to clutter up and defile our landscape, releasing toxins into the water and land and poisoning our air, thus becoming an environmental hazard. Some plastics cause toxic pollution during all stages of their production, use and, when disposed of, some forms of plastic, such as styrofoam and vinyl, constantly give off harmful gases.

Then through FOE I heard about Lynx [Appendix 4], an organisation founded in Britain in 1985 dedicated to ending the fur trade (see Illustration 6, page 8). It is now an organisation devoted solely to the protection of fur-bearing animals, both in the wild and in captivity. Lynx is dedicated to changing society's attitude towards fur and aims to create a new climate of opinion which ensures that wearing fur garments is no longer acceptable. Its sophisticated campaigning, due to the services donated by sympathisers such as David Bailey and Linda McCartney (see Illustration 7, page 10), have succeeded in bringing the cold truth of the fur trade to the public. Their billboard posters and films for cinema screening (see Illustration 8, page 11) have been more than effective in Britain and also in New York. This way, they are striking at the heart of the fur industry, depriving it of customers for fur products and so



Lynx Billboards and Posters

These sophisticated posters were designed to inform the public of the cold and harsh truth of the fur trade. With the help of David Bailey and Ian Pollack, these posters were aimed at the consumers of fur to try and change their attitude towards wearing fur.

dramatically reducing the number of animals killed for their fur. In February of 1990, Harrods announced that they were closing down their fur department, which is the result of and beginning to prove the success of the Lynx campaign. In 1990 a survey for Lynx by Research Surveys of Great Britain found that 74% of the adult population thought there should be a complete ban on trapping animals for their fur and 71% thought it wrong to kill any animals for their fur. This result was good news for Lynx because in previous years, to meet the demand of the fur trade, each year over 20 million fur-bearing animals world-wide were systematically trapped (see Illustration 9, page 12) and hunted in the wild for their skins. Species taken by the fur industry include beaver, mink, coyote, muskrat, wolf, lynx, fox, racoon, badger and squirrel. The Lynx campaign, which is aimed at the consumer of fur rather than the suppliers and retailers, has been a battle that everyone could join in (see Illustration 10, page 13) and has provoked anger especially against the female fur-wearer.

"People and animals. We are inter-related. A long-standing and complex relationship exists between us. It is often one of mutual support. Yet animals are abused every day in a variety of ways."[5]

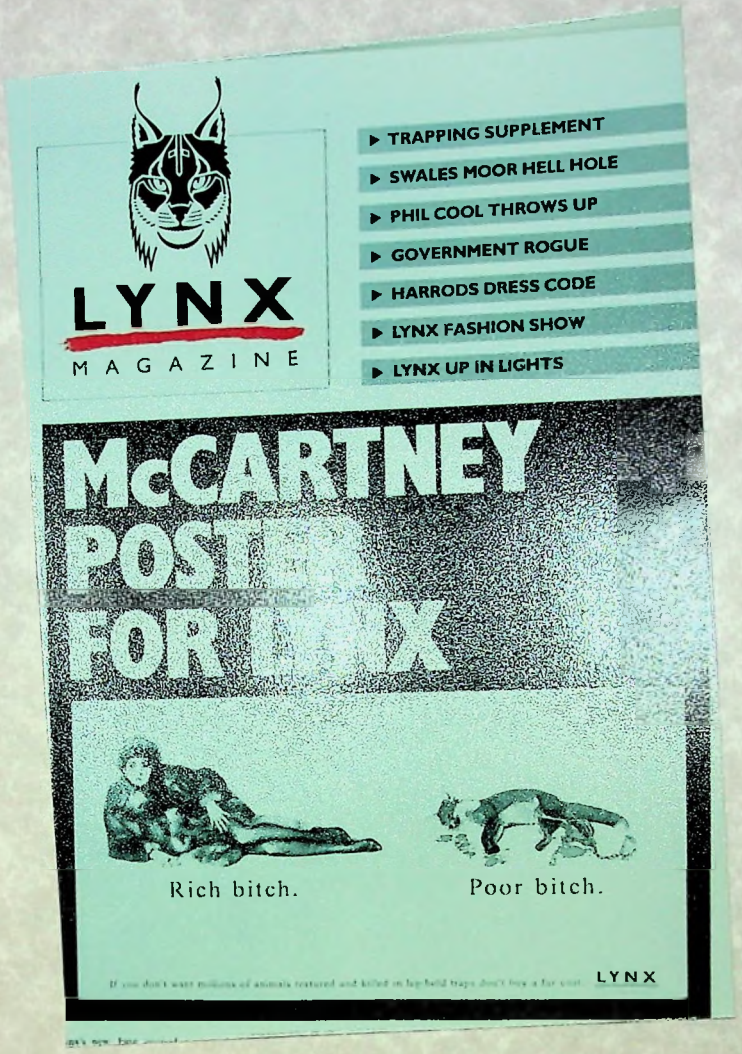


Illustration No 7 - McCartney Poster for Lynx

In autumn of 1989, Lynx released a new series of posters photographed by Linda McCartney. These posters were displayed throughout Britain.

Illustration No 8 - Lynx Cinema Commercials

These are scenes from cinema commercial directed by David Bailey and Chris Hartwill. These commercials were shown in Britain and in New York during 1989.

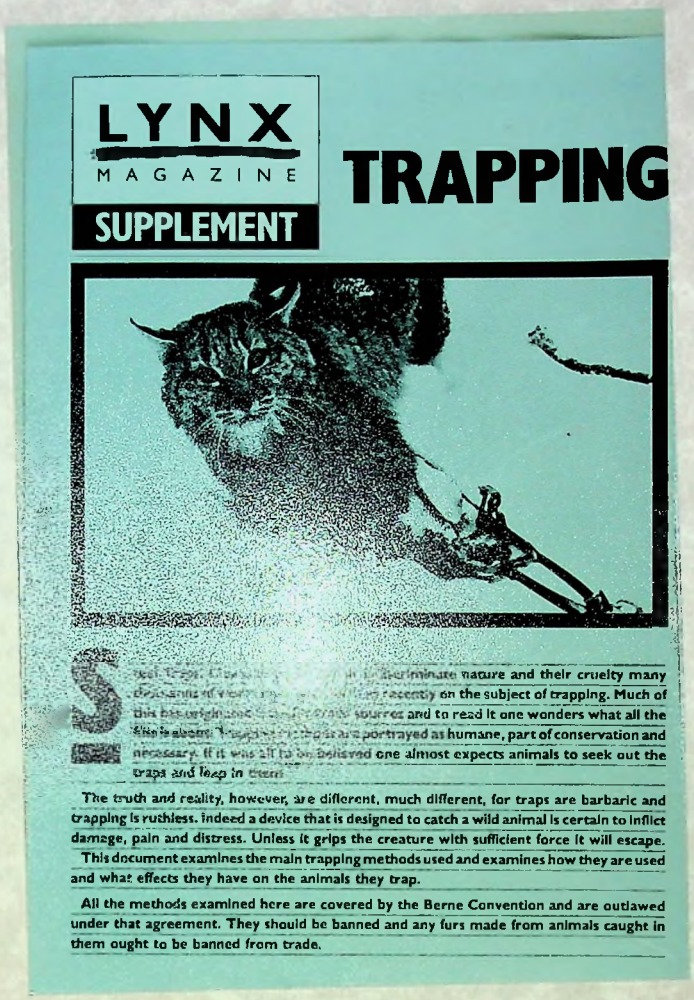


Illustration No 9 - Trapping

This is the cover of the supplement which was issued with the Lynx Newsletter in Autumn 1989. The supplement gives details of the pain inflicted on the animals by the existing methods of trapping.

Illustration No 10 - Lynx Membership

This is one of the leaflets available with the Lynx Newsletter. The leaflet shows the T-shirts and Lynx cards that are available and also explains how the public can help the Lynx campaign.

"Greater Public Awareness"

Anti-nuclear campaigns emerged in Germany, Holland Britain in the late 1950s. In Britain, the Campaign for Nuclear Disarmament (CND) organised "Ban the Bomb" marches (see Illustration 11, page 15). These peaceful protests provided people with the opportunity to express their dissatisfaction with the political and social situation and photographs of the marches were reproduced in the media. But it has been the daring acts of pressure groups like Greenpeace and Friends of the Earth that has aroused public attention and forced governments to take action on environmental issues. Collectively, these and other environmental pressure groups, eg. The Environmental Investigation Agency (ETA) [Appendix 5] (see Illustration 12, page 16) and The Women's Environmental Network (WEN) [Appendix 6] (see Illustration 13, page 17), both of which were set up in Britain during the 1980s, have brought the exploitations of our environment and of the earth's resources to the attention of governments (certainly in Western Europe) and also to a greater section of the public. Through these groups, especially in the second half of the 1980s, we have learned of man's impact on the natural environment, how we are putting the earth at risk and that there is an urgent need to protect our planet.

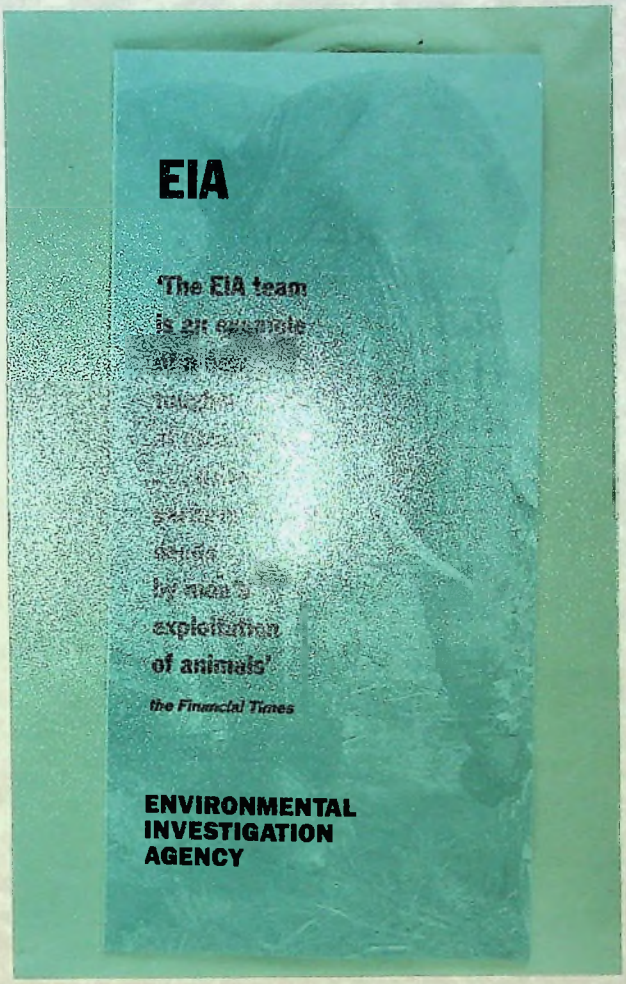
"People the world over are suffering the effects of pollution, deforestation and radiation. Species are disappearing at a terrifying rate. Toxics in the atmosphere and seas have resulted in cancers, genetic mutations and birth defects in fish, animals and people. The destruction of the ozone layer and the imminent global warming has pushed us ever nearer to planetary annihilation."[6]

If we continue to use up the earth's finite resources (coal, oil, gas, metals and minerals) at our present rate and, at the same time, misuse and pollute the earth's renewable resources (water, plant life and the air around us), then before long the

Illustration No 11 - Peace Now (CND)

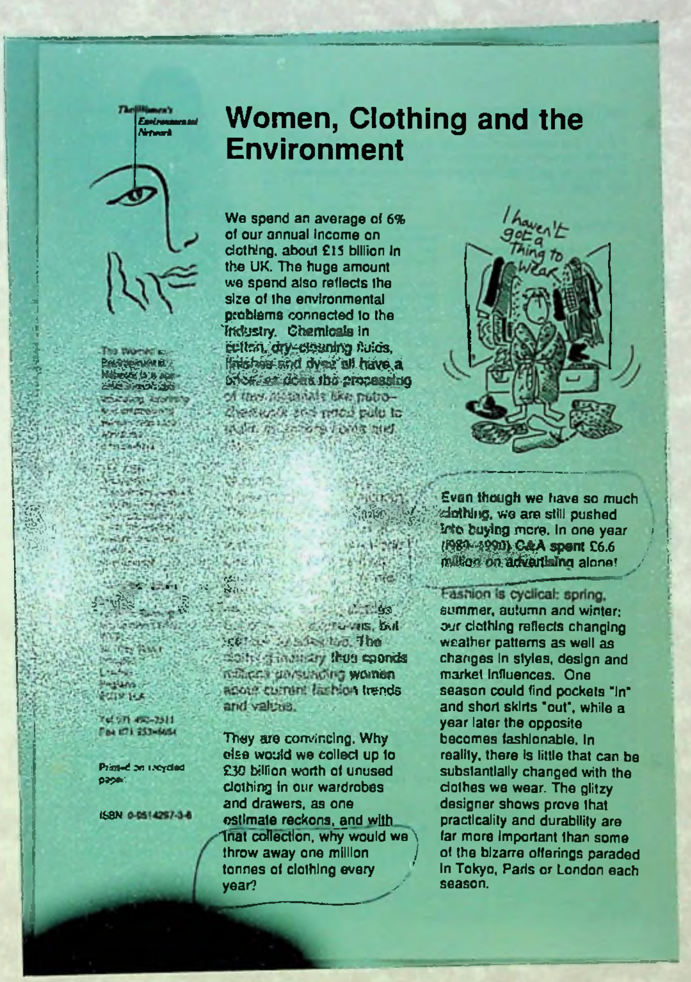
During the late 1950s in Germany, Holland and Britain, campaigns for nuclear disarmament emerged. At the same time in America underground movements were emerging with a desire to reject the authority and establishment.

Illustration No 12 - Environmental Investigation Agency



This is a leaflet published by EIA in 1987. The leaflet discusses the work they do and what they have achieved.

Illustration No 13 - The Women's Environmental Network



Women, Clothing and the Environment

We spend an average of 6% of our annual income on clothing, about £15 billion in the UK. The huge amount we spend also reflects the size of the environmental problems connected to the industry. Chemicals in

They are convincing. Why else would we collect up to £30 billion worth of unused clothing in our wardrobes and drawers, as one estimate reckons, and with that collection, why would we throw away one million tonnes of clothing every year?

Even though we have so much clothing, we are still pushed into buying more. In one year C&A spent £6.6 million on advertising alone!

Fashion is cyclical: spring, summer, autumn and winter; our clothing reflects changing weather patterns as well as changes in styles, design and market influences. One season could find pockets "in" and short skirts "out", while a year later the opposite becomes fashionable. In reality, there is little that can be substantially changed with the clothes we wear. The glitzy designer shows prove that practicality and durability are far more important than some of the bizarre offerings paraded in Tokyo, Paris or London each season.

This is a leaflet which was published during 1989. It discusses the chemicals used in producing cotton, in dry cleaning fluids and in dyes. It also discusses the unnecessary amount of clothes that are thrown away every year.

Earth's ability to continue supporting us is going to break down. It needn't be like this because we know enough to reverse the damage. Peaceful direct action by Greenpeace has invoked the power of public opinion which, in turn, has forced changes in the law to protect wildlife and to stop the pollution of the natural world. It is this kind of action that is finally making people throughout the world realise the damage that is being done. Perhaps even more important is that one of the principal aims of these environmental pressure groups has been to make people realise that we can play a part in stopping this damage; that such global issues are not beyond our control and that we are not powerless. Each one of us can make changes for the better. We all influence the environment in everything we do and, by changing what we do, can affect what is happening to our planet. Perhaps this "new awareness" is the reason why, since the final years of the 1980s, membership of many environmental organisations has increased in Britain and Ireland. Across Europe, environmental issues began creeping onto the political agenda. Mrs Thatcher launched the "Green Cause" Bill in Britain in 1987 and, while it might have been launched purely to gain votes, at least environmental issues were beginning to be treated more seriously in politics. Perhaps we are entering an era where concern for the environment and global issues is starting to grip our cultures and people are realising that the damage must stop.

CHAPTER TWO

"How Green is Fashion?"

So what can we do, and what changes must we make in our existing affluent lifestyles, to interlock with campaigning to safeguard our environment? If pollution from industry and over-packaged goods and disposable items continue to flood the market, automatically becoming permanent garbage, does this suggest that we take a new approach to industry and change our methods of packaging goods and re-consider our consumer habits?

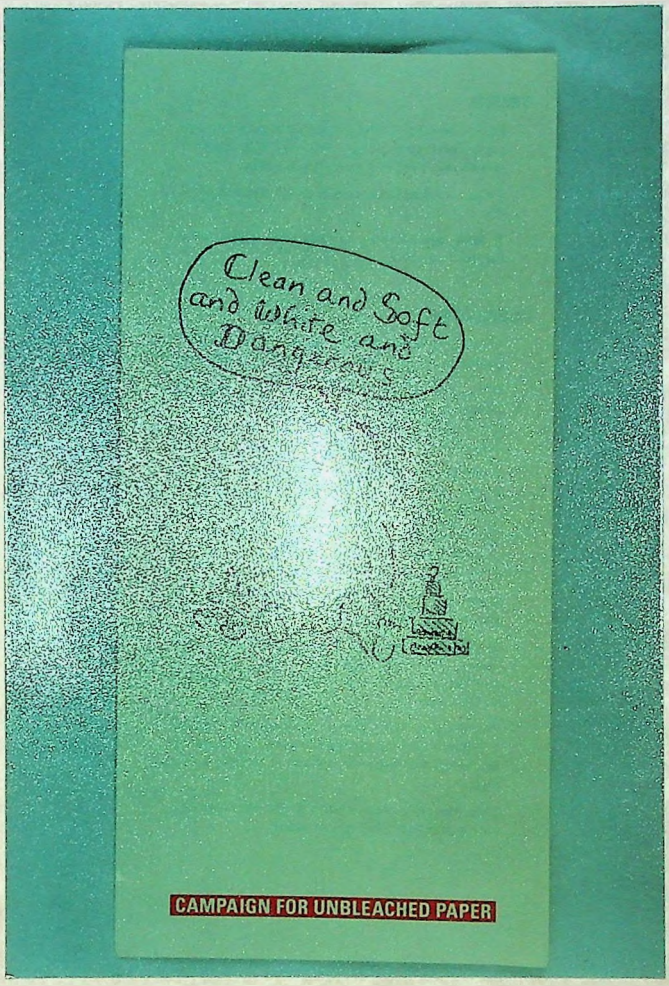
"It's true in the past that a lot of problems were caused by thoughtless multinationals. They are extremely powerful, some more powerful than governments, and many of our huge technical problems would only be solved through their resources. There is a lot to suggest that they will move in the green direction, from consumer pressure and legislation. The fundamental understanding of why companies exist is to meet people's real needs and requirements."[7]

"A great deal can be done about waste by not creating it in the first place. By buying wisely and consuming wisely, but once the waste does exist, a great many useful things can be done with recycling - putting waste back into productive use."[8]

If we should take a new approach to industry and re-consider our consumer habits, what changes must take place in the fashion industry and what area of the industry will be affected the most?

In Britain, women spend on average 6% of their annual income on clothing, which amounts to about £15 billion. This huge amount reflects the size of the environment problems connected with the industry. Chemicals in cotton (see Illustration 14, page 20) (pesticides are sprayed on the cotton crops and bleach is added to cotton during the processing, manufacturing and finishing stages), dry cleaning fluids, finishes and dyes all have a

Illustration No 14 - The Women's Environmental Network



This leaflet was published in 1989 by the Women's Environmental Network. It discusses the use of bleach in paper, nappies and tampons. The bleach involves the use of chlorine (gas which produces chemicals, including dioxin) which poses a risk to our health and to the environment.

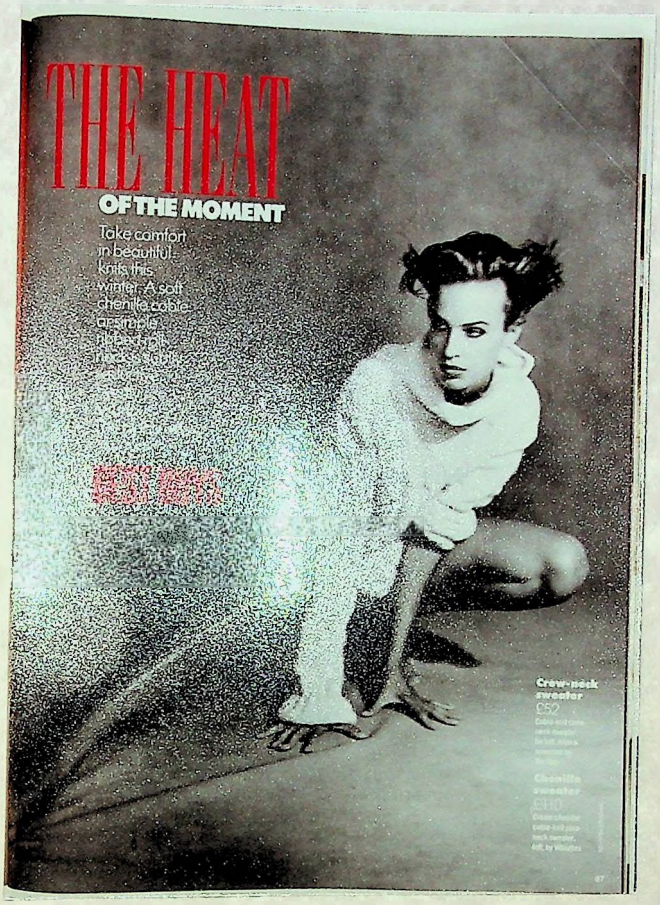
price, as does the processing of raw materials like petro chemicals and wood pulp to make synthetic fibres and rayon. The clothing industry spends millions persuading women and men into purchasing current fashion rends, and values in one year (1989-1990) C&A spent £6.6 million on advertising alone. These advertisements have meant that in Britain a total of £30 billion worth of clothing remains unused in people's wardrobes and drawers and one million tonnes of clothing is thrown away every year, and still people are pushed into buying more (see Illustration 15, page 22). The conservationists, environmentalists and pressure groups stress the need to consume less and produce less, and also emphasise the need to recycle and reuse, thereby reducing the strain on natural and man-made resources. The recent arrival of greater concern for environmental issues on the public's and politicians' doorstep does suggest that fashion during the 1990s will have to be more of a natural affair.

"Little coverage is given to the consequences which may result from the many and various processes involved in clothing production."[9]

"There is a danger in playing with fashion and ecology because nothing goes out of fashion like fashion."[10]

Fashion is cyclical: Spring, Summer, Autumn and Winter all affect and change out styles of clothing to suit these weather patterns. Rules dictating new appropriate colour and fabrics, collar shapes and silhouettes have made consumers slaves to constant changes and turned the fashion industry into one which thrives on waste and excess. The idea of recycling and the commercial reality of extending the life span of clothes to combat the problem of waste and excess might not appear to our big industries. So what will the response be during an era when ecology seems to be in and conservation is catching on? Demands made by pressure organisations now will, in time, be the demands made by the consumer.

Illustration No 15 - The Heat of the Moment



Advertisement taken from Elle Magazine (February 1991, page 87). The quality of the photography and the use of text is typical of fashion advertising today.

"Green products are commercially viable. The point is that if you are producing more environmentally friendly products this week than last, then you are going in the right direction."[11]

"The public also has a role to pressurise and to monitor. It is consumer demand which sets the chain of events in motion. Customers provide the interest and demand which forces the market to expand. That, in turn, gives us the clout to stipulate changes and conditions factories, going all the way back to the cotton growers."[12]

Individual consumer use of natural or man-made products, or a mixture of both, in the form of clothing, furnishings and other related products, have minimal adverse environmental impact. But, collectively, the effluent from various manufacturing processes, and the energy required to mass produce products to meet consumer demands, is responsible for heavy pollution in our rivers, in the air and unnecessarily uses up the earth's supply of resources.

Each day, every person comes into contact with various textile products, either natural or man-made. Natural fabrics are used in everyday apparel, home textile and furnishings, and are extensively mixed with man-made fibres. The more advanced a country is (most West European countries and America), the greater percentage of man-made products are used. Their importance to society is steady increasing as they are used in virtually every sphere of human activity. Medical and surgical products, civil engineering and computers, aerospace and communications, agriculture and transport have all been made possible and have improved through the use of man-made fibres (see Illustration 16, page 24).

The key to their acceptance and success lies in a remarkable combination of dependability, versatility, performance and strength (see Illustration 17, page 25). It has been found that when all facets of this vast economic industry are taken into account, it involves more people and more money than any other

Illustration 16

Better Living with Man-Made Fibres

These pictures were taken from the British Man-Made Fibres Federation catalogue published in the late 1980s. The catalogue explains the essential role of man-made fibres in everyday living. Man-made fibres are used in everyday apparel, engineering, to space travel.

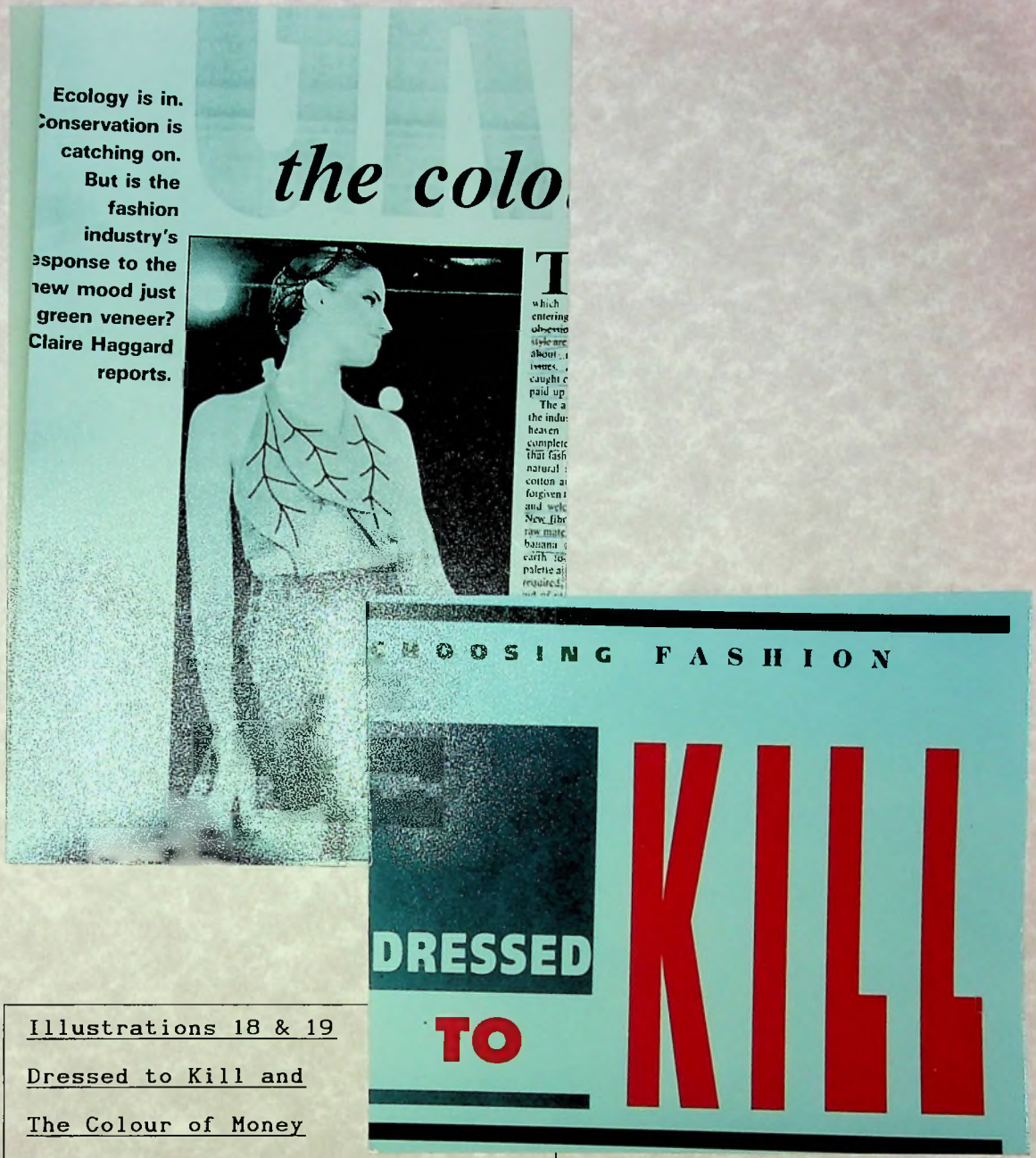
Illustration 17 - Lycra

These photographs were taken from a booklet published by Du Pont in the late 1980s. The photographs show the versatility, strength and performance of Lycra in clothing today. It is for this reason that Lycra, since 1963, has dominated the foundation garment market.

industry. With new developments occurring in the field of textile science and technology, it is becoming increasingly difficult to tell the difference between some natural and man-made fabrics. Since 1976, over 60 billion pounds per annum of fibre have been produced in the world, and each year sees an increase in production. The immense scope of the textile industry makes it one of the largest in the world, as well as the oldest.

My continued interests in environmental issues prompted me to investigate different areas of this vast industry to find out if situations existed that would give rise for environmental concern. I was also interested in finding out what changes, if any, manufacturers (from raw materials to the finished product) and designers were making to accommodate the recent ecological mood of the public (see Illustrations 18 and 19, page 27). Most of my research and information has been obtained through the help of environmental pressure groups such as Greenpeace, Friends of the Earth and Women's Environmental Network. The Body Shop, Lynx, Design Council (Haymarket, London) and British Clothing Industry Association have been very helpful and gave me necessary advice. Many large companies, for example Du Pont, ICI, Belfort International (plastics), did respond to enquiries, but other manufacturers such as Courtaulds, well perhaps did not have the time to respond. The British Man-Made Fibres Federation and the International Institute for Cotton were very helpful, as were Next, Marks & Spencers and BHS. Individual help came from, for example, Iou Taylor, Head of Art and Design, Brighton Polytechnic, Elizabeth McCrum from the Ulster Museum, and the staff in the Department of Textile Furnishings and Dress in the Victorian & Albert Museum, who duly replied to my letters and advised me on what areas to research. I have obtained a considerable amount of information on different areas of the fashion industry that could be considered to cause potential damage to the environment in different ways.

Because there is no association or organisation existing solely to investigate the fashion industry in its broadest sense, the



Illustrations 18 & 19

Dressed to Kill and

The Colour of Money

(a) Dress to Kill was an article featured in Green Magazine (April 1990). The article discussed the pros and cons man-made and natural fabrics. It also discussed energy consumption in producing these fabrics and chemicals used in dye, and different finishings.

(b) The Colour of Money discussed how British designers in 1989 were interpreting environmental issues into their work.

bulk of my research has been obtained through environmental pressure groups. Articles from a variety of magazines, eg. Designers' Journal, Design Weekly, Fashion Weekly, Elle, Marie Claire, Vogue, etc, show how designers have and are responding to the "green" issues, but seldom discuss or dig below the surface of the situation. While information on such matters is not easily available and sometimes only accessible after much enquiry, environmental pressure groups and organisations such as Lynx have provided me with most of my information. The research carried out and the information published by these pressure groups and organisations is not aimed directly at the fashion industry, but some of the findings suggest that different areas of the industry are misusing and polluting the earth's renewable resources (water, plant life and the air around us).

CHAPTER THREE

The Industry

The "rag trade" since the Industrial Revolution has been notorious for the poor wages and working conditions it imposes on workers the world over. Prior to the Industrial Revolution, a seventeen hour working day was not uncommon and work continued for seven days a week. In many factories, children as young as six toiled these long hours. In fact, it was not until 1906 that the first strong moves against "sweating" were begun. The Daily News Anti-Sweating Campaign by J J Mallon and A G Gardiner, editors of The Daily News, was opened by Princess Henry of Battenberg at London Hall in Langham Place.

Conditions have improved immensely since then, but we still know very little about who makes most of our textile products and what sort of conditions people work in, especially in developing countries. This poses a problem for consumers as we all need clothes and other textile products.

Noise, air and water pollution have long been a problem in the industry, particularly in fabric manufacturing. Weaving rooms have been notorious for their loud sounds looms, etc. Of course, new methods have reduced noise considerably. Pollution of air and water has received considerable attention over the last decade and will continue to do so. To aid reducing water pollution, manufacturers have installed costly water purification equipment. They have also turned to alternative methods of processing (solvents and foam technology). Solvents can be reclaimed and work effectively in several finishing and processing operations. Forms are designed to require a limited amount of liquid, which is mixed with air. This reduces the amount of liquid to be released and it lowers energy requirements by reducing the amounts needed in drying fabrics.

The pollution of air through exhausts of fumes and smoke has been controlled for some time in many areas. Pollution of inside air has been responsible for illnesses. Cleaning and filtering the air is now necessary because of government pressure and employee groups. The use of chemicals that are potentially carcinogen or toxic in some other way are used but are now being discouraged or banned by governments and by special consumer advocate and medical groups. Chemicals are widely used in dyes and are linked with causing asthma and skin irritations. as well as rivers frequently running red or purple or whatever colour is in fashion. Dyeworks discharge to sewage treatment plants wherever possible, but colour cannot always be removed. Experts at the National Rivers Authority in Britain admit that this is not just an aesthetic problem. Dyes prevent light reaching river plant life and so disrupt the food chain. The highly caustic discharges from dye plants are neutralised with sulphuric acid. Greenpeace estimates that around 43,800 tonnes of sulphuric acid enter the River Tees every year. It doesn't all relate to textile production, but gives an idea of the scale of the problem. Pattern printed textiles also cause problems because, although single lots of dye can be re-used almost to exhaustion, the result of multi-coloured printing is waste product comprising a useless grey sludge. But our passion for patterned and highly coloured clothing will continue and rightly so.

On the energy efficiency front, synthetics win out over cotton as they can be dyed at lower temperatures and, as a raw material, acrylic fibres can absorb dye lots to total absorption, thus reducing waste. Today, the dye industry for food, cosmetics and textiles is now one of the largest chemical industries in the world, with Switzerland, Germany and Britain dominating the textile dye industry. While most people now are aware of the tests carried out on animals in the cosmetics industry, the chemical industry also uses animals for a range of experimental purposes. Animal-tested bleaches, dyes and pesticides re still used and required during the production and processing of wool, cotton and synthetics.

CHAPTER FOUR

Natural or Man-Made Fabrics?

The impact of fashion cannot be ignored. Fashion determines for many consumers what is bought, when it is bought and how frequently it is replaced. As of recently, more people are beginning to consider the moral and political principles when choosing garments. For example, many people now find it unacceptable to wear any fur due to the growing success of the Lynx campaign (see Illustration 20, page 32). It is this principle that is also staring to make people read the labels on their clothes to see if their new outfit is Costing the Earth, literally.

Cotton

As a natural fabric, cotton is growing in popularity and is at present the most popular fabric among consumers in the UK. As a natural fabric, a renewable resource which is comfortable to wear and, as a biodegradable product, it appears to be gentle on the environment. Cotton is an important cash crop for the third world and occupies 5% of the world's productive land. Intensive production of this thirsty crop ruins the soil. In Russia, the Arel Sea is in danger of drying up as a result of intensive cotton production, and in Brazil rain forest is felled to grow cotton. Cotton consumption has doubled since the 1930s, but acreage has hardly increased as yields per acre have been raised using modern chemical-dependent farming techniques. Over 26,000 tonnes of pesticides are used on Egypt's cotton crop every year. In the Sudan, run-off from irrigated cotton fields is contaminating drinking water, destroying natural life with substances such as methyl parathion, classed by the World Health Organisation as an extremely hazardous pesticide. During the production of cotton, the fossil fuel used in the machines for planting, spraying, fertilising and picking causes further pollution. Cotton fibres have to be further treated, which usually involves

Illustration 20

The Public Against Killing Animals for their Fur

This leaflet was issued with the Lynx Newsletter during 1990. A survey was carried out in Britain during 1989 which showed that 71% of the adult population thought it was wrong to kill any animals for their fur.

bleaching and washing. Peroxide has largely replaced harmful chlorine-based bleaches, but foam generated from detergents deprives river life of oxygen. During the finishing stages of weaving and strengthening the cotton, the formaldehyde-based finishing agent has caused a great deal of concern. Used to produce flame-proofed, crease-resistant and easy-care type cottons, it can irritate eyes, skin, lungs and is a known carcinogen.

Wool

Wool is a warm fabric that can keep the chill out and thus requires you to use less heating, but again we need to know how it is produced.

Compassion in world farming argues that sheep farming in Australia currently involves excessive cruelty. Not only are sheep routinely cut and distressed during shearing, but they are also subjected to "mulesing". This involves slicing off the skin around the tail area to prevent blow-fly maggot infestation in damp wool. Further consideration when wearing wool is the permethrin which is used as a moth-proofing agent in wool processing industries. Permethrin is an organo-chlorine pesticide which has replaced older more toxic chemicals. The reaction takes place in water which some companies discharge straight into waterways. The current processing method is applied to wool in dye baths, generating about 50,000 litres of waste liquid for each tonne of wool treated. Lobbying for improved controls could change this.

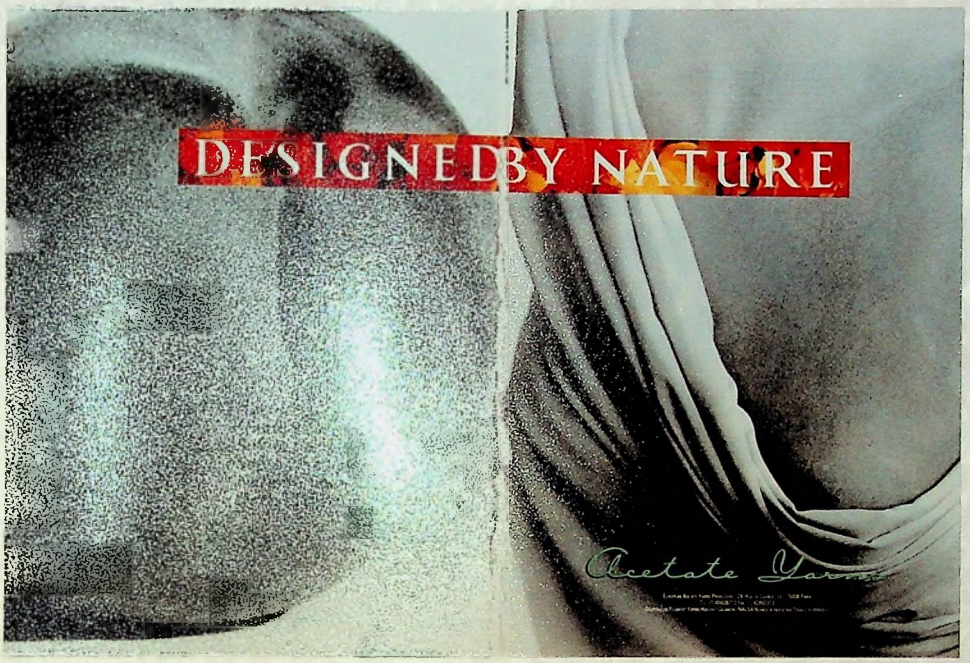
Synthetics

Man-made fibres are produced by the chemical treatment of certain raw materials such as cotton, linen, wood pulp, extracts of petroleum and the by-products of coal. The twentieth century saw the addition, for the first time, of new fibres and fabrics,

not from nature but from the chemistry laboratory. Since then, the strong desire and need for new and different fabrics for both apparel and other related goods has led to new developments in fabric and yarn structures, as well as in finishes and methods of colour application. Unlike natural fabrics, they can be produced in forms and with characteristics to suit specific purposes. Length and thickness, colour and lustre, plus such performance factors as strength, resistance to heat, acids, alkalis, sunlight and laundering can be determined before production starts. For example, Lycra is a man-made elastic fabric invented and produced by Du Pont. Its remarkable properties of stretch and recovery enhance fabrics, adding new dimensions of fit, comfort and drape to clothing. These fibres have brought superior quality through advanced technology into the textiles industry.

But our advanced technology producing superior fibres and man-made fabrics could be our natural enemy. The first man-made fibre to become a reality was rayon (then known as artificial silk) which appeared commercially in the early 20th century. Courtaulds is Britain's biggest manufacturer of viscose/rayon with plants in Grimsby and North America. In 1988-89, their fibre sales were £197 million. Unlike most other synthetic fibres, viscose is manufactured from a renewable resource using the wood pulp from the eucalyptus (see Illustration 21, page 35). Courtaulds have their own eucalyptus plantation in Africa but this has caused severe soil degradation as the trees extract more nutrients than they contribute, produce toxins and their shallow roots deplete ground water supplies which can interfere with local food crop production. Outside of their native Australia, eucalyptus are regarded as an environmental disaster. Rayon, made from eucalyptus trees, requires chlorine in the early stages of production. This, in turn, causes dioxin and other organo-chlorine pollution. Rayon is also made from trees which come from temperate zones in Canada and the United States, and from rain forests.

Illustration No 21 - Designed by Nature



This is one of many advertisements that Courtaulds produced to promote their acetate yarns (viscose, rayon etc). This was taken from Vogue, June 1990.

Most of our synthetic fibres and man-made fabrics are made from an oil base. According to estimated global oil consumption figures, synthetic fibres account for around 23.000 of the 57 million barrels of oil we consume every day. An oil-based fibre such as nylon, however cleanly it is produced, consumes a raw material which the planet has in limited supply, although the fibres themselves are recyclable. The soft thermo plastics used to make nylon, polyester and acrylics give off traces of chemical vapour as the fibres warm against the skin, which could affect people with allergies and asthma. Synthetics may be cheaper and easier to care for than cottons and linens because they need less ironing, colder water for washing and less time for drying. Their desirable properties and easy-care virtues such as controlled shrinkage, pleat and crease retention and wrinkle resistance have provided the base for their penetration into almost every phase of our modern life. To achieve these properties, the fabrics are treated with a formaldehyde resin. Formaldehyde is a suspected carcinogen and can irritate the eyes, nose and throat. The formaldehyde is combined with another chemical to make the resin, which becomes part of the fabric. The resin may still contain formaldehyde and, as it gradually breaks down during the life of the garment, it releases traces of gas continuously.

Another environmental factor to consider when discussing synthetic fibres and fabrics is that, unlike natural fabrics such as cotton which takes between two and five years to decompose, environmentalists think it takes several centuries for polyester to do so. The industry is working on developing some biodegradable polyesters but some won't decompose. ICI, the chemicals and fibres giant, have announced plans to recycle tights and plan to launch limited trials of hosiery banks in the UK during 1991. According to ICI Fibres Managing Director and President of the British Textiles Confederation, Scott Davidson:

"Thousands of pairs of tights are placed in the bin each day when they could easily be recycled."[13]

Women have been wearing stockings since AD600 when soft leather (sykhos) covered their legs in Greece. Early British stockings were made of silk, but these days some 500 million pairs of tights are made of nylon. In Britain the average woman uses 25 pairs of tights per year. They are not biodegradable and are often linked to health problems like thrush. Originally elastic fabrics were made from rubber or latex, but in the past forty years latex has been replaced with artificial lastex, lycra, spandex, polyamide and acrylics which literally last forever.

If we were to replace all synthetic fibres with man-made ones, there would be yet another major factor to take on board. It takes 600,000 acres of cotton to produce the fibre that is manufactured by a 300 acre synthetics factory. In America at present 75% of all fabrics come from synthetic fibres. To replace that man-made fibre with cotton would require 20 million acres of land. To replace synthetics with wool would take 1,000 million acres. Cotton and wool production could be developed and could be increased in the developing world, but then most third world countries need food crops, not cotton and sheep to clothe the industrialised world. The complexities of all the issues involved require an informed and questioning attitude because the obvious solutions might not always be the best.

CHAPTER FIVE

More Factors to be Considered

Although man-made fibres date back to 1955 when Count Hilaire de Chardonnet in Besancon, France, used an extract of mulberry leaves to make artificial silk (rayon) and the first chemical (aniline) dye was invented in 1856 by William H Perkins (Perkins purple), it wasn't until the early 20th century that they became a widespread commercial reality. Since the 1920s, scientists have produced many new fibres, fibre variants and modifications of man-made fibres. In fact, there have been greater advances in fibres, fabrics and wet processing techniques (finishing and dyeing) since 1900 than in the several thousand years before. But many of our fabrics that have been modified, received some treatment or dyed can only be dry cleaned and this in recent years has been called into question more than ever before.

Dry cleaning fluids include solvents that destroy the ozone layer as well as other solvents known to cause health problems. Porchloroethylene is irritating to the eyes and throat in concentrated amounts and gives off toxic fumes when heated. Tetrachloroethylene, which is a by-product of soap production and used in dry cleaning fluids, contributes 20% of emissions of chlorocarbons (CFCs) which depletes the ozone layer. Also, tetrachloroethylene reacts with low level ozone in the presence of ultraviolet radiation to form trichloroacetic acid (TCA). This is a powerful herbicide and has caused more damage to conifer forests through its release into the atmosphere. In recent years, a German analytical chemist, Hartmut Frank, has found that these industrial solvents and dry cleaning fluids may both make a very significant contribution to forest decline. Frank presented his findings to the German Federation of Dry-Cleaners and the Swedish Academy of Sciences in Stockholm in 1989 and decisions have been made to reduce the use of tetra-chloroethylene by 75% by 1995. Also in Britain in 1989 a company called Eco Clean was set up to offer a dry cleaning

service that cares for your clothes as well as the environment (see Illustration 22, page 40). The essential ingredients are air and water. The first step is to remove the moisture which holds the dirt, then the dirt is vacuumed out. Finally, the moisture is put back in when the clothes are being pressed.

Another area which is essential to our clothing and has received a lot of attention during the past few years is our washing detergents. Detergents are rinsed out of our machines into the sink and back into our rivers, lakes and streams. Some of the most harmful ingredients in powders are phosphates. These are nutrients which encourage the growth of algae in our water, which use up oxygen needed by other plants by by fish life. I extreme cases, an area of water can literally be suffocated, as in the case of Lake Erie in North America. During this rapid growth, known as algae bloom, some species of algae release toxins which are harmful to many creatures, including man. This effect was graphically demonstrated last summer in a number of British reservoirs such a Rutland Water when sheep and dogs were poisoned by the toxins. In addition, the phosphate manufacturing industry creates a good deal of pollution by dumping the by-products, which include heavy metals and even radioactive materials, into rivers and seas. There are alternatives.

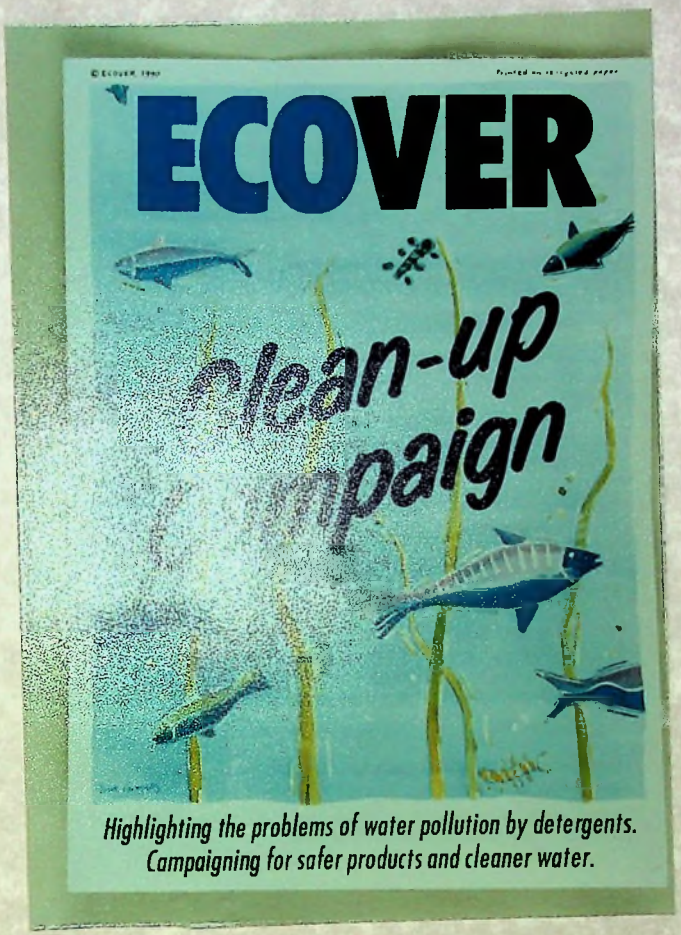
Ecover is a company which started over ten years ago on a farm in Belgium (see Illustration 23, page 41). Ecover produced the first phosphate-free washing powder in Europe. The basic concept was to produce products which have as little impact on the environment as possible, but would perform as well as regular products. They have encouraged other manufacturers such as Lever Bros and Proctor & Gamble to produce better quality products, with the result that 20% of washing powders are now phosphate-free. Ecover use vegetable oil-based surfacants and continue to develop their products to meet their own strict environmental standards.

In an era when the need to conserve energy and energy-rich resources is of great importance in the world, the time has

Illustration No 22 - Eco Clean

This leaflet was published in 1989 and explains how Eco Clean looks after your clothes as well as the environment.

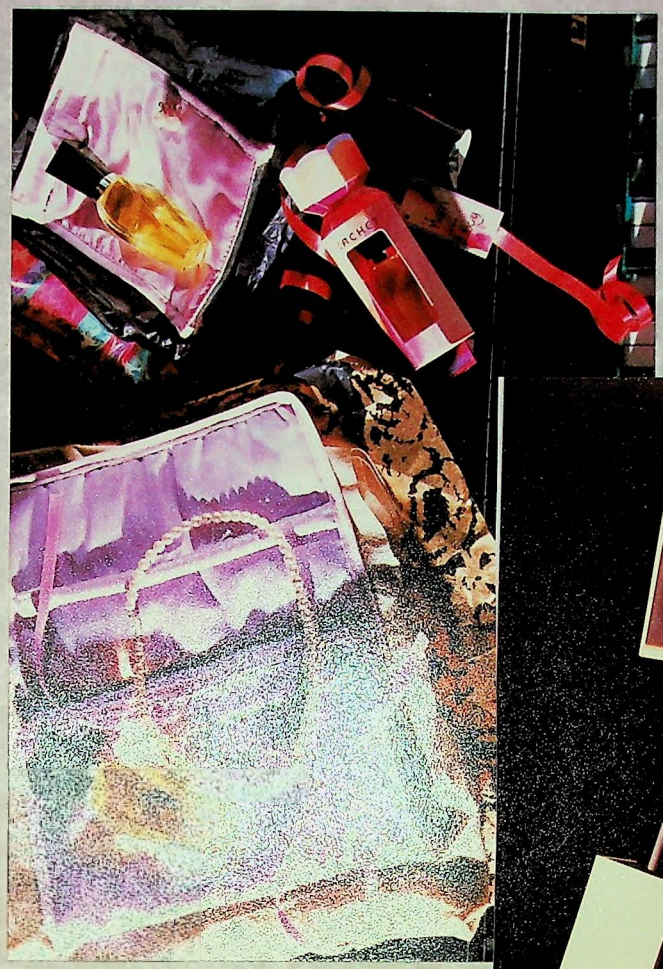
Illustration No 23 - Ecover



This leaflet was published by Ecover in the late 1980s and is now available in health food shops, vegetarian restaurants and some supermarkets where Ecover products are stocked. The leaflet explains why detergents cause pollution and why Ecover products are safer to use.

arrived for manufacturers to search for production methods or operate alternative methods that use minimum amounts of energy. So as the trend moves towards conservation of energy and natural resources, recycling, re-using to reproduce, seems to be a major solution and this cannot be emphasised enough. Packaging creates the bulk of our waste, which could be recycled and an enormous amount of packaging is used for a wide variety of goods as well as clothing and cosmetics. (see Illustrations 24 and 25, page 43). Perhaps the fashion and cosmetic industry could set an example by using less packaging and using biodegradable plastic bags (see Illustration 26, page 44). There are at least 30 different types of plastic currently being used in a variety of applications. These range from building materials, packaging for food, cosmetics, luxury gifts, domestic and electrical goods, garments and other related materials. However, in 1982 Britain alone manufactured 1,000 square miles of polythene film, the majority of which went into plastic carrier bags. On average, each person in Britain consumes about seven kilograms of plastic bags per years. Today, about one-tenth of the average weekly shopping bill is spent on packaging alone. In Britain in 1988, total usage of plastic reached 2.6 million tonnes, of which 36% was used specifically for packaging, and every year paper products use up about 75 million trees. Most of these products will end up in some form of packing, newspapers and glossy magazines. The plastic carrier bag and our disposable elaborate packaging (see Illustration 27, page 45) is a classic symbol of our existing throw-away society. These over-packaged goods will continue to be an environmental hazard as they join the landfill sites and rubbish tips, using up valuable land, and can allow poisonous chemicals to be washed through the soil to reappear in drinking water.

When discussing paper products and paper packaging, another area of enormous concern is the amount of chlorine bleaching that is used. In Sweden, the pulp and paper industry is one of the biggest polluters and this is evident all around Sweden's coastline. The use of chlorine bleaching to produce white paper has resulted in heavy discharges of organo-chlorine compounds,



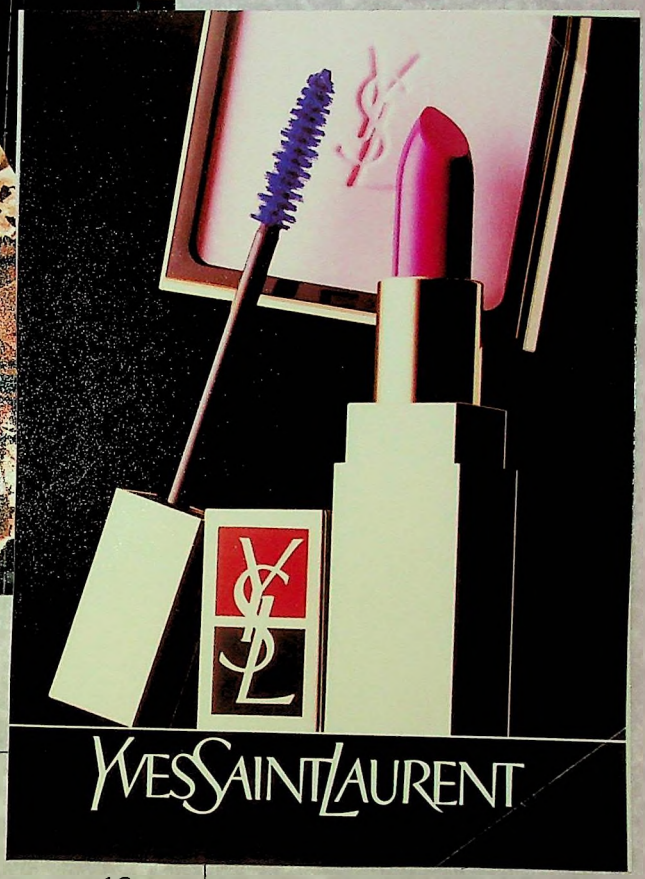


Illustration 24

Yves St Laurent

Elle Magazine, March 1991, page 19

This advertisement shows the amount of packaging that is used for these cosmetics as well as the money that is spent in promoting them.

Illustration 25

Cachet

Marie Claire, January 1991, page 122

This advertisement shows the amount of packaging involved for one bottle of perfume.

Illustration No 26 - Belfort International

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NICE LEGS – BUT WHAT ABOUT THE PLASTIC BAG

This was an article featured in the Greenpeace magazine (May/ June 1990). The article discusses the amount of energy plastic uses up during production, and why plastic doesn't break down. Belfert Plastics have designed a soft handled, looped plastic carrier bag. It is tear resistant, with high strength so the bag can be used time and again.

Illustration No 27 - Kleenex Boutique Tissues

Elle Magazine, March 1991, page 81.

This advertisement shows the sophisticated packaging used that will be disposed of, as will the tissues.

including dioxins. This is known to cause diseases in fish and plant life.

"In nature there are neither rewards nor punishments, there are consequences."

A great many things can be done about waste by not creating it in the first place. But once the waste does exist, it still is potentially useful material and can be recycled, putting it back into productive use. In Britain and Ireland, about one percent of all household rubbish is recycled. If we are to reduce the waste created by our present way of living, this would involve conserving our resources by using them more sensibly, consuming less, and re-using or recycling useful materials instead of throwing them away (see Illustration 28, page 47).

The Cosmetics Industry

When endeavouring to research the fashion industry for particular findings, the enormous size and the immense scale of the industry instantly presents a problem or automatically solves many. My interest in researching the possible connections between the fashion industry and environmental concerns, and to see if the industry was adjusting itself to the current mood of the public, meant for me that I had to decide where I was going to draw the line. Environmental pressure groups have created greater public awareness which is beginning to make us more aware and perhaps re-consider our current means of habitating on this planet. It was from this angle that I approached my research to see what areas of the industry will need to change if we are beginning to change our current affluent lifestyles. Huge industries and our heavily consuming habits is costing us the earth literally. Raw materials, natural or man-made, mass production, chemicals and wasteful packaging have all and still are causing a lot of damage to the earth's renewable resources (water, plant life and the air around us) and continue to use up the earth's finite resources (coal, oil, gas, metals and

Illustration No 28 - Marks & Spencer Recycling Campaign

St Michael NEWS

OCTOBER 1990

THE STAFF NEWSPAPER OF MARKS & SPENCER

IT'S TAKE-OFF FOR RECYCLING CAMPAIGN

Praise for Hayes DC

Marks & Spencer's Newsletter, October 1990.

Marks & Spencer announce their recycling campaign set to take off in all stores throughout Britain. All their polythene bags will be sent to Hayes at Maidenhead to be recycled.

minerals). While I have discussed the different industries, different fabrics and our use of packaging, one area which I feel is necessary to the fashion industry, and also one that I wanted to research, is the cosmetics industry. Cosmetics are an essential ingredient in the world of fashion but this industry is also connected with some of present environmental issues and concerns.

Every year, two billion dollars is spent on fragrances (400 million in Britain alone) which makes the perfume industry one of the biggest beauty industries in the world. The involvement of science and technology in our cosmetics and beauty products has led to fifty new brands appearing on the world market each year. Sophisticated advertising and glamorous packaging has encouraged the consumer to spend an annual amount of $600 million on these goods.

Behind the sophisticated advertising and glamorous packaging lies the suffering and death of thousands of animals. The animals are used as raw ingredients for the formulations and perfumes and they are subjected to laboratory testing in the names of innovation and human safety. The list of animal ingredients used by the industry is long. For example, civet, an ingredient in expensive perfumes, is scraped from the glands of Ethiopian civet cats, who are kept in tiny bamboo cages and subjected to heat and smoke in order to make the glands secrete more. Musk, another perfume fixative, is obtained by killing the small Himalayan musk deer.

The three main types of tests used in the cosmetics industry on animals are to measure levels of toxicity and to look for eye and skin irritation. For toxicity, the LDS0 test is used. A group of animals are force-fed large quantities of a substance such as lipstick until 50% die. Rats and mice are usually used for this. For eye irritation, the Draize Eye Test is the most commonly employed. Rabbits are used, as the structure of their tear ducts means they cannot rid themselves of substances in the eye. Products such shampoos or hairsprays are tested by

dripping them or spraying them into the eyes of conscious rabbits. For skin irritation, substances are applied to the shaved skin of animals, usually guinea pigs or rabbits. The deodorants, face cream or whatever is taped onto the shaved area and left for a period of time to see the reaction.

But this industry too is being affected by the emotional climate of the times (see Illustration 29, page 50). Thanks to the example set by conscientious retailers like the Body Shop and the campaigning efforts of charities such as the RSCPA, which in 1989 launched a scheme to provide companies committed to not testing on animals with human volunteers on whom to try out their finished products, the beauty industry is beginning to change its approach (see Illustration 30, page 51). In 1987 BUAV, the British Union for the Abolition of Vivisection, was launched (see Illustration 31, page 52). Steve McIvor, who is the National Campaign Organiser, said:

"The ecological movement has undoubtedly had considerable impact on the cosmetics industry."

In 1987 in Britain, sixty companies manufactured products without cruelty to animals. By 1990, 150 companies had stopped testing their products on animals (see Illustration 32, page 53). In 1989 Avon and Revlon stopped using animal testing on all their products, which puts tremendous pressure on other international companies to follow suit. Avon committed itself to getting out of animal testing in the early 1980s. They also provide funding for various bodies, including the Fund for Replacement of Animals in Medical Experiments (FRAME). It is one of the organisations concentrating on finding proven alternatives to animal testing - in vitro testing of cell cultures, for example. Until recently, cruelty-free products were only available by mail order, but their popularity is again adding more pressure to the larger cosmetic companies.

Not all companies are at present affected by the emotional climate. L'Oreal, who have moved away from tests such as Draize,

Illustration No 29

Beauty Goes Green and Facial Discrimination

BEAUTY GOES GREEN

Green awareness is forcing cosmetics companies to stop testing on animals

FACIAL DISCRIMINATION

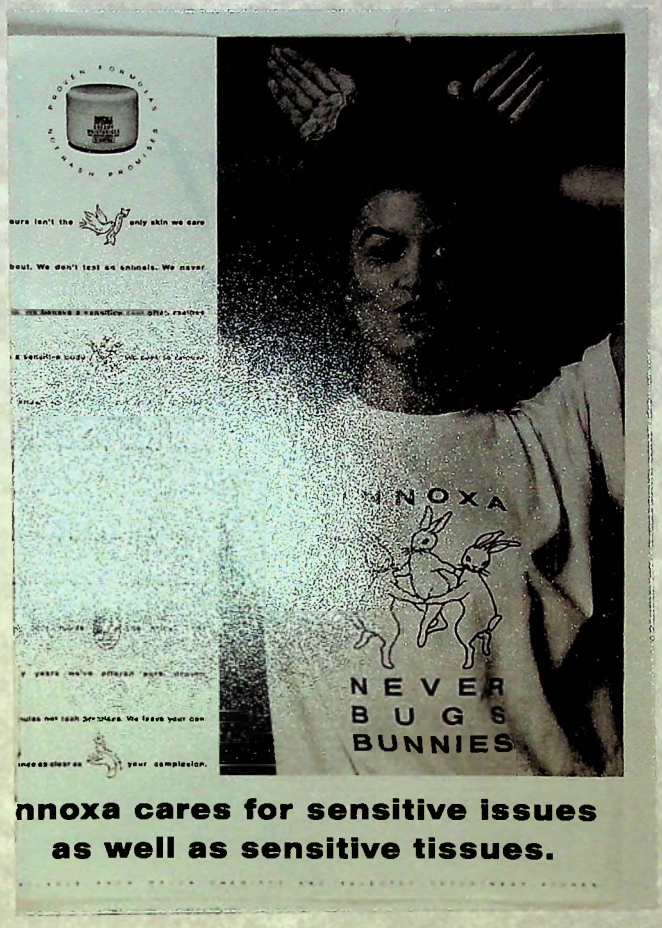
Choosing environment friendly and cruelty-free cosmetics and toiletries requires careful shopping. Debra Selinger canvassed some celebrities on green ideals and ideas.

Anita Roddick, Christina Stewart, Stephen Carey, Bob Holness, Jill Gascoine, Barbara Daly, Peter Howitt, Rula Lenska

(a) Beauty Goes Green was an article in Elle magazine (November 1990). This article discussed how cosmetics are being adjusted to suit the ecological mood of the Nineties.

(b) Facial Discrimination was an article which was in the Green Magazine (October 1990). This article discusses the products that are available that are not tested on animals. It also talks to various celebrities and asks why they are against cruelty to animals in the testing of cosmetics.

Illustration No 30 - Innoxa



This advertisement for Innoxa beauty products appeared in magazines such as Elle and Marie Claire during 1989 and 1990. It was to promote their product which uses only natural ingredients and is not tested on animals, but also to join in on the campaign against cruelty to animals.

Illustration No 31 - If Looks Could Kill

IF LOOKS COULD KILL...

LABORATORY TESTING ON ANIMALS

LETHAL DOSE TEST: This is used to decide how toxic any new substance is – ie in what quantities a new drug should be administered or how risky a new pesticide is.

- LD50 (Lethal Dose 50 per cent) TEST: Is administered by mouth or through the skin. It establishes the dose expected to kill half the animals in any group. The formal test uses about 60 animals.
- LC50 (Lethal Concentration) TEST: This is similar to LD50 but a substance is breathed in as gas or vapour.
- Almost 7,000 animals were used to test household products in 1987.
- Toothpastes which 'fight plaque' were tested on rats and mice following high sugar diets designed to increase their vulnerability to tooth decay.
- In 1987 14,000 animals helped to test cosmetics and toiletries.
- Nearly 40 per cent of all animal tests in this country are for medical and dental products. Crowns, fillings and dental anaesthetics are developed and tested on laboratory animals.

A 'Guide Without Cruelty' list of skin care products, perfumes [illegible] cream, soaps, bath oils/foams, cosmetics, hair care, [illegible] talc, shaving gels, sun protection, oral hygiene, health [illegible] household products, organic gardening and veterinary products [illegible] in the Green Guide to Shopping by the Green Magazine [illegible] and available at your Newsagent. The RSPCA also [illegible] a Guide, which may be obtained by writing to them at The [illegible], Horsham, West Sussex RH12 1HG.

SPECIAL OFFER

FREE WILD RASPBERRY BATH CRYSTALS FROM MONTAGNE JEUNESSE

If you would like to sample cruelty free toiletries, Montagne Jeunesse are giving away free 250g packs of their Wild Raspberry Bath Crystals to the first 100 people to write in. Suitable for all skin types, these crystals have astringent properties and produce an invigorating fresh fragrance in bags made from recycled paper. All bath packs are biodegradable.

Montagne Jeunesse products are BUAV and Advertising Society approved. The company's environmental policy applies to all aspects of its business from formulation and testing right through to manufacture.

Please send me my free sample of Montagne Jeunesse Wild Raspberry Bath Crystals.

Name .....

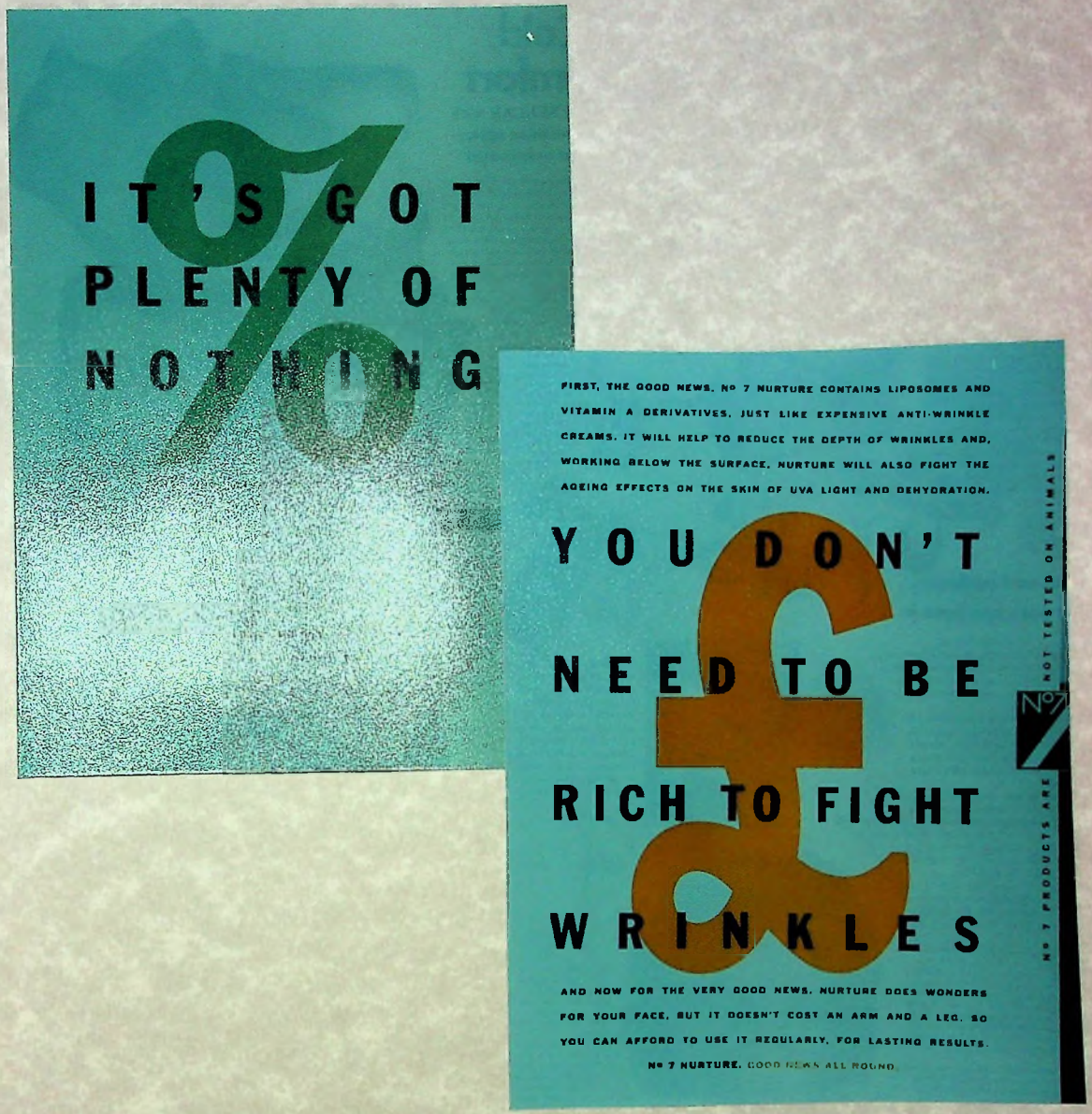
Address .....

..... Post Code .....

Send to: Montagne Jeunesse, 2 Pennington Road, Southborough, Tunbridge Wells, Kent TN4 0SJ.

This article was featured in several issues of Green Magazine during 1989-1990. This commercial was a campaign launched by BUAV (British Union for the Abolition of Vivisection) to persuade consumers to buy cruelty-free products.

Illustration No 32 - No 7



These advertisements were two in a series launched by No 7 (the cosmetic and beauty product company) in 1989. The advertisements were and still are featured in magazines such as Elle, Vogue and Marie Claire. The advertisements promote their use of natural ingredients and inform their customers that their products are not tested on animals.

but still use other tests on animals. Their fundamental stance is to carry out research that will achieve the highest quality and greatest possible safety in their products. They feel it would be irresponsible of them to change their policies due to "superficial" pressure. There is also pressure from the EC to ensure the safety of products for the consumer. This sometimes means more rather then less animal testing. But the growing market in "green cosmetics" offering good, safe and conscience clearing products can perhaps no longer be ignored.

CHAPTER SIX

Mass Production, Mass Consumerism, How did it Evolve?

Since 1976 over 60 billion pounds per year of fibre have been produced in the world and each year sees an increase. In 1988 in Britain alone, the total usage of plastic reached 2.6 million tonnes, of which 36% was used specifically for plastic. Today in Britain women spend on average 6% of their annual income on clothing, which amounts to about £15 billion. The cost of advertising, persuading men and women to purchase the latest fashions, runs into millions. Every year two billion dollars is spent on fragrances, making the perfume industry one of the biggest industries in the world.

But this has not always been the situation. Our sophisticated advertising, our superior man-made fibres and our consumer habits have all evolved during the 20th century. Why and how our current lifestyles and products have evolved us further understood when the period during which the product came into existence is investigated. It is understand that world events (in recent history) have changed and shaped our societies and will continue to do so.

By the same decree, these events are also responsible for creating new methods of production as well as new products, and also alter or affect the existing structures. The final result of these changes and alterations is the change (immediate or gradual) in people's way of living. To understand the evolution and success of, for example, nylon tights, it is important to trace back to the period during which they evolved and see why these industries and products were created and why they main their success. As preserving the environment is starting to become a more serious issue and products such as nylon tights are now, more than ever, called into question, the question of why they evolved is of equal importance. While World Wars I and II, designers like Chanel and Mary Quant, and the invention of

nylon have changed and shaped our lives during the 20th century, the Industrial Revolution was perhaps the first step in creating our current way of life.

The Industrial Revolution is responsible for the change in the structure and distribution of fashion, as so much else. Indeed, every area of our modern lifestyle could be traced back to this important time and, since then, different events and people have also changed and shaped many areas of our lives. Collectively, through the years these events and people have all contributed to and are responsible for our current way of life. Progress in fashion was also moving with progress in many other areas. For this reason, it would not be possible and does not make sense to look at every area in detail. Therefore, I have looked at the important inventions, the crucial events and the outstanding people who have all led to and are responsible for our fashion industry today.

Industrial Revolution

Fashion in our modern perception dates from about AD1300 when, in the Western world, people began slowly to discard the loose, often wrapped or draped simple shapes of ancient civilisations and began to cut, sew and shape materials to fit the body. All early fabrics were composed of fibres fro natural plant and animal sources. Wool, flax, cotton and silk were the most important. These fibres were apparently subjected to minimal processing. The ingenuity of human beings and their desire to enhance their own appearance has led, over the centuries, to the development of complicated fabrics and, within the past hundred years, to great technological expansion. From ancient civilisations until the 18th century, all fabrics were constructed and decorated by hand, and made at home. Fibre preparation and yarn-making were never-ending tasks.

The Industrial Revolution of the late 18th and 19th centuries transformed the processing of fibres and the manufacture of

fabrics from the home and small cottage shops to the factory. Mechanisation was gaining more and more importance and the textile industry was expanding, especially affecting cotton and wool. The growth and production of these natural fibres became the concern of governments (for economic reasons) throughout the world. By 1865, at the close of the Civil War in the USA, the cotton industry was worth $15 billion, employing in all its branches 14 million people.

After many attempts by different people, in 1851 Isaac Merrit Singer, the American, successfully patented the sewing machine. This was a very significant event and that year marked the debut of the sewing machine in factories, making possible the mechanisation of the apparel industry. In 1842 the first loom for weaving silk was set up in New Jersey by John Ryle. 1849 was the initial birth of the ready-to-wear industry in New York as a result of the introduction of the sewing machine. In 1856 William H Perkin (Perkins purple), an English scientist, discovered by accident the first synthetic dye. Up to this time, for thousands of years only natural dyes were available. This aniline dye (coal tar derivative) was much in demand by 1858. Within a couple of decades, natural dyes were very rarely being used. By the late 1870s, Thomas Warldes at Leek, who were assisting William Morris, artist, designer, painter and poet, were one of the only dye manufacturers in Britain still using natural dyes. The natural dyes, which were largely of plant and animal origin, worked out to be very laborious and too expensive to produce. For example, the red dye from cochineal required 70,000 insects to produce a pound of dye; royal purple from shellfish needed 8,500 animals to produce one gram. Also, a lot of the natural colours faded and had a garish or muddy character. These, perhaps, are the reasons for the rapid success and acceptance of chemical dyes.

In 1889, the first automatic loom was developed by an English mechanic, James H Northrop. This loom was first operated in the Draper Corporation, Hependale, Massachusetts. From the late 1890s to the late 1930s, America was changing from a basically

rural society to one centred in cities. Factory production of clothes was developing, mainly in menswear. Being more uniform and standardised than women's fashion, they lent themselves much more easily to factory production. Fitted bodices, bustles, crinolines and flowing elaborate skirts left womenswear still to the couturier, court dressmaker, etc. Mechanisation and other new techniques were slow to develop in women's fashion.

By the end of the 19th century, the Industrial Revolution was in full swing. Men were accepting "ready-made" garments more quickly than women, and standard patterns, buttonholing machines and pressing equipment were being introduced. Ready-made fashion meant that for the first time even people of modest means could dress in current styles. Unfortunately, poor wages and bad working conditions were imposed on people in the industry. A working day of 17 hours was not uncommon and children as young as six years of age toiled these long incredible hours. It was not until 1906 that the first strong moves against "sweating" were taken. The Daily News Anti-Sweating Campaign by J J Mallon and A G Gardiner, editors of The Daily News, was opened by Princess Henry of Battenberg at London Hall in Langham Place.

Moving into the 20th Century

The 20th century saw the addition for the first time of new fibres and fabrics, not from nature but from the chemistry laboratory. The first man-made fibre to become a reality was rayon, which appeared commercially in the early 20th century. First known as "artificial silk", rayon is produced from wood pulp which comes mainly from the eucalyptus tree. Basically copying the silkworm, the process of producing chemical filaments is as simple as forcing man-made rather than insect-made liquids through tiny holes. As I have already explained, man-made fibres are produced by the chemical treatment of certain raw materials such as cotton, linens, wood pulp, extracts from petroleum and by-products of coal. These fibres can be accurately

controlled and modified during manufacture. By 1915 rayon was becoming a substitute for wool. By now Samuel Courtaulds had bought the British rights to the rayon/viscose process.

A huge wave of Jewish immigrants into New York towards the end of the 19th century (following persecutions in their own countries) provided and supplied a vast pool of labour. Highly skilled tailors and needleworkers, working extremely long hours, made their way into manufacturing, creating the garment district. By now the sewing machine was in factories and the ready-to-wear industry was born in New York. By the turn of the century the ready-to-wear industry in America was beginning to blossom. The introduction of man-made fibres helped bring down the cost of apparel. Department stores, originally opened in the 18th century, were now growing in size and numbers. Harrods of London, Bon Marché in Paris, Macys in America, were beginning to be filled with inexpensive ready-to-wear clothing. Although no precise date can be given for the birth of our consumer society, it evolved in America first and then moved to Europe. In New York the ready-to-wear industry was becoming gigantic, and the textiles industry was becoming the second largest industry in America. The fashion and textiles industry now had an important role in the economic growth of the country. The techniques of the assembly line had been transferred from heavy industry to clothing manufacturing, and specialised machinery had been invented that made the growth of inexpensive clothing even more rapid.

Fashion almost until the 20th century originated with the wealthy and titled and only slowly worked its way down to the other classes. (This is actually one of the oldest and most natural forms of recycling clothes.) At the beginning of the 20th century, while it still took a considerable amount of money to indulge in fashion, it was, for the first time, moving away from the manner in which clothing had been approached in the past. Indeed, the first half of the 20th century is marked by many radical changes in fashion, in the perception of fashion and how fashion in approached. It marks the arrival of mass

merchandising, the appearance of the designer cult and a slow but steady approach to an ease in apparel, not seen since ancient days.

In 1908 the designer Paul Poiret introduced a new look based on the natural figure. This could be called the start of modern fashion because the concept upon which it was built has, in various ways, been basic to fashion ever since that time. Straighter lines, simpler styles - fashion was by now been disseminated widely and with increasing speed. New chemical yarns such as acetates were being introduced and easy dyeing was their main characteristic. New styles meant, for the first time, women were showing their legs. This inevitably was significant for the hosiery manufacturers. Many new inventions such as the telephone, telegraph, the wireless and the automobile changed the shape and pace of fashion. Photographic experiments and the wireless enabled dialogue between the fashion capitals of the world. The automobile meant transport and suitable clothing for outdoors. This perhaps is when the fur coat first became a necessity rather than a pure luxury. The tempo of people's lives was changing and styles became fashions overnight.

Newspapers and magazines were dealing with fashion regularly and manufacturing was improving in scope, efficiency and working conditions. During World War I in Europe, millions of men disappeared into the military and women for the first time manned the home front. This marked the first time that women dressed in tailored clothing. The significant and extremely important arrival of Gabrielle Chanel introduced extreme simplicity into high fashion and all fashion. The outbreak of war in Europe radically spread the arrival of simpler and more functional clothing, for both men and women, to perform and carry out more duties. Women were called to work in factories and, with larger paycheques, revelled in a new freedom of choice. Struggle for freedom, the right to work and to vote, was emerging and was all being reflected in the less restrictive fashion. The war ended in 1919. Women were now wearing short skirts more often than ever before, and more and more fashion

for women, because of Chanel, began to be borrowed from men - simply cut, tailored and comfortable. The spread of ready-to-wear fashion between the wars was due to the fact that it became easier to reproduce, techniques were improving and demands for products, especially from women, had vastly increased. In America, 5½ million women were employed in the work force - buying, not making. Elizabeth Arden and Helena Rubenstein worked endlessly to supply cosmetics for women who were now, after a rest during the 18th century, painting and powdering their faces.

It was around this time, and especially during the 1930s, that the media, ie. magazines, started selling the idea of and became preoccupied with the aesthetic of cleanliness. Exaggerated cleanliness became the norm in domestic landscapes. This pre-occupation had its effect upon design as much as ideas of taste and beauty. From the 1890s, almost everywhere in Europe and America, steps were being taken to improve habits of hygiene. Everything from dress to feeding infants, homes, shops and factories all received meticulous consideration. Campaigning cleanliness was taken to schools. But it was only when advertisers, designers and manufacturers began to make use of the imagery of hygiene did the general public full assimilate the lessons which the hygienists had been teaching. The idea and design for cleanliness and beauty was designed, developed and marketed. This developed a multiplicity of appliances and gadgets such a deodorants, washing machines, vacuum cleaners and detergents, and all took hold with great force. The new modern environment made every speck of dirt stand out and new products that purveyed an appearance of hygiene was, for the consumer, a fulfilling need. Unfortunately, this desire and preoccupation with cleanliness has, through the years, produced machines, powders, deodorants and detergents that are responsible for different clinical illnesses, pollution in our rivers, and affected the ozone layer.

Because of World War I and during the early 1920s, the status symbol aspect of fashion was losing its importance. Class

distinction was now becoming blurred in dress, just as it was in the world at large. An era of inexpensive fashion had begun, in which change and variety were more valued that costly impressiveness. During the first decade after the war, women's garments were for the first time being made in bulk by factory methods. The growth and development of manufacturers, many of whom became powers in themselves in future years, is one of the biggest between wars stories of fashion-making in Britain. Names and reputations were established, many bringing their own signatures to the clothes they designed and made. Vogue advertisements for wholesale apparel appeared for the first time and branded fashions were advertised for the retail market. This was the start of a new cycle of fashion making and fashion selling. In America the rise of large scale manufacture was further stimulated by the existence of a vast market.

During the 1930s the demand increased for good quality ready-to-wear. There was heavy unemployment in Britain and in America and this put a curb on extravagant dressing, and fashion was on the move out of the couture level to something less expensive. The Great Depression during the Thirties, especially in America, resulted in manufacturers trying to reduce costs, improve the visual appearance of products along functional lines and make things easier to use, to provide greater saleability on the chaotic market place. These factors combined led to the birth of industrial design. The growth of mass media and communications, the cinema, radio and all forms of advertising were bringing in uniformity of standards of taste among the populace and this led to a further spread of fashion, creating country-wide chains of shops that could satisfy the immense new needs. During this time, Du Pont, who had a cellophane plant in New York, were doing fundamental research into chemical yarns. In 1934 they perfected synthetic polymers of great strength and elasticity. By 1936 three hundred million pounds of rayon was being produced in Britain. In 1937 experimental stockings were knitted from the new chemically-produced material developed by Du Pont. Named nylon [see Appendix 7, page 98]. Dr W H Carothers received patents. In 1938 nylon was introduced commer-

cially to the public. In 1939 Britain produced 325 million pounds of rayon yarn and one year later 1.237 million pounds was produced. From 1941 to 1942 Du Pont produced 20 million pounds of nylon at their plant in New York. World War II had started in Europe and the fashion industry, like everything else, was greatly affected.

World War II

In our understanding of how fashion is affected by world events, it would be obvious that war would produce the most radical changes of all. Millions of men and women in Britain were working together for the first time in factories, manufacturing military uniforms and ammunition. Fashions restrictions were drastic, plus the fact that there wasn't much time available to concentrate on new fashions. Pure function was the rule of the day. The Second World War changed every aspect of civilian life in Britain, regimenting it for everyone in large things and small by legislation which was needed because of the dislocation of everyday existence. Governments controlled all apparel manufacture. Style restrictions and rigid measurements were imposed. The War Production Board specified the amount of yardage used in clothing For example, under L-85 as the law was known, there was a total ban on turned up cuffs, double yokes, sashes, patch pockets, attached hoods, etc. Skirts could be cut with just so many inches of circumference. Coupons were needed to buy shoes made of leather. Handbags and costume jewellery were heavily taxed. With Germany occupying France, French couture ceased to function in a meaningful way, plus fashion information could not get out of France. America was cut off from Paris, so, for the first time, American designers were beginning to show in their own country.

The experience in the mass production of uniforms with the maximum speed and the best use of labour also led to more scientific and better mechanised methods of large scale production in the clothing trade as a whole. Because of restrictions on fabrics,

manufacturers had to study quantities and different layout techniques to get the best yardage, so they became more knowledgeable. Restrictions on trimmings meant that they could not conceal any deficiencies or poor design, so quality had to improve. When these factors are combined, they produced a stability and prosperity which had previously been rare in the fashion industry. This proved to be a springboard for further developments, not only in techniques and manufacturing, but also in the promotion and marketing of fashion.

"A revolution has taken place behind the smokescreen of wartime conditions" declared the Apparel and Fashion Industry's Association in 1950. All the main features of present day large scale production date from after World War II. Also, for the first time the fashion industry was trying to organise itself for more effective functioning as an industry with a stake in British economy. It was also during this time that the greatest progress was made in the dye industry, and today there are over 2.000 dyes being produced by many companies.

The war ended in 1945. There were new demands for everything that had been denied during the war. People wanted it all. Cars, refrigerators, children, marriage, houses and, perhaps secretly, more than anything women yearned for fashion after five years of war and six years of further rationing by the Labour Party. A turning point in the mood of the country occurred in Britain in 1951. It was the appeal of the Conservatives under the leadership of Winston Churchill which promised to interfere less in people's lives, the appeal of no longer being told what one was allowed to eat and wear, the appeal of being able to feather one's own nest, that returned the Conservatives to office in 1951. Symbolically, if not materially, the consumer society had started in Britain. 1951 signified the public moment when balance shifted from social idealism to consumerism, from the old age to the new. Social barriers had been broken down during the war. Men and women for the first time worked together in factories. People mixed and shared their lives with people outside of their geographical region, let alone their own

social class. Private affluence increased substantially for the vast majority of the population. People wanted and and expected to own the goods and services the pre-war generations would have associated with only the wealthiest sectors of society. Younger people especially craved for social status and couples dreamed of owning their own homes, cars, televisions, radios, etc.

In America, ownership of single family homes grew more in the decade of the 1950s than in the previous 150 years. By 1954 one in five US citizens moved house each year. By the end of the 1950s, television was the single most important form of mass entertainment and culture. In Britain in 1951 6% of households owned TVs, most of which were bought on hire purchase (HP). Televisions informed people about current affairs, science, the arts and about other nations. It also fuelled materialism by creating false desires for new, bigger and supposedly better consumer products. The new affluence fuelled materials which created a boom in consumer sales. The more desirable and advanced consumer goods such as radios and tape recorders with high quality performance, and the more existing and impressive mass media (glossier magazines and epic films) were hailed by many as examples of how technology could enhance the lives of ordinary people.

"You've never had it so good."[16]

These were the words that Harold MacMillan, Britain's Conservative Prime Minister, said to his country in 1959 when the nation was experiencing growing prosperity and increased spending power. The affluent consumer society had arrived.

Many new materials which became popular in the 1950s were designed as substitutes during World War II, as supplies of the real thing ran short. This was particularly true as far as textiles were concerned. Nylon, which practically vanished during the war, returned with a vengeance in the late 1940s. Women stood patiently in long lines to buy a single pair of nylon stockings (see Illustration 33, page 66). Developments in

Illustration 33 - Lycra and Nylons

(a) Shows the versatility of Lycra. Lycra can be used in tailored clothes, fashion wears and hosiery.

(b) Du Pont made history in 1938 with the invention of nylon which revolutionised the textile industry. This photograph shows the celebrated nylons of the post-war years.

synthetic fibres brought new textiles, added another push to the newer "ease" in fashion. Boasting proudly that "no ironing" was needed, that garments made from these "miracle" fibres would wash and dry in minutes, their easy-case virtues and their versatility provided the base for their success. As techniques were perfected and the fibre qualities understood better, synthetics swept the apparel world. It was becoming increasingly difficult to find either clothing or home furnishings that were not composed entirely or in part of man-made fibres. They became the desired textiles of the day.

The term teenager did not come into general use until the mid-1950s. The main change that took place in the 1950s and which led to the recognition of teenagers as a separate entity was the growth of the affluent society. Young people could now earn good wages and, with none of the responsibilities of adults, could spend nearly all their earnings on themselves. Teenagers suddenly became important consumers. They soon developed very strong ideas about what they wanted to spend their money on and that did not escape the attention of manufacturers and retailers. Teenagers and young people wanted fashions to express their moods and their attitudes. For most of them, in Europe and America, they were living in a world of plenty, earning their fair share, and clothes was the biggest item of their expenditure. In America, juke boxes, coffee bars and jazz clubs sprang up where teenagers could congregate. Rock'n'roll took the world by storm and it seemed to encapsulate and reflect everything a teenager felt - excitement, love and rebellion.

In Britain and Europe, the post-war baby boom resulted in a large increase of 15-19 year olds as a total percentage of the population. The economic and social conditions were perfect for an explosive discovery of young identity and this identity made its greatest impact on fine art, fashion and music. Fashion schools produced young people with young, new ideas. Royal College of Art, London was founded in 1948, and people like Zandra Rhodes, Ossie Clark, Bill Gibb and Sally Tuffin graduated during the 1960s.

The 1960s

The 1960s arrived and with it came pop culture. The affluence that swept the United States from the early 1950s onwards - with Europe not far behind - meant the mass manufacture not only of cheap "popular" products, but also of anything from television programmes and advertisements to comics and throw-away canned drinks. Such items depended on instant appeal - usually to encourage their purchase and so often used bright colours and gimmicks for effect. Such commercial impact, which during the 1960s became increasingly influenced by market research techniques, was designed to be consumed immediately and forgotten after use. The term "pop" was especially applied to areas associated with youth interests such as music and fashion: pop music, pop clothes. In Britain fashion became the hard-edged mini and designs had an architectural feeling to them. Pop fashion became a topic of national debate in 1963 - the year when legs never had it so good. The emphasis on legs was unmistakeable. Tights became highly fashionable, boldly coloured or patterned stockings, chunky fair isle stockings and high boots were the craze and skirts were becoming increasingly short. These new fashions evolved as a result of teenagers growing in confidence and looking to different sources like film and pop music stars to set the trends. From the late 1950s, the sources of youth fashion had begun to change and no longer were the aristocracy or Paris fashion houses providing the ideas. Its significance was that it was one of the first fashions to begin in the street and work upwards.

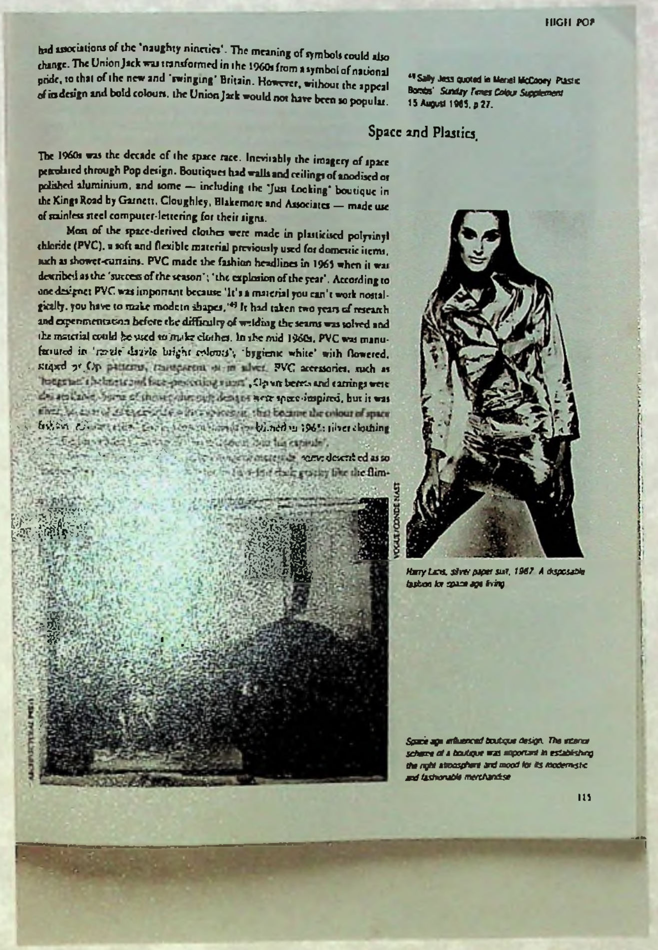
In 1955 the first boutique opened in Kings Road, Chelsea under the name of Bazaar. It was owned by Archie McNair, Alexander Plunkett Green was in charge of sales and Mary Quant designed the clothes. Quant had realised that suitable clothes did not exist in any quantity and, in order to cater for the market, she decided to design them herself. The Bazaar boutique was an attempt to provide clothes for the younger women. Her early designs were much influenced by clothes of the 1920s and 1930s and tended towards simplicity. Tunics, a shirt with knicker-

bockers patterned with large polka dots, a cardigan dress with matching wool stockings and flared black dresses with white collars were characteristic of Quant's designs. In 1957 John Stephen opened his first shop in Carnaby Street to cater for young men who wanted to look different. The boutiques meant variety and quick change variety. Perpetual motion was the aim. 1966 and 1967 saw a revolution in selling and this meant a revolution in making. They aimed to be shops for all seasons. The up to the minute clothing was not always made very well, but durability was not on the whole what the boutique clientele put high on the list of fashion requirements. This was also the decade of the space race and most space-derived clothes were made in plasticised polyvinyl chloride (PVC), a soft and flexible material previously used for domestic items (see Illustration 34, page 70). PVC made the fashion headlines in 1965 when it was described as the "success of the season", "the explosion of the year". Plastic had had overtones of inferiority and cheapness since the 1930s when plastic was often used to simulate more popular, more expensive materials. The significance of the popularity of PVC and other plastics-based clothing made it more fashionable and appealing, and transformed the image and status of the material. The consumer revolution saw the proliferation of the plastic carrier bag as an important fashionable item, and a source for good advertising.

Paper goods also became the embodiment of pop values. The ability to mass produce paper products at a very low cost, such as pop carrier bags and wrapping paper, signified a complete commitment to stylistic and physical expendability. Disposability and constant change were the hallmarks of pop lifestyle.

It was also during the 1960s that shopping malls took off as a retail phenomenon, particularly in the United States (where not only had they the space to build such vast complexes but also people had the cars to get to them). By 1966, 95% of food was sold through such stores. Self-service became an increasing popular and cost-efficient means of retailing, helped by improved

Illustration 34 - Space and Plastics



HIGH POP

had associations of the 'naughty nineties'. The meaning of symbols could also change. The Union Jack was transformed in the 1960s from a symbol of national pride, to that of the new and 'swinging' Britain. However, without the appeal of its design and bold colours, the Union Jack would not have been so popular.

[49] Sally Jess quoted in Meriel McCooey 'Plastic Bombs' Sunday Times Colour Supplement 15 August 1965, p 27.

Space and Plastics

The 1960s was the decade of the space race. Inevitably the imagery of space percolated through Pop design. Boutiques had walls and ceilings of anodised or polished aluminium, and some — including the 'Just Looking' boutique in the Kings Road by Garnett, Cloughley, Blakemore and Associates — made use of stainless steel computer-lettering for their signs.

Most of the space-derived clothes were made in plasticised polyvinyl chloride (PVC), a soft and flexible material previously used for domestic items, such as shower-curtains. PVC made the fashion headlines in 1965 when it was described as the 'success of the season'; 'the explosion of the year'. According to one designer PVC was important because 'It's a material you can't work nostalgically, you have to make modern shapes.'[49] It had taken two years of research and experimentation before the difficulty of welding the seams was solved and the material could be used to make clothes. In the mid 1960s, PVC was manufactured in '[illegible] dazzle bright colours', 'hygienic white' with flowered, striped or Op patterns, transparent or in silver. PVC accessories, such as [illegible] berets and earrings were [illegible] space-inspired, but it was [illegible] that became the colour of space fashion [illegible] in 1965: silver clothing [illegible] described as so [illegible] like the flim-

VOGUE/CONDE NAST

Harry Lans, silver paper suit, 1967. A disposable fashion for space age living

Space age influenced boutique design. The interior scheme of a boutique was important in establishing the right atmosphere and mood for its modernistic and fashionable merchandise

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Harry Ians, silver paper suit, 1967. A disposable fashion for space-age living. Space age influenced boutique design. The interior scheme of a boutique was important in establishing the right atmosphere and mood for its modernistic and fashionable merchandise. [Pop Design, Modernism to Mod - Nigel Whitely, page 115]

refrigeration and improved packaging materials such as polythene. The establishment of these huge stores provided an outlet for manufacturers' obsolescent overstocks. Consume was the message and products designed to last as long as consumer interests became "throw-away aesthetics". In the textiles industry, 1968 saw for the first time man-made fibre consumption (5 billion pounds) surpassing natural fibre consumption (4.6 billion pounds). In America the growth in the use of polyester [see Appendix 8] was the key factor in this development. In 1969 Ciba and Geigy merged to form the giant chemical plant in New York. Major changes in production and manufacturing of fibres, yarns and fabrics were occurring. The development of second, third and fourth generation fibres, fibre variations and modifications and new methods of processing fibres into ultimate end use products all affected the finishing and colouring of fabrics at the manufacturing level and the behaviour in use and care at the consumer level. Textiles could now meet almost every possible need. Of tremendous importance, especially during the 1980s, was the development of equipment used in processing fibres to ultimate end use, products that provide durability, reduce the use of valuable natural resources and still provide top quality products.

A More Natural Affair

The final years of the 1960s saw the young, who had become more affluent, becoming now also more socially and politically aware. In America, protest against the escalating war in Vietnam became more vociferous. In Britain, convictions for drug-taking rose sharply. The use of marijuana, amphetamines and lysergic acid diethylamide (LSD) all had their intentions, "change the prevailing mode of consciousness and you change the world". Groups of people merged to form their own lifestyles, believing in freedom, peace and love, turning their backs on consumerism, big business and high technology. A new fashion emerged, using colourful embroidery designs that were very creative and were a form of non-verbal communication. Unruly long hair expressed

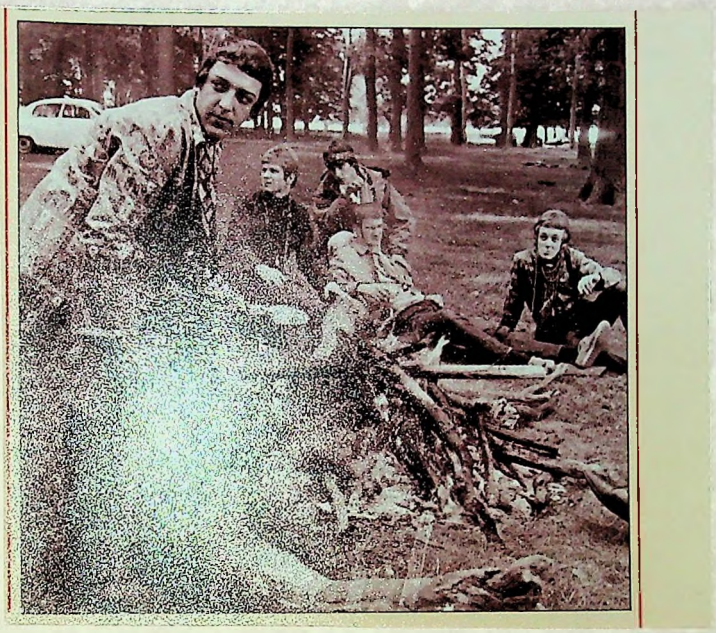
freedom. Conventional cosmetics were rejected and the natural look plus the painting of flowers and butterflies on people's faces was a reaction against male and female stereotype (see Illustration 35, page 73). Anti-fashion took over. It was desirable to stop bathing, to wear old cast-off clothing, to go barefoot, to scorn material possession, to stop combing the hair and, above all, to grow it. During the 1970s long skirts and pants of every conceivable design came back into fashion. Tenderness, romance and nostalgia were reflected in natural fabrics that swayed and moved. This was probably a revolt against the bold geometric shapes and the plastics in psychedelic colours that were synonymous with the Sixties.

In the late Sixties, we saw for the first time man-made fibre consumption surpass natural fibre consumption. Less than a decade later, natural fibres and fabrics were making a tremendous comeback, especially throughout the 1980s. Cottons, linens and wool were once again in demand. A growing interest in and emphasis on health, knowledge about our bodies and remarkable changes in our eating habits started to evoke during the Seventies. Body awareness introduced entirely new categories of functional clothing, and a great deal of this functional clothing evolved into formal wear and dressy fashions. In Britain, a "Laura Ashley" long evening dress in fine cotton strewn with pale prints was much in demand.

"If you went to a summer party in 1970, you could guarantee that most women would be wearing a long 'Laura Ashley' skirt or dress."[17]

Laura and her husband Bernard first started printing during the summer of 1953 at 23 Pellham Street, London. It was not until the Seventies that the publicity and sales they received far out-grew the size of the company. This emphasis on a more natural lifestyle continued through the Seventies and on into the Eighties. By now environmental pressure groups had evolved and were starting to receive publicity for their campaigns to protect the environment. Mass production, mass consumerism and

Illustration No 35 - Music, Love and Simple Living



This picture shows the new styles in fashion. The belief that love, music and simple living could produce a political change reached its apotheosis in Woodstock - the largest gathering of young people this century.

advanced technology were having an effect on the environment and the signs were beginning to show. The huge industries that grew during the 1950s and 1960s to meet the consumer demands were polluting the air, our rivers and the seas. Products that were designed to last as long as consumer interests and become "throw-away aesthetics" were now turning into mountain-high rubbish tips releasing poisonous toxics and using up the earth's finite resources (coal, gas, oil, metals and minerals). Wild life, marine life and plant life were all being threatened by our heavily consuming way of life. Greenpeace especially were beginning to receive greater attention from the media and the public.

At the beginning of the 1980s, the most interesting design development in fashion was the emergence of Japan as a major fashion influence on the West. Although designers such as Issey Miyake and Kenzo were established in Europe from the early 1970s it was not until 1982 that a concerted Japanese onslaught was launched. Rei Kawakubo and Yohdi Yamatoto were mainly responsible for the launch of these designs that were entirely Oriental in spirit and inspiration. Their simple, clean-cut designs, full of control and order, and their use of natural fabrics took Europe by storm and were widely emulated. This natural yet sophisticated look continued through the Eighties, and was beginning to be reflected in hair and cosmetics. Cosmetic colours were being watered down and were used in a much softer way. People were becoming more interested in health and diet. Natural products and "alternative" everything were beginning to be sought after. The ongoing campaigns of the environmental pressure groups were continually creating more public awareness. The success of the Body Shop especially in the mid-Eighties was putting pressure on the big cosmetic companies to stop testing on animals and to launch a "natural" range of products. The Lynx campaign started in 1985 and more people were becoming aware of the cold truth of the fur trade. The first designer to use and bring fashion into environmental issues was Katherine Hamnett. Slogans such as 58% Don't Want Pershing, Stop Acid Rain, Ban Pollution, Education Not Missiles were printed in stark black letters and filled up

the 2 ft by 3 ft shirt front in what is the single strongest T-shirt style to emerge from the decade (see Illustration 36, page 76).

"You feel you have to do something because the world's going to blow up, we're going to be poisoned or chocked or gassed or virussed to death."[18]

In autumn of 1985, Greenpeace launched a massive campaign against the cruelty and hunting of seal pups in Newfoundland, North Canada. Their films of seals being clubbed to death over the head received news coverage. People were shocked and horrified and this was a major step forward in the campaigning against cruelty to animals universally. A new era in which selfish obsessions with image and personal style was starting to be eclipsed by broader concerns about environmental and global issues.

Illustration No 36 - Ban Pollution

This T-shirt was designed by Katherine Hamnett in 1984. Concerned about environmental problems. Hamnett designed a range of T-shirts with various slogans on them. This picture was taken from The T-Shirt Book by John Gordon and Alice Hiller which was published in London in 1988.

CHAPTER SEVEN

Mild Green Response

In Britain in 1987, Mrs Thatcher launched the Green Campaign. In June 1989, 2.25 million people voted for the Green Party in the European elections. Membership of environmental organisations began to increase in 1986, when international issues such as the ozone layer and global warming were just creeping onto the political agenda. Letters of complaint or concern began to weigh more heavily in the politicians' postbags from 1987. It was during this time that the media started giving greater prominence to environmental stories. Green campaigning has left us in no doubt that we as consumers must take responsibility for using up the earth's resources and polluting the atmosphere. Concern for the environment has started to become a more serious issue, but it is still mainly the pressure groups who are taking any action. Designers, manufacturers and the public have been slow to respond. A growing interest in health and diet and knowledge about our bodies, which evolved during the Seventies, have been the first areas to experience any changes. health and diet and the demand for more "natural" foods became an important issue during the Eighties. Manufacturers were quick to respond, and foods that had less fat or no artificial additives or more polyunsaturates were flooding the market.

The growing success of the Body Shop has seen an increased demand for natural cosmetics and beauty products. Fashion photography started to emphasise the natural look and articles started appearing in many fashion magazines (Elle, Marie Claire, Harpers & Queens) discussing the beneficial use of natural remedies for skin and hair (see Illustrations 37, 38 and 39, pages 78, 79 and 80). Various pressure groups - for example, Environmental Investigation Agency and Lynx - started printing and selling T-shirts as part of their ongoing campaigns. This enabled it to be a campaign that everyone could get involved in

BEAUTY

FUTURE PERFECT

As the nature of beauty changes, so nature is changing the face of beauty. The scientists who developed the revolutionary hi-tech products of the past five years are now looking to plants for inspiration, so the best of the new products are a combination of natural ingredients and space-age technology.

The broad concepts of beauty care have changed dramatically in a short space of time. The emphasis has switched to skin preservation, with protection against environmental stresses such as pollution and ultraviolet being essential.

Now, more than ever, the importance of great skin cannot be over-emphasised ...

CONSUMER DEMAND FOR NATURAL INGREDIENTS IS CHANGING THE FACE OF BEAUTY, AND THE MARRIAGE OF SCIENCE AND NATURE MEANS THAT COSMETICS ARE MORE EFFECTIVE THAN EVER. KARENA CALLEN REPORTS

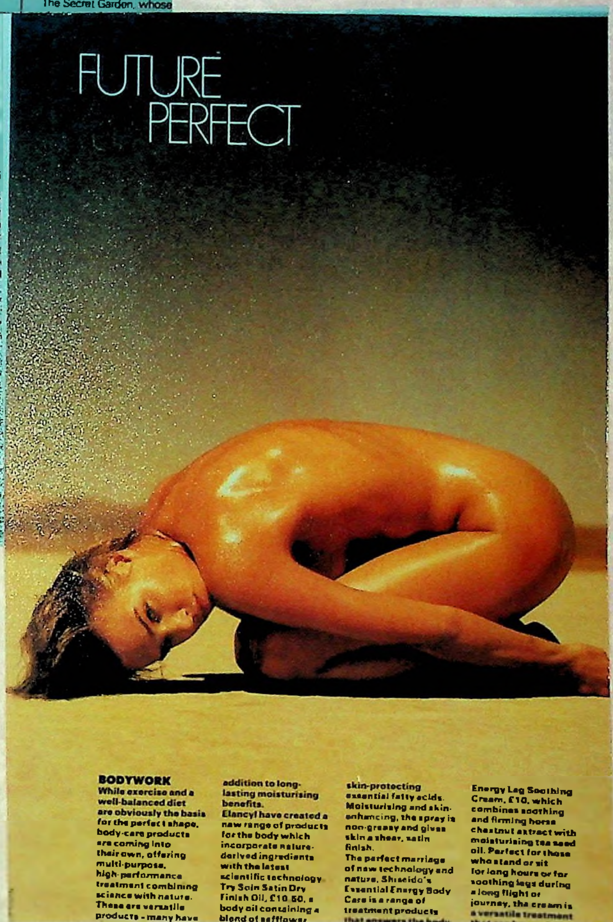
versatile, hi-tech and high-performance organic skin care. Packaging, too, must be slick, functional and biodegradable.

SUPER NATURE

As public demand for org... produce increases, cosm... scientists are looking at ... ural ingredients for skin-c... development. One of ... newest skin-care compan... Elemis, has produced a ra... of skin, hair and body produ... using natural ingredien... Jan Kusmirek, creator of ... Elemis range and a renown... herbalist and aromatherap... believes that the green r... olution has increased ... awareness that synthe... products do not necessar... provide the best active ingr... dients. ...

to traditional moisturisers. Deep Essence is available fo... four skin types: dry, oily and combination, £12.50, and sensitive, £13.50.

The Secret Garden, whose ...



BODYWORK

While exercise and a well-balanced diet are obviously the basis for the perfect shape, body-care products are coming into their own, offering multi-purpose, high-performance treatment combining science with nature. These are versatile products – many have ... addition to long-lasting moisturising benefits.

Elancyl have created a new range of products for the body which incorporate nature-derived ingredients with the latest scientific technology. Try Soin Satin Dry Finish Oil, £10.50, a body oil containing a blend of safflower ... skin-protecting essential fatty acids. Moisturising and skin-enhancing, the spray is non-greasy and gives skin a sheer, satin finish.

The perfect marriage of new technology and nature, Shiseido's Essential Energy Body Care is a range of treatment products ... Energy Leg Soothing Cream, £10, which combines soothing and firming horse chestnut extract with moisturising tea seed oil. Perfect for those who stand or sit for long hours or for soothing legs during a long flight or journey, the cream is a versatile treatment ...

<u>Illustration 37</u>

Future Perfect

This was an article featured in Elle magazine (May 1990) in their Health Notebook section. The article discusses the growing demands for natural ingredients in beauty products and the emphasis now being put on skincare rather than the use of sophisticated make-up.

ELEMENTAL BEAUTY: EARTH

BENEATH OUR FEET LIES A TREASURE TROVE OF HEALTH AND BEAUTY TREATMENTS. KARENA CALLEN GETS DOWN TO EARTH FOR THERAPEUTIC BODY TREATS AND CHARLOTTE SECKER FINDS THE NATURAL SHADES OF SUMMER

EARTHWORKS

For centuries mud and clay have been used to deep cleanse and revitalise the skin. These organic treatments, from the earth or sea bed, contain a multitude of skin-enhancing ingredients, from essential minerals to nutritive oligo-elements.

Mud is a truly ancient beauty treatment and its benefits are just as valuable to modern complexions. The most beneficial property of mud and clay is their ability to act like vacuum cleaners on the skin's surface, drawing out dead cells, excess sebum and traces of old make-up. Clay and mud particles are enriched with therapeutic minerals such as magnesium carbonate and zinc which help to tone and disinfect the skin, leaving it [illegible]

Every skin type can reap the rewards from a regular application of a clay or mud-based mask. [illegible]

sea water. It also has a unique mineral composition.

Scientists at the Institute of Physical Medicine and Balneology in Germany have decreed Dead Sea mud as highly therapeutic. It not only acts as an effective cleanser and moisturiser, but is also thought to alleviate certain forms of psoriasis and eczema. Smooth the mask on to clean, slightly damp skin and massage in, leaving it to dry. Remove with a damp sponge and spray skin with spring water before toning and moisturising.

Clay-based masks that have a gentle action on dry or sensitive skins include Chanel's Mask Detente, £15, containing kaolin and other purifying ingredients, Simple's Face Mask, £1.59, which purifies and moisturises; and Ultima II's Mineral Masque Concentrate, £14.60, [illegible] natural minerals and water to lift out surface skin impurities and leave the skin feeling [illegible]

[illegible]

mud, the salon offers a full range of hair and body treatments, including the Black Mud Scalp Treatment, £15, which includes a relaxing head massage and scalp mud pack, designed specifically for those with problem scalps.

BODY WORKS

Mud treatments are also excellent for cleansing and toning the body and for releasing deep muscular tension. At the famous Terme di Montecatini Spa in Tuscany, *fango* (mud) treatments are used to treat the face, hair and body. Pamper skin with Princess Marcella Borghese's Terme di Montecatini Active Mud for Face and Body, £29, a fragrant thick green volcanic mud blended with almond and avocado oils and essences extracted from flowers and [illegible]. Use it to cleanse the face, stimulate and refresh the body and soothe scalp problems. A top-to-toe body mask, it is designed to combat cellulite, drain away retained fluid, release tension and revitalise and refresh the skin.

[illegible]

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<u>Illustration 38</u>

Earthworks

This article was taken from Elle magazine (June 1990). It discusses the beneficial use of natural remedies for therapeutic body treatments for skin and hair.

Illustration No 39 - Balance of Nature

Taken from the February 1991 issue of Elle, this is another example of advertising promoting the more natural image and articles discussing health and beauty alternatives.

and also spread the message (see Illustrations 10, page 13). The message has started to spread, and while it might be safe to say that the desire to be "green" has been and still is gripping our culture for the last few years, Unfortunately, the less virtuous marketing experts have realised that going green can make money, and have cashed in on environmental protection. The new marketing ethos is feeding off the public's greater greener awareness, and the words "environmentally friendly" are bouncing off everything from lead-free petrol to shampoo. Some products might not contain CFCs, but they still have toxic-producing plastic packaging. While shoppers are trying to make "greener" choices, manufacturers jostle to be top of the ecology class (see Illustrations 42 and 43, pages 82 and 83). Many products are making excessive or misleading claims about their value to the environment. Consumers are mislead by labels such as "no nitrates" being put on some bathroom cleaners when it is impossible to have which do have nitrates in them.

Sadly, with a few notable exceptions, the fashion industry has been slow to respond to the green movement. In a recent attempt to be earthy, eco-minded and enlightened, using cosmeticised twigs and leaves and employing a lot of black models and playing tribal music. British and European designers have leapt onto the eco bandwagon. The irony of top designers interpreting the environment conscious Nineties with an array of pure white, drippy hippy clothing at the Paris Fashion Shows, Spring 1990, was not overlooked by the more astute fashion writers. Nothing could be more environmentally "unfriendly" than Rifat Ozbek's bleached, ultra bright white, lycra jogging suits.

What can we do and how do we know how to make the right decisions? No matter how converted the consumer, no-one is going to embrace the idea of a world without cars, washing machines and every technological advance of the 20th century. No matter how environmentally aware the supermarket, none is actively going to encourage its customers to spend less. Though every party and every producer pays lip service to green issues, as soon as they threaten to interrupt capitalist enterprise and freedom of choice, the doors slam shut.

Illustration No 42 - How Green is your Trolley

ow Green Is Your Trolley?

takes a close look at the myths

rounding environmentally friendly products

and can cause water pollution.

"Chlorine was used as a poison gas in World War One and in World War Two so you can imagine the effect it has on fish," says Dr Ronnie Russell.

Chlorine is used for whitening coffee-filters and in teabags. "There are no safe levels of chlorine bleach, and it's used in paper purely for aesthetic effect" says the Greenpeace scientist Dr Paul Johnson. "There's this idea that white is clean is pure. In fact white equals some really nasty chemicals. We don't know what the risks of exposure to these low levels are over a long time."

Phosphates are used in detergents as water-softeners and help the cleaning agents to work better. When phosphates get into slow-moving water and lakes they encourage algae in the water to grow rapidly, using up all the oxygen and causing fish kills and damage to other river life.

SUPERQUINN SENT out a questionnaire to all their manufacturers, based on information from the Trade and Marketing Institute in Washington, asking whether their product contained any of the three constituents. "Any product which used to have these in it and doesn't now is becoming greener and that's the criterion we use," says Superquinn's spokesperson Alan McDonnell. "This is the first year of Greenwatch, next year we hope to add more constituents to our 'Black list'," he added.

The Greenwatch list contains nearly 250 products ranging from CFC free deodorants to chlorine-free nappies. However it also includes recycled toilet paper which is not chlorine-free and products like an oven cleaner, which although it now comes in a CFC free aerosol, contains a sodium hydroxide

This article was featured in The Sunday Tribune on 28 January 1990. It discusses how "green awareness" has become big business for manufacturers and how these manufacturers are making false claims to grab the attention of the green consumer.

Illustration No 43 - An Environmental Soap Opera

14 January 1990 THE SUNDAY TRIBUNE C7

ADVERTISING FEATURE WASHDAY REVOLUTION

Ann Cullen on how blue whiteness is being replaced by green consciousness

An Environmental Soap Opera

This article was featured in The Sunday Tribune on 14 January 1990. It discussed the ingredients in washing detergents and also how advertisers and manufacturers were trying to cash in on the green campaign.

CONCLUSION

Real Green Solutions

"People the world over are suffering the effects of pollution, deforestation and radiation. Species are disappearing at a terrifying rate. The warming of the atmosphere threatens us all with devastating changes in climate and food production. It needn't be like this. We know enough to reverse the damage and to manage the earth's astonishing wealth more fairly and sustainably."[20]

Knowledge, as they say, is power and this has been the main principle behind the pressure group campaigns. Greater public awareness and consumer concerns eventually puts more pressure on producers to change those industrial processes which cause environmental and health problems. Peaceful direct action by Greenpeace has invoked the power of public opinion which, in turn, has forced changes in the law to protect wildlife, and to stop the pollution of the natural world. There are always solutions and the problems can be solved. Our designers and manufactures, who are also the consumers, are capable of and must make the necessary changes.

Today design is the most powerful tool with which man shapes his environment and, by implication, society and himself.

"In an environment that is screwed up visually, physically and chemically, the best and simplest thing that architects, designers, planners, etc. could do for humanity would be to stop working entirely, or go beyond that and work positively. Design can and must become a way in which people can participate in changing society."[21]

"Another general principle when endeavouring to achieve harmony with ecological laws is to use materials which are as natural as possible and have not changed much in being processed."[22]

Hairdresser Daniel Field, who runs his own hairdressing business in London, has proved how 100% organic and mineral hair treatments and colourings are just as effective as the traditional use by hairdressers of the bleach alkaline mixture of ammonia and hydrogen peroxide. His products - pure, Ph-balanced, kind to the environment, not tested on animals and ingredients based on plant derivatives - have proven long-lasting results that are as good as conventional methods (see Illustration 44, page 86).

The Body Shop showed us how green philosophy could be turned into millions, operating on a non-exploitative approach to the world in which we all live and work. Insisting on only selling products that don't consume a disproportionate amount of energy during manufacture or disposal, and don't cause unnecessary waste and, by not using materials derived from threatened species or from threatened environments, the Body Shop has proved that designing and manufacturing can recognise, isolate, define and solve problems. Taking a completely holistic view of their business and getting involved in education in its widest sense, the Body Shop is a force for the welfare of its staff, the community and, ultimately, the planet itself (see Illustrations 45, 46 and 47, pages 87, 88 and 89).

Advertising plays a crucial role in consumerism by mediating between manufacturers, retailers and the public. The vehicle of presentation is vital. The sophisticated campaigning of Lynx, using billboard posters and films for cinema screening, have been more than effective in Britain and also in New York. Dedicated to changing society's attitude and aiming to create the wearing of fur unacceptable, the Lynx campaign is proving that raising consumer consciousness can recognise and solve problems. In October 1990 Lynx celebrated five years of campaigning to put fur out of fashion, and held their second annual Cruelty-Free Fashion Show. Student participation and designers contributions - for example, Rifat Ozbek, Red or Dead, Vivienne Westward, Joe-Caseley-Hayford - all offered wonderful alternatives to fur and other animal skins to promote the Lynx message. Gore-tex supplied the fabric for the linens. This is

Illustration No 44 - Hairvert

HAIRVERT

Have you thought of letting your hair go green? Don't worry we are not advocating a return to the punk hairstyles and colours of the 70's but are referring to the current trend sweeping the consumer market for 'green' cosmetic products. If you follow the advice of hairdresser Daniel Field you will not only be giving your hair a treat but will also be environmentally friendly. Karen Lamont puts organic hair to the test.

Make-up by: **Karen Purvis** *Hair by:* **Daniel Field and Aran**

THE ORGANIC AND MINERAL HAIR HIGHLIGHTS

We decided to let the result speak for itself and styled Emma's hair to show off her luxurious tresses – with an added touch of seaweed for good measure as it is an important ingredient in Daniel Field's organic highlights.

This is an article that was featured in the Clothes Show Magazine (March 1990 issue). The article discussed Daniel Fields' (hairdresser based in London) use of environmentally friendly and 100% organic hair products from shampoo to colourings. Daniel approached the Clothes Show as they were interviewing designers and manufacturers who were changing their designs or products to make them more friendly.

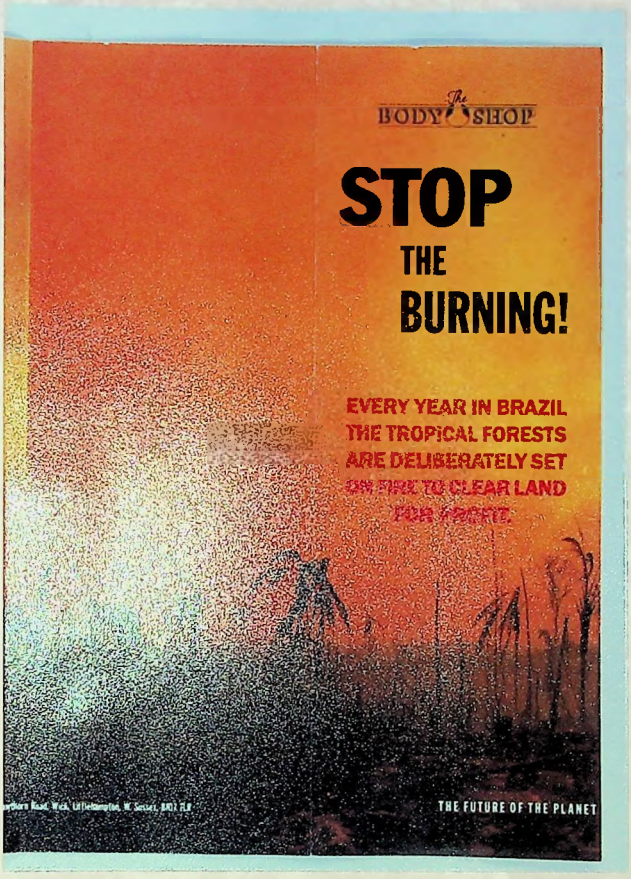


Illustration 45

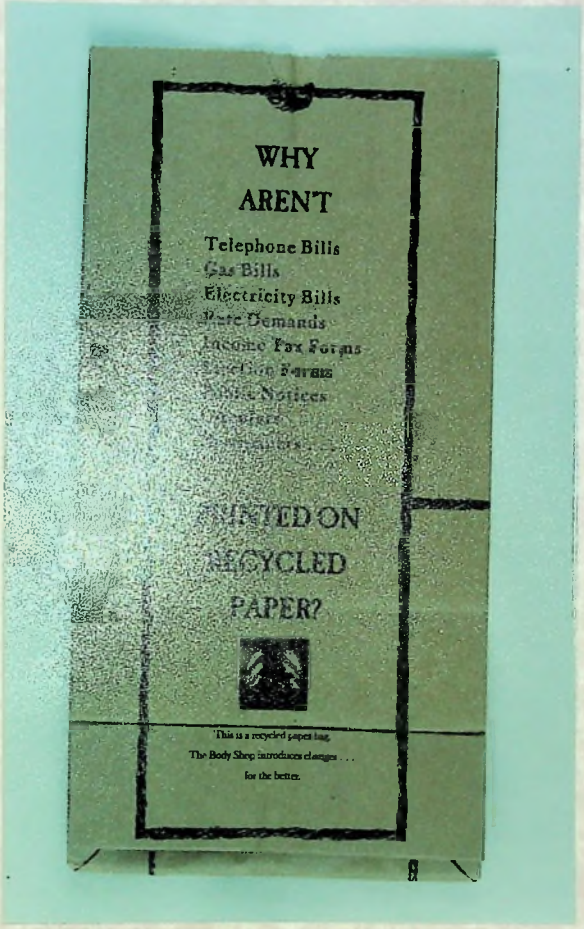
Stop the Burning

This leaflet was published by the Body Shop in 1988. It describes the deliberate destruction being caused to the tropical forests in Brazil, gives us the reasons why and explains the consequences.

Illustration 46 - The Body Shop and Friends of the Earth

This leaflet was published during 1989 when the Body Shop and FOE joined together to campaign to protect the ozone layer. The leaflet advised people on what they could to to try and protect the ozone layer.

Illustration 47 - The Body Shop



This recycled paper bag started being used in all Body Shops during 1989. It was part of the Body Shop's recycling campaign and to encourage customers to recycle paper when possible.

a membrane fabric which has similar properties to skin in that it breathes and is windproof, and is environmentally desirable as it uses no dyes. Fake fur is now an integral part of the fashion look for outerwear and trims. Designer Georgina Godley simulates fox fur using a combination of mohair and alpaca fibres.

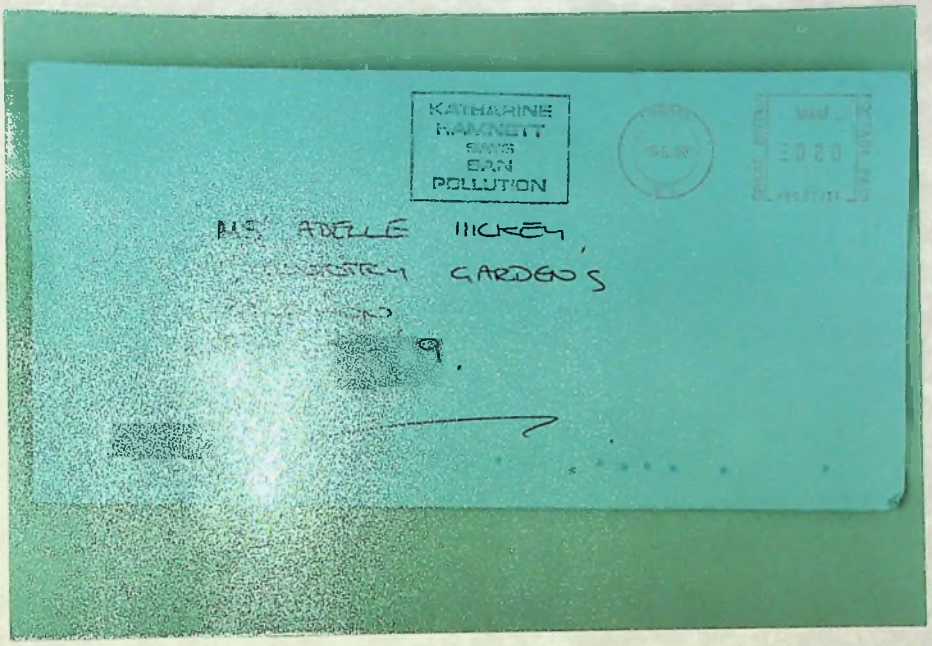
The supposed greening of fashion will inevitably bring scepticism. But designer Katherine Hamnet, in a link up with FOE, has now undertaken to fund a research programme to discover the true environmental costs of clothing production (see Illustration 48, page 91). Her Winter '89 collection told fashion punters to "clean up or die". Her manufacturing contracts for denim stipulate that stone-washed effects are achieved using pumice stones instead of chemicals. During 1990, the Danish chemical plan, Nova Norelisk, further developed the enzyme Cellulase. A cupful of Cellulase produces the same effect as pumice 100 times its weight. As a result, Levi, Wrangler and other denim makers are turning to Cellulase to "bio-stone-wash" their jeans.

"This is a technology with potential for an almost infinite number of applications, the only problem is in thinking them up."[23]

Apart from improving the crucial business of street credibility, cheap non-polluting enzymes are transforming the manufacture of paper, detergents, soft drinks, leather, lager and a host of other goods.

In response to the Green movement, Next (High Street retailers) launched a green cotton range in 1989. Usually, chemicals are added to cottons at the finishing stage to make them crease-proof, etc, and this process includes the use of formaldehyde and other substances which may cause rashes and allergies when clothes are worn next to the skin. In normal dyeing and finishing the effluent, if not treated, can cause environmental pollution. Green cotton is not treated with any formaldehyde-

Illustration No 48 - Post Stamp - Ban Pollution



Another step taken by Katherine Hamnett to make her views known about pollution and the ;damage it is causing to our environment and the health risks it poses for us all.

based chemicals in any way, and highly sophisticated and efficient effluent treatment techniques are used to avoid any possible pollution. Also, new fibres are in the process of being developed from raw materials such as pineapple and banana skins as well as stronger colours being achieved with the aid of vegetable dyes.

From a green approach, Professor David Bellamy is interested in the power of profit, working with people with money, and believes the way forward is with industry rather than opposition to it.

"Who, if we don't work with the industry, is going to produce the CFC substitute, who is going to look after PCBs? The Green Movement has done its bit to raise awareness of the problem and now we've got to solve it."[24]

West German manufacturer AEG (see Illustration 49, page 93) have been working on improving their appliances. Their appliances such as dish washers, refrigerators, tumble dryers use less electricity and are more energy-efficient.

Though the green issue seems to be changing our perception of the world, it also seems that it might be just a fashion and, like other fashions, from rebellion to materialism, it will be marketed as such (see Illustration 50, page 94). The logic solution offered by the environmentalists and conservationists is to recycle, re-use, and recycle has been slow in catching on. These transforming actions are essential to designing and consuming better products. They require a willingness to connect the future to ourselves by making small changes - for example, developing different ink, paper, plastic etc. More research on ecological implications of design processes and materials is required.

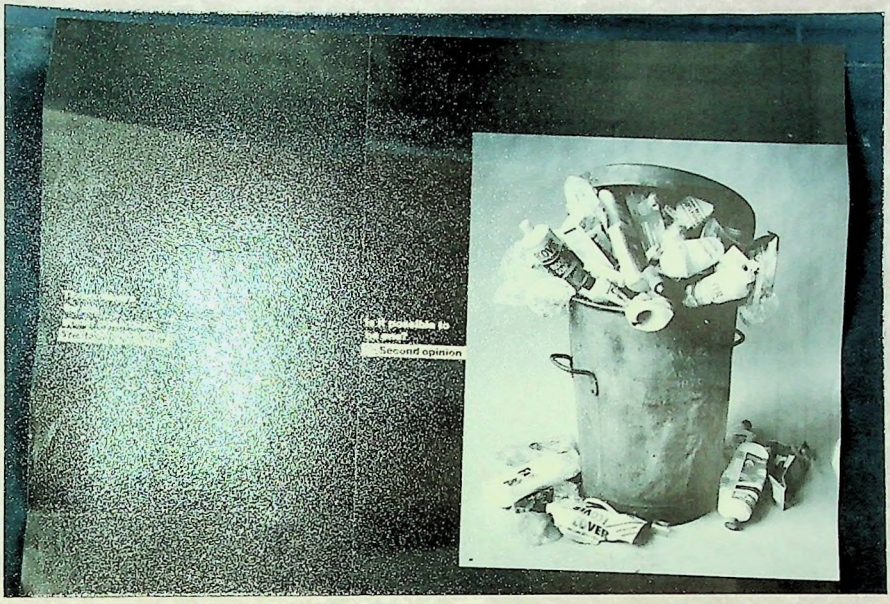
Designers must begin the process of educating - not only themselves, their colleagues, clients and suppliers, but also their ultimate public, THE CONSUMER.

Illustration No 49 - AEG

AEG are West German manufacturers. They manufacture domestic appliances such as refrigerators, washing machines, tumble dryers etc. In 1989 they launched a $2 million campaign in Britain claiming that their appliances used less elecricity and were more energy-efficient and are therefore responsible for less acid rain - caused by power plant emmisions. These advertisements started to appear in Marie Claire and Elle magazines in Britain in 1989.

Illustration 50

Green Consumerism: First Impression! Second Opinion



This was one in a series of advertisements featured monthly in Elle magazine during the 1990s. It questioned green consumerism and whether or not it is possible to be green.

Perhaps the fashion industry has been slow to respond to environmental issues, but we all can make a difference, whether it's recycling our polyesters or using political pressure to support organic growing techniques and proper incineration of waste. it demands a number of intelligent, unsentimental assessments and energy - ours, not the planet's.

FOOTNOTES

Appendix

1. Body Shop

Anita Roddick opened her first Body Shop in 1976 in Brighton. East Sussex. She opened the shop on a shoestring budget of £4.000 which was a loan from the bank. She had fifteen products in plastic bottles for sale and all the labels were handwritten by Anita. The shop took in £130 on the first day. All the products had 100% natural ingredients and the plastic bottles were biodegradable. Each bottle could also be brought back to be refilled. To fight against cruelty to animals in the testing of cosmetics was one of the main principles of the Body Shop. Using minimal packaging and recycling as much as they can. The Body Shop takes a holistic view of their business, catering for the welfare of the staff. the community and the planet itself. The Body Shop now has 111 shops in the UK and over 255 hops in 33 countries around the world operating in 14 different languages. selling a range of 300 products. In 1978 the first shop opened outside of Britain in Belgium and in 1989 the first shop opened in the USA. In 1985 the Body Shop and Greenpeace started the Save the Whale Campaign. In 1986 the Body Shop created its own Environmental Department to take action on a range of issues connected with the environment in its widest sense.

In 1987 the Body Shop was declared Company of the Year in Britain. and in 1988 was nominated Communicator of the Year. In 1989 the Body Shop was voted Retailer of the ear and. in that same year. the Body Shop and Friends of the Earth joined together to campaign to protect the ozone layer.

2. Greenpeace

Greenpeace is an international environmental organisation pressure group which was set up in Britain in 1971. It maintains complete independence from all political parties anywhere in the world. Working on a voluntary basis. they have brought the plight of the natural world to the attention of caring people. Greenpeace. because of their daring actions. have stopped French testing of nuclear weapons in the atmosphere. They have fought a long campaign against radioactive discharges into the Irish Sea. They have campaigned to protect threatened seals and dolphins around the UK coastline plus prevented baby seals being killed in Newfoundland and the Orkney Isles. These and many other actions have invoked the power of public opinion which. in turn. has forced changes in law to protect wildlife and to stop the pollution of the natural world.

3. Friends of the Earth (FOE)

Friends of the Earth is an environmental pressure group which was set up in Britain in 1971. Now one of the leading environmental groups in Britain, they have led the way in many of their wildlife and anti-pollution campaigns. In Britain alone, they have 100,000 supporters and they have built up an impressive reputation for giving early warnings of environmental hazards - acid rain, the hole in the ozone layer and the greenhouse effect. Friends of the Earth has more than 270 local groups across Britain and internationally they are represented in more than 35 countries. They were the first organisation to campaign for the protection of the ozone layer, to fight against the cutting down of the tropical rain forests, were the first to highlight the problems that emissions from power stations, cars and lorries would cause. The principal aim is to enable everyone to do their bit for the environment by applying pressure on governments to make the necessary changes.

4. Lynx

In 1985 Lynx, an organisation dedicated to ending the fur trade, was founded in Britain. They are the only organisation in Britain dedicated solely to the protection of fur-bearing animals both in the wild and in captivity. They have built up an international reputation for their non-violent and peaceful campaigns for the protection of animals. Their aim is to create a new climate of opinion which ensures that wearing of fur garments is no longer acceptable. Its sophisticated campaigning, due to services donated by sympathisers such as David Bailey and Linda McCartney, have succeeded in bringing the cold truth and harsh realities of the fur trade to the public's attention. Their billboard posters, for example Rich Bitch, Poor Bitch and "It takes up to 40 animals to make a fur coat, but only one to wear it", plus their films for cinema screening, have proved more than effective and in Britain and also in New York. The Lynx campaign is aimed at the consumer of fur rather than the retailers or suppliers, whose demise would follow with the fall in demand. The Lynx campaign is beginning to prove successful with Harrods' closing down their fur department in Autumn 1990 and many designers (mainly British) designing garments with fake fur, etc.

5. Environmental Investigation Agency

The EIA was set up in the early 1980s in Britain. Their detailed investigations and their method of work has earned them the reputation of being the "eco-detectives" of the environmental world. The quality of their research has always ensured them success in their campaigns. Especially known for their campaigns to protect the wildlife, they exposed the working of the illegal ivory trade to the world. During the 1980s the EIA called for a ban of all

wild caught birds into Europe and provided film and documentary evidence which exposed the extend of the trade. They also were the first to raise the issue of the Faroese pilot whale and dolphin slaughter into international status in 1985.

"The Environmental Investigation Agency have the courage to do what other bodies fear - unearth and expose the true rogues responsible for the illicit ivory traffic and the subsequent decimation and suffering of the world's elephants. A no-nonsense and effective organisation made up of people who genuinely care".

[Daphne Sheldrick, the celebrated conservationist, who runs the elephant orphanage in Kenya]

6. The Women's Environmental Network

An organisation staffed entirely by women. It was set up in London in 1988. They highlight environmental problems that affect women specifically and educate women on these topics. They run seminars and public meetings, produce leaflets and information packs, highlighting consumer products that are produced in environmentally unsound ways. They research, for example, the effects of chemicals in breast milk and on foods and radiation in pregnancy.

As major consumers, women are in a position of power to influence and control the destruction and exploitation of the environment. The organisation urges women to use this position and to call on governments and manufacturers to make changes in unsafe products.

7. Nylon

Nylon is produced entirely from mineral sources. The raw materials are benzine from coal, oxygen and nitrogen from the air and hydrogen from water. A nylon salt is formed and converted into polymer. The nylon polymer, resembling plastic, is cut into the form of small chips. These are melted down and the molten nylon is pumped through tiny holes in a spinneret and, as the filaments emerge, they solidify on contact with the air and are gathered together into yarn. The yarn is stretched or cold drawn between a series of rollers.

8. Polyester

The first polyester fibre was developed in England during the last 1950s. It has different chemical ingredients to nylon. It is extremely resilient and retains its shape under almost any weather conditions. Water does not penetrate through the surface and it is crease retentive.

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