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National College of Art and Design

Faculty of Design
Department of Industrial Design

An Analysis of the Relationship Between
Packaging and Industrial Design

By Nicholas Mattenberger O'Donnell

Submitted to the Faculty of History of Art &
Design and Complementary Studies in Candidacy
for the Degree of Bachelor of Design

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Introduction

Background:

The idea for this thesis began with a simple query: Why have industrial design students not been asked to consider the packaging for any of the design projects undertaken in the past four years of our course? This prompted me to explore the relationship and responsibilities between industrial design and packaging design. We have been gradually taught and evaluated to form a set of industrial designers who are ready to set forth into the world equipped with an extensive array of skills that will enable us to observe and shape people's desires and needs into solid objects. Objects like those we all see around ourselves every day: kettles, kitchen equipment, stereo systems, office furniture. To create products that balance a combination of beauty, usability, intelligent use of materials and ultimately, appeal to the consumer. That last prerequisite has held an important position throughout most of this century and provided basis for extensive discussion among generations of users and designers. The designer must ensure that the development of their product was part of a whole, circular process in which every relevant factor was given consideration. The very identification of relevance is in itself a key factor in design, and hence the recognition of the relevance of the link between the finished product and the user. When the first batch of the new product rolls off the factory conveyor belt there must be a means by which it can be distributed to the consumer, and that responsibility forms the primary concern for this thesis: product packaging.

Questions:

When the original proposal for this thesis was written, several questions formed a basic breakdown of issues:

- Should packaging be addressed as a problem in its own right by the designer responsible for the product concept and development, or is it a separate task for a separate designer?

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Questions:

When the original proposal for this thesis was written, several questions formed a basic breakdown of issues:

- Should packaging be addressed as a problem in its own right by the designer responsible for the product concept and development, or is it a separate task for a separate designer?

- If so, what reasons can be given to justify the inclusion of packaging as part of the whole design problem?
- Why does this grey area of overlap between graphic designers and industrial designers exist?
- To what extent has environmentally friendly packaging been explored in the design world?
- How important is packaging, and what potential does it hold in a consumer-centred market?

Research for the thesis was initiated with these starting blocks in mind; articles were read and books were studied. As more material was examined, the direction of the thesis grew more focused. Why is it so rare to find actual examples of packaging that a designer has developed for use with their product? Because the food and beverages industry dominates the packaging world, where it is revered as an hugely important factor in increased sales, easier distribution and as a means to inform the consumer. Packaging for these industries is so prominent for the precise reason why it should be prominent in the product design industry: *sales*. The idea of the importance of sales is a common theme throughout, be it justification for the inclusion of packaging on a designer's brief, or explanation for the increased diversification and isolation of separate design fields.

Aims and Objectives:

The aim of this thesis is to highlight and argue for the importance of the industrial designer's role in the packaging of their product, not *how* to design the perfect package. This specific example also acts as a handle to suggest the need for the greater integration of the various design fields.

Chapter one traces the emergence and recognition of industrial design as a distinct profession. It examines the changeover from the broad description of craftsman or inventor, for example, as designer to the gradual definition of a separate entity, that is, *the* designer. From this singular

- If so, what reasons can be given to justify the inclusion of packaging as part of the whole design problem?
- Why does this grey area of overlap between graphic designers and industrial designers exist?
- To what extent has environmentally friendly packaging been explored in the design world?
- How important is packaging, and what potential does it hold in a consumer-oriented market?

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presence there inevitably followed a progressive splitting and subdivision, from the designer to the industrial designer, the graphic designer, the textile designer, the interior designer and the package designer, as the theorists of this century attempted to dig out the precise meaning and purposes of this new profession. This chapter sets the scene for the argument against the isolation between all sectors of the design profession.

Chapter two then focuses on the meaning and the role of packaging in the past and present. How has the package evolved from basic receptacle through to anticipatory preserver, to important sales aid, to conveyor of myths and dreams? This chapter lays out the evolution of these stages, explains the prevalence of the food and beverage packaging business and from that derives one theoretical argument for the consideration of the package by the industrial designer: sales.

Chapter three provides a further argument in favour of the package. This time an evaluation of the 'Green' phenomenon and its relevance in society today makes for convincing justification of the thesis. It presents an overview of the green origins, from idealistic theory to false promotion to consumer overexposure and disinterest, and finally to renewed pressure and opportunity. The turn of the century and the gradual distilling down of green ideals provides the designer with scope to exercise some of their much vaunted responsibilities- this time to the consumer *and* the client.

Chapter four looks at the industrial designer's existing credentials. Where is there further basis for their involvement in the packaging world? What previous experience has the designer in the materialisation of symbols and messages? It discusses the existing perception, through some eyes, of the industrial designer as 'nothing more' than a repackager of old ideas. It repudiates the idea that this renders the profession unworthy in some way and reinforces this argument by providing an example of good design that is essentially a 'repackaged' concept: The Bang & Olufsen Beosound 9000.

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Literature survey:

Several books stood out in terms of the influence, be it in agreement or disagreement, that they exercised on the form and direction of this thesis. Thomas Hine's *The Total Package* (1995) was instrumental in forming a historic and symbolic understanding of the package as an important part of every human being's life and the multiple roles it plays, while books such as *Packaging Design* (1990) by Steven Sonsino and *The Leader of the Pack* (1993) by Marcello Minale provided a more business-orientated point of view, providing the commercial requirements and justifications of the packaging world. Books such as Sparke's *An Introduction to Design and Culture in the Twentieth Century* (1994), Whiteley's *Design for Society* (1993), Papanek's *Design for the Real World* (1997) and Banham's (Ed.) *The Aspen Papers* (1974) were essential in many ways, from helping lay the groundwork for the overall theory to elaborating on specific points such as marketing and green design. Dorothy Mackenzie's *Green Design* (1991) also provided plenty of options and examples for environmental design in all fields but was disappointing in the way that it seemed to state the obvious and repeat itself. Michael Tambini's *The Look of the Century* (1993) provided many examples of packaging to help form a visual image of the development of packs this century, while *Package design in Japan* (1993) provided images and thoughts from a different culture. The remaining books helped the author in a general sense, useful for the background frame of mind.

The journals studied also provided relevant information. *The National Geographic* article helped form the historic aspect, while the *Design Issues* article and Brock's *Domus* piece provided very interesting design theory material. The two *Communication-Arts Magazine* specials, the *Art & Industry* article and the second *Domus* article dealt with the more physical side of packaging, i.e. design procedure, process and the green material issues. Marcus Gosling's thesis held a particular interest for the author as it aimed to address a similar undermanned grey area between

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industrial design and graphic design- Typography. It was important to see the approach that was taken.

The internet sites were vital in providing perhaps a more immediate and up-to-date source of information on the design and packaging world. The packaging sites confirmed suspicions of a complete orientation towards the technological side of the industry, while at the same time containing interesting information on these technological developments. Articles such as Jan Michl's *Form Follows WHAT?* and Antonelli's *Mutant Materials in Contemporary Design* provided some contemporary design thought.

It is hoped that this introduction has paved the way for firstly an understanding of the subject of this thesis, and secondly, a greater understanding of its following content.

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Chapter 1: Emergence and Divergence

Within the framework of industrial capitalism which created it and continues to dominate it in contemporary Western society, design is characterised by a dual alliance with mass production and mass consumption and (that) these two phenomena have determined nearly all its manifestations. (Sparke, 1994, p.xix)

In the understanding that the concept for this thesis grew out of a perceived lack of participation of the industrial designer in the design of the packaging for their own products, the aim of this chapter is to provide an overview and explanation of the emergence and divergence of the designer and the accompanying subdivided professions- industrial design, graphic design, package design etc.

Designers have been around since the dawn of mankind. Any form of design can be seen as the identification of, and subsequently, the solution of a set of problems. For example: Stone Age man is faced with the dilemma of hunting a deer whose senses are too keen to allow surprise at close range. Solution: attach a piece of sharpened flint to a suitable length of willow or other straight branch and he has in his hands a primitive but effective spear. An office worker is in need of a temporary means of holding together a sheaf of papers; a thin bar of metal bent six times provides the perfect solution: the paperclip. Simplified examples- but the message is clear. Design is not new, rather the recognition and development of a profession is.

It is well documented and accepted theory that the development of requirements for mass production such as mechanisation, standardisation, and the emergence of the mass market eventually led to industrial design as a profession, separate and distinct from that of craftsman, architect or artist. Yet the world did not really see evidence of our profession until this century. The people of the nineteenth century and the Industrial Revolution consumed products that were engineered, manufactured and finally had some form of ornament applied, rather than being designed as a whole

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concept, which the masses expect today. At that time, the term “designer” was in use but it could encompass any number of descriptions, from inventors to technicians to architects and so on. “Although by the end of the nineteenth century designing for industry had, as an activity, become widespread, as a job description for an individual or group of individuals it was still not clearly defined.” (Sparke, 1994, p.95). This can be seen as a natural consequence of the whirlwind of industrial and technological advances over the past 100 to 200 years. While the division of labour as a system was well established, there was still a hangover from the old craft-based industrial structure where the difference between the person who designed the patterns or decorations for the maker and the maker himself was clearer, and the people involved in specific crafts were so because they studied as apprentices to acquire their particular skill. Now there was the possibility for an influx of unskilled labourers to man the machine-tools that were changing the methods of manufacture. In turn, the distancing or removal of the craftsman from the manufacturing process meant that designing became a team activity, and began to separate itself from the mechanical process of manufacturing.

So at the turn of the 19th and through to the 20th century the spotlight began to fall on design and the designer as a means of increasing the desirability and saleability of the growing sea of mass-produced consumer goods; a means of applying ‘art’ and individualising the product and highlighting it as more than a simple piece of engineered machinery. The appreciation of ‘art’ and ‘beauty’ has always been perceived as a sign of taste and intelligence, and here was the perfect manner in which to present the masses with their own piece of status, handsome and functional household goods to improve their quality of life. With the ability of the designer to provide the consumer with greater social status, so too did status of the designer improve- “both within the hierarchy of industry and in the eyes of society as a whole.” (Sparke, 1994, p.105)

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The development of the 'new' phenomenon then bore cultural implications-implications that would effect the way everybody lived,

thought and behaved. This inevitably meant that people wanted to analyse and break down design to its component parts, to seek out what was really 'good' design, 'worthy' design. Perhaps the most noted of these thinkers were part of what is now called the Modern Movement, which has been evident throughout most of this century, be it through condemnation or exaltation. Nicholas Pevsner, Adolf Loos and Walter Gropius were some of the well-known names who took it upon themselves to evaluate in terms of society and design what went before, what the contemporary situation was and what should come. They reacted strongly to the ornamentation of products to mask the function, to package the object and then call it design, which was the prevailing practice at the time as mentioned above. They proclaimed that 'form follows function' -that the appearance of a product would shape itself naturally after the designer considered what was truly important- the purpose of the object. "Truth to materials" was another catchphrase considered to be an unassailable reality. If you were building a house from concrete, wood and steel then you should see the concrete, the wood and the steel. It was all about truth -to materials, to function- a reflex action to excess ornament and disguised products.

These theories were all relevant and understandable when considered in the context of the contemporary society- but what these analytical minds did not realise is that the only constant and absolute rule of design is that it has no absolute and static set of rules and meanings.

In the reality of our day-to-day world... where architects and designers are bound to live and act, no matter how lofty are the design philosophies they profess, the functionalist notion of function operated as a *carte blanche*: having been empty the notion made the architects and designers free to define it in ways that always legitimized their aesthetic priorities. (Michl, 1995, p.13)

"Truth to materials" is equally redundant at a time when technology is used to blur the borders between (for example) ceramics and metals, plastics and glass, sheet metal and carbon fibres. "No longer adjuncts in passive roles, materials have been transformed into active interpreters of the goals of engineers and designers." (Antonelli, 1995, p.1) That is not to say that the

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thoughts and words of the many design theorists who have aired their beliefs are irrelevant and worthless. The opposite is true, because without outspoken views and conviction of belief, there would be no reaction against established theory, no challenge to authority. Nothing would change. 'For every action there is an equal and opposite reaction' and this is what prevents the stagnation of ideas.

Design as we consider it this century is born out of, changes and reflects mass culture. That is why the meaning of the word is in a state of constant flux. As a natural result of constant theorising and efforts to reduce the diversity of ideas and methods gathered together under the label 'design' down to a manageable and definitive set of reference points, it has been divided and into particular subject matters, each with a set of methods suitable to its exploration. Industrial design, graphic design, packaging design, interior design are a few of the familiar categories under study in today's world, and while they have undoubtedly contributed to providing "an integrated understanding of human experience" (Buchanan, 1992, p.5), the very specialisation which is their nature results in further subdivision and isolation from the concept of design as a whole process. Those involved in the research of these subjects become progressively more blinded by their proximity to their field. They "have lost connection with each other and with the common problems and matters of daily life from which they select aspects for precise methodological analysis." (Buchanan, 1992, p.6)

The study of particular areas in the world (of design) and the specialist skills of the related designer is invaluable to the advance of knowledge, but there are many grey areas and shadows cast where the specialist fields overlap, where there is a need to step back and absorb information and fact from related areas and apply it to one's problems as a means to an end. 'Variety is the spice of life' and design is an integral part of life. Penny Sparke, in her book *An Introduction to Design and Culture in the Twentieth Century* writes that there is:

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...a need for generalists who can operate in several of these fields simultaneously. Thus there is as great a need for the consultant as for staff designers, and as much emphasis on anonymity as upon individualism. (Sparke, 1994, p.105)

The overlap between package design, graphic design and industrial design forms the basic concept for this thesis, so is in agreement with Sparke's desire for 'generalists'- yet her statement seems to imply that there is a need only for a few of these jack-of-all-trades. Should every designer not have at least circumstantial knowledge of the processes and technologies involved in other related specialist fields? For example, the author of this paper has no knowledge of even the basic considerations, technological or otherwise, that the graphic and package designers are taught in colleges and universities around the globe. The curriculum of the course in his college makes no provision for the teaching or laying of a groundwork knowledge with regards these closely related areas of practise. The inclusion of such teaching, i.e. in the form of modules, to course framework, could only benefit the design world.

The designer will never extend his or her knowledge "beyond the library or laboratory" (Gropius, 1970, p.20) by attempting to pin design down under a single description. The nature and function of designers will change as society develops now and in the future, and their strength must lie in their ability to adapt successfully and evaluate information from all kinds of sources. "In the words of Raymond Loewy: 'The designer is a nimble creature and a dependable one. Flexibility is his greatest asset.'" (Sparke, 1994, p.106) It is under this assumption that the author believes that a product is not whole until it is surrounded by that which protects and, today, sells it.

... a need for generalists who can operate in several of these fields simultaneously. Thus there is as great a need for the constant as for staff designers, and as much emphasis on anonymity as upon individualism (Spark, 1994, p.102).

The overlap between package design, graphic design and industrial design forms the basic concept for this thesis, so is in agreement with Spark's desire for 'generalists' - yet her statement seems to imply that there is a need only for a few of these jack-of-all-trades. Should every designer not have at least circumstantial knowledge of the process and technologies involved in other related specialist fields? For example, the author of this paper has no knowledge of even the basic considerations, technological or otherwise, that the graphic and package designers are taught in colleges and universities around the globe. The curriculum of the course in his college makes no provision for the teaching or laying of a groundwork knowledge with regards these closely related areas of practice. The inclusion of such teaching, i.e. in the form of modules, to course framework, could only benefit the design world.

The designer will never extend his or her knowledge "beyond the library or laboratory" (Gropius, 1970, p.20) by attempting to pin design down under a single description. The nature and function of designers will change as society develops now and in the future, and their strength must lie in their ability to adapt successfully and evaluate information from all kinds of sources. "In the words of Raymond Loewy: 'The designer is a nimble creature and a dependable one. Flexibility is his greatest asset.'" (Spark, 1994, p.100). It is under this assumption that the author believes that a product is not whole until it is surrounded by that which protects and, today, sells it.

Chapter 2: Packaging: The Chicken *and* the Egg

Without it's package, a product does not exist.
(Sonsino, 1990, p.9)

Depending on how one treats the term 'packaging', the further back in history it can be traced. Treating the term a little more conceptually than may be at first obvious, one can look to the natural world and biological forms around us that have existed for millions of years- precursors to the commercial and machine-made packaging that is all around us now. Nuts in their shell, peas in their pod, an orange in its peel, ultraviolet colours from flowers beckoning bees onto them- the ultimate in disposable packaging. These natural packages, like every other pack that ever was, are made to be opened. Their purpose is to protect, then to entice- the animals that feed from them know of their nutritious and tasteful value- and then to be dispersed, cast aside as rubbish when no longer useful. But at that stage its job is done, "a means to an end: selling the product and keeping the productive system going." (Hine, 1995, p.30). Perhaps the flower is the closest comparison one can make in practical terms between human and natural packaging: the plant uses a visual means to attract the pollinator, much the same as today's supermarket packaging shouts in colours and words at the consumer: Take Me! Both perform essentially the same functions.

The most basic of these functions have been employed by humankind now for some time. "The package as holder"¹ and protector is its essential and defining characteristic, the one which even our prehistoric ancestors had the means to make use of. At this point, they still took directly from the natural world, using shells, rocks with depressions in that served as reservoirs, animal skins and so on. By the first century B.C., the inhabitants of the famous city of Petra, now in modern day Jordan, were able to carve the stunning temples, theatres and other buildings out of a

¹ (Miyares, 1998, p.1)

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Whether it's a package, a product, does not exist.
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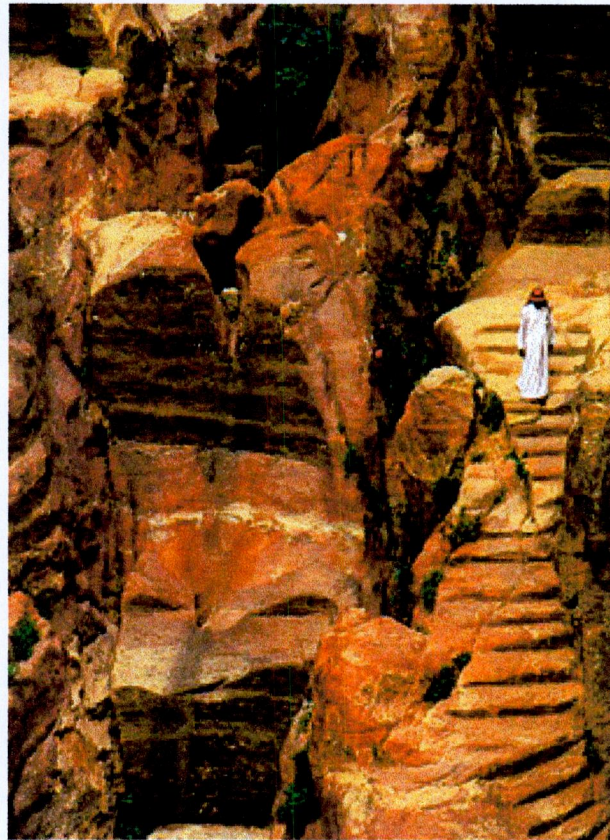
Depending on how one treats the term "packaging," the further back in history it can be traced. Treating the term a little more conceptually than may be at first obvious, one can look to the natural world and biological forms around us that have existed for millions of years-precursors to the commercial and machine-made packaging that is all around us now. Thus in their shells, peas in their pods, an orange in its peel, ultraviolet colours from flowers beckoning bees onto them- the ultimate in disposable packaging. These natural packages, like every other pack that ever was, are made to be opened. Their purpose is to protect, then to entice- the animals that feed from them know of their nutritious and tasteful value- and then to be dispersed, cast aside as rubbish when no longer useful. But at that stage its job is done: "a means to an end; selling the product and keeping the productive system going" (Hine, 1992, p. 30). Perhaps the flower is the closest comparison one can make in practical terms between human and natural packaging: the plant uses a visual means to attract the pollinator, much the same as today's supermarket packaging shouts in colours and words at the consumer. Take Mel! Both perform essentially the same functions.

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remote sandstone desert canyon because of their ability to master their pitiful water supply.

Harvesting water like precious grain, the Nabataeans collected it, piped it, stored it, conserved it, prayed over it, managed it...hundreds of cisterns kept Petra from dying of thirst...while masonry dams in the surrounding hills protected the city from flash floods. (Belt, 1998, p.122)

Archaeological evidence of packages, as with those of Petra, is often found at ancient crossroads, trade outposts where strangers met each other. Gordin Tepe, in the Zagros mountains of western Iran, held another such outpost. Found here were 5000 year old vessels that held the earliest chemical evidence of beer, 'protopackages' seemingly designed specifically for the purpose of storing this beer: the inside of these upright jars were deeply scored to collect an unavoidable and unwanted residue from the brewing process.



1. Laced with channels, terraces, dams and cisterns, the cliffs above Petra display the Nabataean's skill at capturing and containing rainwater.

remote sandstone desert canyon because of their ability to extract their
entire water supply.

Harvesting water like pistons from the sandstone collected in
pipes it stored it, converted it, pumped over it, and
it, hundreds of miles from Port of Spain, which
masonry dams in the surrounding hills protected the city from flash
floods (Bell 1998, p. 12).

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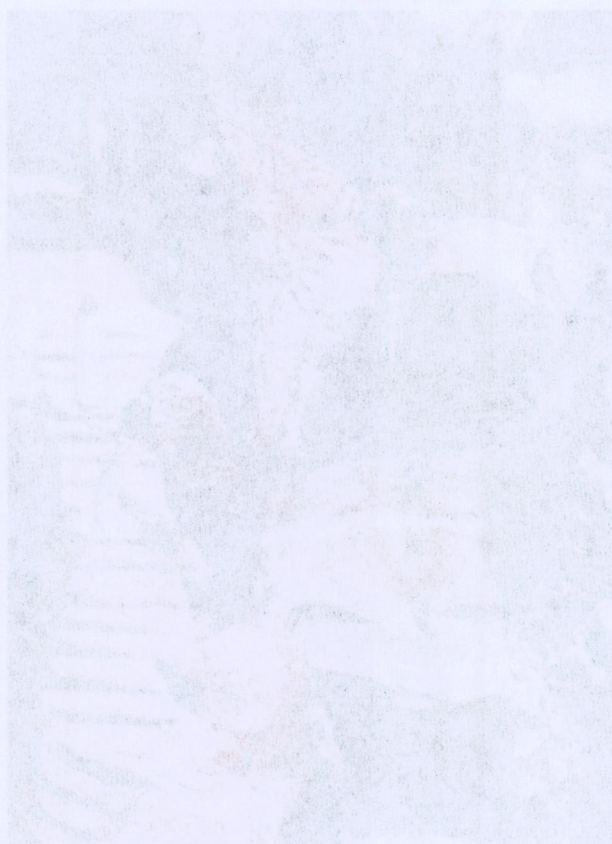


Fig. 1. Close-up of ancient masonry, showing the texture of the mud or stone, and the scoring of the jars for the purpose of storing beer.

Amazingly enough, found in the same room at Gordin Tepe was the earliest chemical evidence of wine-in a different kind of jar. This one seemed to have been stored on its side and was "capped with an unfired clay stopper, that, like a cork, would absorb some wine, swell, and keep out air to retard spoilage." (Hine, 1995, p.25) This early manifestation of packaging is, according to Ben Miyares, the second stage of four in the evolution of packaging: "the package as blocker."¹ Now humankind was depending on these containers not just to hold and offer protection of sorts, but to seal and preserve. These two methods are ancient, but the next two that Miyares mentions have only come into play a little over the last century, abreast with the rise of the mass prefixes- mass culture, mass consumption etc...

"The package as reactor"¹; where the packaging further protects the goods by the ability to adjust to physical and chemical changes in their environments. "Corrugated cushions against shock, strategically placed vacuum panels that collapse so that hot-filled plastic bottles don't, and so on."¹ The final stage that brings packaging to its latest development is "the container as anticipator."¹ Here the pack is 'waiting' for some sort of foreseen problem with a means to counteract it; it has a latent capability. An impressive example of this sophisticated technology is a new glass coffee jar that Nestlé have developed for an instant 'espresso' range- an area where primary concerns include a real-coffee taste and longer shelf-life. This 'anticipator' is hailed as fulfilling both requirements. A multi-layer polymer liner under the cap absorbs leftover oxygen from both the 'headspace' of the jar and the coffee itself.

There are two related points which the reader may now notice, the purpose of which are to further clarify the thrust of this thesis. In providing a brief overview of the forms and purposes of packaging through the ages it

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comes as no surprise that the package, 5000 years ago or now, on the cusp of a new millennium, is enormously important to the human race. Its ancient roots imbue it with the power that it possesses today.

Packages are about containing and labelling and informing and celebrating. They are about power and flattery and trying to win people's trust. They are about beauty and craftsmanship and comfort. They are about color, protection and survival.
(Hine, 1995, p.25)

The first point concerns the isolation of specialised fields of study as discussed in the previous chapter. Miyares, in his online article quoted above: *Packaging keeps evolving... from able, to active, to anticipating.* seems to be concerned with nothing more than the purely technological aspects of his industry. The developments he mentions are exciting and evolved, but has he not overlooked a large branch in the evolutionary tree of packaging? Thomas Hine evokes strong images with the description above. Images in particular of the enormous growth in commercial value to the company of the package, as a selling agent and a potentially beautiful object, over the past century. Surely the commercial and formal side of the business deserves a mention as one of the many cultural factors that made the evolution of modern packaging possible.

The second point relates to the implication, both from the opening of this chapter and from the majority of relevant literature, that the world of packaging design is for the most part concerned with food and beverages. This is for the simple reason that it is.

...Food and drink packaging represents 90 per cent of the packaging market and most of the exciting developments over its relatively short lifespan have been in packs for food and drink. These ideas then percolate through to other forms of packaging.
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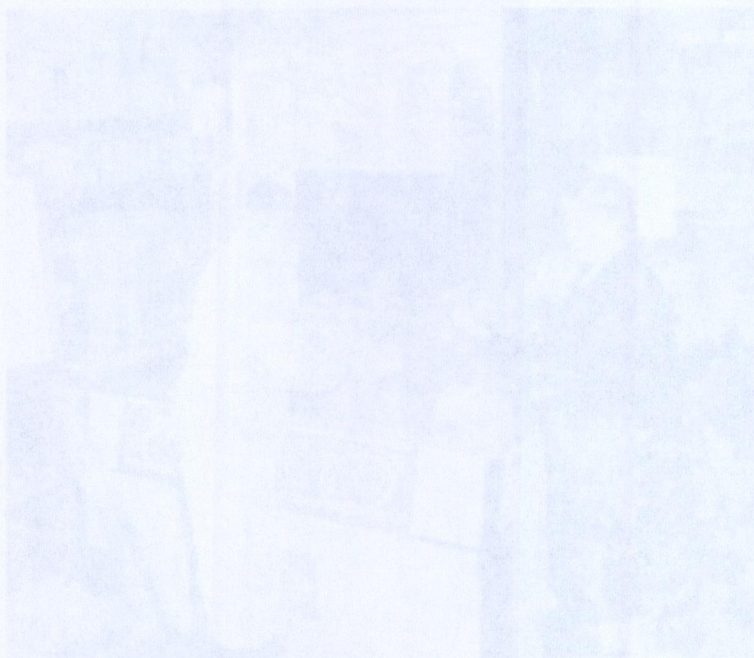
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2. The 20th century grocer became surrounded by prepackaged goods

Why is this? A simple question, with the possibility of a simple answer. There are three basic necessities for living: food, clothing and housing. Again, the 20th century phenomenon of the masses helps to explain the rise of packaged goods. More people meant more demand—especially the demand for the basic commodities. The shop down the road began to play a smaller and smaller part with the advent of the supermarket store. Shopping became a depersonalised experience: one no longer had to rely on the grocer to advise on and wrap the desired quantity of foodstuffs. Two World Wars had accelerated the trend towards measured, standardised units of goods. The package became a vital factor in the spread of mass-consumerism. It provided the means to large-scale distribution of goods and the building of a consistent image for the producing company: branding. The supermarket could now provide people with an exciting, instantly recognisable array of choice, promises and lifestyles. “Packages replace the indeterminacy of human relationships with quantities and emotional messages, both of which have been carefully measured.” (Hine, 1995, p.17)

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Packaging has moved beyond its basic function as preserver and protector. In today's self-service environment it has to sell itself and the

product all the way from the supermarket shelf to the house to the next shopping trip. It must attract the consumer, instantly communicate the contents, fit in with overall brand image, "convey leadership within the sector and tie in with other marketing activities." (Sonsino, 1990, p.8). In our increasingly competitive world, people perceive themselves to have less and less spare time (they are probably right) and the visit to the supermarket becomes an increasingly infrequent yet large-scale activity, it is increasingly important for the package to almost make the decision for the consumer. This statement would not encourage a zombie-like troupe of shoppers down at the local Marks & Spencer picking characterless goods from the shelves to the trolley, the aim is rather to communicate effectively and precisely, to enable immediate understanding on the part of the consumer. Considering that the emergence of the supermarket and mass-produced goods has affected so many people's lives in terms of the choice they are provided with, and hence the variety of foods and other goods from all the corners of the earth they have experienced, perhaps the concerned designer should look in that direction for inspiration.

The phrase 'concerned designer' is written in reference to one of the central themes of design that has preoccupied the practising designer and the somewhat loftier design theorist for over a century, that is: the education of the masses in 'good design'. When the above hear these words, he or she may be thrown into a thousand thoughts, tying themselves into knots asking themselves what 'good design' may be (see Chapter 1). But it is felt the ordinary consumer in the street will understand these words to mean economical, durable, useful, beautiful and hence valuable products. What better a way to infuse the people of the (developed?) world's lives and thoughts with good design than to concentrate on one of life's other basic necessities- housing or the household. These terms do not simply mean electrical goods such as kettles and freezers which *are* readily available in massive retail warehouses, they imply every article that one might add to one's house to make it more like a home. But wait, says everyone in surprise! We thought that the consumer was perfectly aware of the concept of good design, and we were especially sure that industrial

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designers the world over had been relentlessly producing millions of household goods for over a hundred years! And indeed more consumers than ever *are* aware of this concept, and industrial designers *have* produced millions of well-designed household goods. Yet the reality is that for most, that concept and those household goods are out of reach. Both still belong to an élitist bracket, only for those with the right amount of money. Multi-national companies such as Muji, Habitat, Sony and Ikea have made and are making forays into this sort of territory- especially the former two, which produce some beautiful and accessible designs- but there is no super-, hyper-, mega-market chain with aisles and aisles and thousands of square feet of floorspace filled with reasonably-priced quality household goods.



3. The rows and rows of packages we are so used to seeing in every mini- and super-market.

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Dozens of horrific images fill the mind. Rows of garish, cheap, over-designed plastic useless design binkies surrounding waiting children

and harassed mothers and fathers in enormous superstores dotted all over town and countryside. But it would not have to be an ordeal, doomed from start to finish. One only has to examine the supermarkets that the consumers prefer today. Marks & Spencer, Bloomfields, Superquinn etc... an increased element of personalisation is present, ready-made foods are of better quality than ever before and organic food sections no longer consist of a token bag of carrots. Quantity is no longer the unassailable imperative- more and more people search for quality. The design supermarket would at least bring the subject of good design to the fore- in everyone's mind, not just that of an educated minority. The world of the supermarket is a competitive one, and so it should be: "The supermarket shelf has been called the most valuable real estate in the world; anything which fails to earn its keep is de-listed to make way for something that will."(Conran, 1995, p.129) The high expectations of the consumer, and the race to meet these high expectations on the part of the manufacturer in terms of quality and economy, should be transferred to the world of design. Theoretically, there is no reason why the consumer should expect anything less.

The designer will then have to treat the package of their product as the real and integral part that it deserves to be considered as. The consumer in the shopping aisles will have to be presented with a package that echoes the designer's aims and thoughts, which in turn echoes the perceived desires of the shopper. Responding to the individual lifestyle of different consumers was recognised as an important factor in the ultimate increase of sales 20-30 years ago- the advent of marketing. Global corporations examine social trends in lifestyles, anticipating and creating consumer desires. The designer is a marketing-led businessman, inseparably entangled in the commercial world- no matter how hard the philosophers cry out for change (as they have been for decades), demanding that we take notice before time runs out.

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Professional designers go to camp meetings to be told what's right and what's wrong...Year after year, men have stood at the microphone and preached hellfire, the population explosion, and the sands of time running out. We love it, gladly agree that our time for dancing has come to an end, and resolve to go out and do better by taking the situation more seriously. (Banham, 1974, p.158)

The only people who have the time to take the situation more seriously are the theorists who take stock of and evaluate the cultural environment and muse upon action to be taken. The professional designer working as a consultant or in-house must respond to the pressures that are ultimately, via the chain of command (and demand), laid on them by the consumer. Nigel Whiteley quotes Lippincott in an unequivocal and extreme voicing of this opinion: "...no product, however well its aesthetic functions are fulfilled, may be termed a good example of industrial design unless it meets the acid test of high sales through public acceptance."(Whitely, 1993, p.17). If we apply this thinking to the design of food and drinks packaging, it is immediately obvious that it has passed this 'acid test' with flying colours. So in the reality of industrial design's commercial nature, one of its original and basic characteristics, we can find the justification for the profession's responsibility to package the goods that it conceives and produces.

If it can be argued that sufficient justification for the industrial designer to consider what surrounds their product lies in its sheer commercial potential, one must also take into account the more ethical and responsible implications of packaging. Firstly, design is a whole process that involves the setting and solution of problems to attain a set goal. As discussed above, the consumer sits atop the design chain, in terms of importance through money. So while the immediate goal of a designer may be to design a new lamp for trendy young twenty-somethings, there is a crucial extension to the brief that must not be ignored. The designer has not completed the process when the first working lamp rolls off the factory line, far from it, the lamps must now reach the intended targets, scattered all over the world. They might as well not exist until they reach the shops, and in the future superstores, where they will be sold. "In order to be able to produce something, you have to have a mechanism to produce and

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control its consumption. Packaging links industry to dreams and helps keep them in sync.”(Hine, 1995, p.16) The appearance and consideration of a package in the context of Japanese culture serves to reveal the respect or gratitude that the presenter feels. Who are the industrial designers to pass on responsibility for the safe transport and appearance of the product that they have nurtured and developed to an unknown graphic or packaging designer with no concept of their intentions? A dedicated integrative approach, from concept to consumer, such as the Muji approach, where a panel of designers is involved in every aspect of the company’s operation, can only benefit the quality and commercial viability of design.

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Chapter 3: The Green Dilemma

In Spring what I thought were new-born lambs in the fields turned out to be a dandruff of discarded milk cartons...the river banks sport a foul and filthy tide of rubbish washed down from God knows where...I cannot disguise my new loathing and disgust for this profession. It strikes me that designers are the worst sort of vandals. (Mylius, 1995, p.37)

The idea and presence of a widespread concern at the pollutive consequences of the enormous amount of packaging waste our consumer society produces every year or even day is by no means a new one. In 1970, at the Aspen conference, the French Group furnished a strongly worded condemnation of the whole social and political system of the industrialized world. The paper set out the Group's disbelief at the falsities that it believed the French government in particular was airing to divert attention from deeper running and more pressing issues.

The burning question of Design and the Environment has neither suddenly fallen from the heavens nor spontaneously risen from the collective consciousness... It is not by accident that all the Western governments have now launched this new crusade, and try to mobilize people's conscience by shouting apocalypse.
(Banham, 1974, p.208)

Whereas this statement may have been quite revolutionary in its attempt to throw back the lid on a seething mass of social inequality and is surely valid, this chapter will instead concentrate on environmental problems to which the solutions can perhaps be seen as a little closer to hand. The late eighties/early nineties can be identified as the period in which the (design) world saw the most action in terms of considering the environment in the product development process.

A few years ago the public was constantly bombarded with ominous warnings that heralded impending doom unless we took notice and action: depletion of The Ozone Layer, The Greenhouse Effect, the wide-scale and irreversible destruction of the rainforests. The television, newspapers and every aware person's mind were swirling with the inevitable repercussions

Chapter 3: The Green Dilemma

In Spring when I thought were new-born lambs in the fields mowed out to be a dwarf-riff of discarded milk cartons... the river banks sport a foil and fifty tons of rubbish washed down from God knows where... I cannot disguise my new loathing and disgust for this profession. It strikes me that designers are the worst sort of vandals. (Mylius, 1995, p.37)

The idea and presence of a widespread concern at the pollutive consequences of the enormous amount of packaging waste our consumer society produces every year or even day is by no means a new one. In 1970 at the Aspen conference, the French Group furnished a strongly worded condemnation of the whole social and political system of the industrialized world. The paper set out the Group's disbelief at the fact that it believed the French government in particular was going to divert attention from deeper running and more pressing issues.

The burning question of Design and the Environment has neither suddenly fallen from the heavens nor spontaneously risen from the collective consciousness... It is not by accident that all the Western governments have now launched this new crusade, and try to mobilize people's conscience by shouting apocalypses. (Barnham, 1974, p.308)

Whereas this statement may have been quite revolutionary in its attempt to throw back the lid on a scorching mass of social inequality and is surely valid, this chapter will instead concentrate on environmental problems to which the solutions can perhaps be seen as a little closer to hand. The late eighties/early nineties can be identified as the period in which the (design) world saw the most action in terms of considering the environment in the product development process.

A few years ago the public was constantly bombarded with ominous warnings that heralded impending doom unless we took notice and action. depletion of The Ozone Layer, The Greenhouse Effect, the wide-scale and irreversible destruction of the rainforests. The television newspapers and every aware person's mind were swirling with the inevitable repercussions

that this imbalance of Mother Earth would result in. Looming over humankind were the collapse of fragile ecosystems, extinction of thousands of species of animals, and ultimately our own downfall. Blame fell on the greedy multinational corporations and their encouragement, by all their many and varied means, of our ravenous consumer society, which demanded more and better and newer of everything. People were concerned and action had to be taken, alternative methods explored. Recycling, a concept practised by ancient cultures such as the Maya, came to the fore and research was carried out in the field, among others, of plastics, seen as a major offender, as to the viability of its biodegradability. The design profession was again identified as a means for social change, and at the same time, inevitably seen as a major factor in the cause of these problems.

The designer has a key role to play in the Greening of design...They must relinquish the attitude of 'I-was-only-obeying-orders', and assume greater responsibility for the 'cradle-to-grave' life cycle of what they design. (Whiteley, 1993, p.82)

Some companies or individuals seemed to make a dedicated effort to educate themselves and reduce their negative impact on the environment. The hugely successful story of the Body Shop 'green approach' involves the use of biodegradable materials, re-use and refilling of packaging and has expanded to the undertaking of environmental projects. Others created, exploited and perpetuated the public's perception of the word and colour green to jump on the latest marketing carriage of the gravy train.

In this culture of intense consumption, what more potent a symbol of our effect on the environment confronts us all than our waste, more specifically, our packaging waste. Although once full of promise and allure, enticing the consumer to pluck them from the shelves, when they sit in the landfill and lie discarded in the streets, those coloured boxes and pouches take on an entirely different meaning. Their prominence in our minds is probably more pronounced than in the landfills- household packaging accounts for about 15 percent of solid wastes (U.S. figures)-

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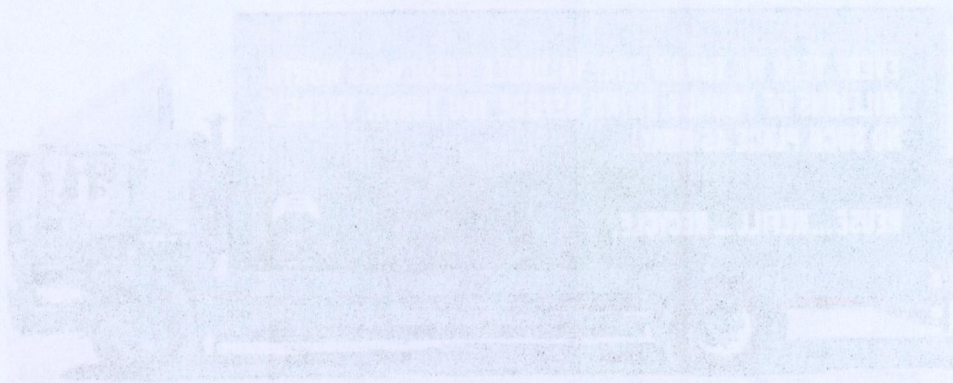
garish, dirty, and extremely visible, they are a part of our consumption that we prefer not to think about, although we feel an uneasy responsibility towards them. "Think before you throw. There is no such place as away.", says the slogan on the side of a Body Shop truck, a fitting reminder of just how easy we find it to put those thoughts to the back of our minds. Even so, the recent green concern did result in some direction, action, and results in the area of packaging.



4. The simple but striking message on the side of a body shop truck.

Legislation passed by the European Community that requires the Member States to introduce systems for the return and/or collection of used packaging aims for a recovery of 50 to 60 percent and recycling of 25 to 45 percent. In turn the Member States target related legislation at the packaging manufacturer. There are two motivating factors at work here that will nearly always ensure better results than simple human conscience. The first is the prospect of falling foul of the law, and the second the prospect of increased profits. The manufacturer who uses the minimum amount of material in their aluminium cans or PET bottles, for example, saves money in virgin or original material costs and by lightening the eventual load for transportation. Packages are produced and shipped in such vast numbers that well-placed tweaking can save the manufacturer substantial amounts- which is always good news. Today further

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opportunity also lies in the attraction to the consumer of less wasteful, easier to recycle, and potentially less expensive packaging.

An overexposure to what should be disturbing and horrific pictures of war, famine, natural disasters and violence that flash up on the news bulletins on our television screens and now hold our attention until the cut to the next clip means that ultimately we are numbed by the frequency of these images. It is very hard for most people to commit any thought to concerns that seem "somewhat abstract and removed from most people's daily existence." (Whiteley, 1993, p.49) In the same way phrases like those at the head of this chapter, which realistically should have held some weight, began to sound hackneyed and tired. People turned off at the mention of the word "Green". Now, a few years later, some of the green ideals have sedimented down and consumers are more receptive to the idea of genuinely less wasteful packaging. The Green notion is moving towards a more realistic position in the consumer's mind: a subtle 'lifestyle' or 'niche' choice to which they aspire and want to buy into. Mainstream consumers do see rubbish, and particularly packaging waste, as a very serious problem but that is countered by a reluctance to radically alter the way they live at present. They wish to be able to make minor contributions to environmental protection, without making complete commitments.

This diluted nineties version of the Green issue provides a realistic reinforcement to the more traditionally orientated arguments for the industrial designer in seriously reconsidering their role in the whole design of their product- more integration and less isolation. To quote Dorothy Mackenzie, "Close collaboration between graphic designers, industrial designers, technologists and materials scientists (*is*) will be important." (Mackenzie, 1997, p.93) The manufacturer and/ or client's realisation that the combination of the fast approaching deadlines for tough legislation and a growing desire on the part of the mainstream consumer to participate in and hence buy into a piece of this gradual, but real fight for the environment makes for a good reason for some sort of commitment to the Green cause. Hence the industrial designer can now take advantage of this

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sympathetic atmosphere to exercise the right balance of both their social and commercial roles:

- They can fulfil their responsibility to complete design by creating the packaging for their own products- something that should take on increasing importance.

- The manufacturer/ client understands the potential for Green packaging and frees the designer from some of the commercial restraints that would have previously been in place- opportunity for responsible/ ethical design.

- The consumer identifies with and purchases packaging and product that ensures their participation in minimising environmental impact.

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Chapter 4: The Industrial Designer is a Packaging Designer

If truth simply cannot be spoken, the only thing that remains to represent it is the lie. Packaging is the lie that represents truth, that encourages recognition without moral repression. (Brock, Feb 97, p.6)

In assuming responsibility for product packaging, the industrial designer is not restricted to only quoting the increased commercial and social value of their profession as discussed in the preceding chapters; they may also boast of experience, if not in relevant materials technology, then in the visual language with which they are so familiar. As discussed in the previous chapters, in view of the increased definition and understanding of the function or profession of the industrial designer, the emphasis on the designer as an inventor or even innovator shifted to that of commercial creature. No longer could the designer fall into the kind of category of inventor that those famous Heath Robinson cartoons depicted. S/he was provider of preferences, an anticipator of desires. The designer integrated beauty into the existing function. The products they designed took on meaning, they signified lifestyles. As Barthes writes in his book *Mythologies*: "Objects have meaning beyond their practical function - as signs, bearers of opinion, and means of ideological manipulation." (Barthes, 1973, p.154) Almost universally now in the consumer world, the concept or function of the product changes little. The computer as a means of storing and retrieving information, the chair as a machine for sitting on, the television as a means for reproducing moving pictures on a screen and so on. The hardware for the technical products just keeps getting smaller and/ or more efficient, and the designer keeps, in the harshest terms, tweaking the aesthetics of their product. They repackage and refresh the myths that these objects symbolise, creating products whose aim it is to elevate people's standard of living.

That is not to say that the industrial designer does not change the functions of products, or peripheral functions that surround the primary one. They are not completely devoid of the potential for introducing

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That is not to say that the industrial designer does not change the functions of products, or peripheral functions that surround the primary one. They are not completely devoid of the potential for introducing

innovatory features. The point is that with many products today, the designer's creativity lies simply with developing technology into products. Innovative technology brought about in a laboratory by specialised researchers, hence "the industrial designer is the front-end to innovations that have been made a long way down the line." (Pedgley¹, 1996, p.1) This situation is acceptable for precisely the same reason that neglecting packaging is not. It is the scientist's or technician's profession to innovate or progress in their fields, it is the industrial designer's responsibility communicate with the aforementioned and apply this innovation to relevant products. The designer can exercise vision in the application of innovation. When they are granted the freedom to make use of their creative talents in considering both the product and it's environment, then the designer will have the potential to change the way users see and use a particular product group. For example: the design of a new means of choice-controlled music in a private setting, not just a new version of a jukebox. Yet even when the designer identifies and develops new concepts, even when they innovate, they envelop the necessary component parts in a functional, aesthetic and symbolic package that becomes the product. Sparke identifies the designer as stylist or packager as "standing at one end of the spectrum", while the more "work-a-day, anonymous, industrial designer (who) operates much more like an engineer than an ad-man" (Sparke, 1994, p.175) stands at the other end. Today, in reality, the designers at both ends of the spectrum are packagers and 'ad-men'.

The result is not a step down, a lowering of tone, for design. The idea that designers 'repackaging' products are departing from the general term of 'good design' probably stems from our mental association of (food) packaging with a flimsy, temporary, over-designed culture that results in all too visible mounds of waste. Regardless of the validity of this association, it drives home the realisation of products (packages of function and aesthetics) as signifiers.

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Design is not simply a cover, not a carton in which the functional unit of the object is hidden and could just as well be presented in its 'pure' or 'naked' form...Microelectronics and nanomechanics are almost as virtual as thoughts or ideas and have to be conveyed into social communication through design. (Brock, Feb 97, p.6)

As ever-progressive technology provides the designer with an increasingly invisible and efficient set of electrical and mechanical components, they are presented with growing freedom to integrate function and beauty into a package that the consumer aspires to buy.

Case Study: The Bang & Olufsen Beosound 9000.

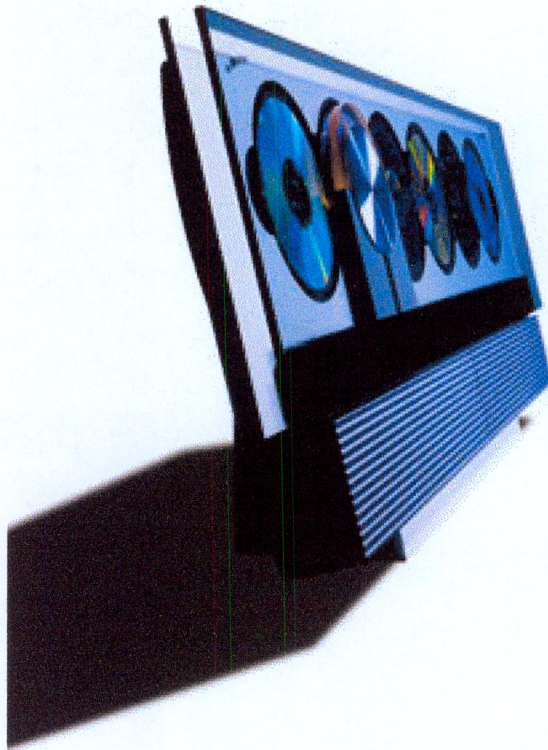
The Beosound 9000 provides a good example of how a company can produce an innovative restyling of a product concept that is well-known the world over: the CD player. Bang & Olufsen present themselves very much as a user-orientated company. They take pride in highlighting their widely varied customer lifestyles as much as they do their dedication to function, beauty, and design integration. About their customers: "These are people with a way of life that entirely their own or expresses a very conscious choice- borne out of by their choice of audio and video equipment." {bang-olufsen}

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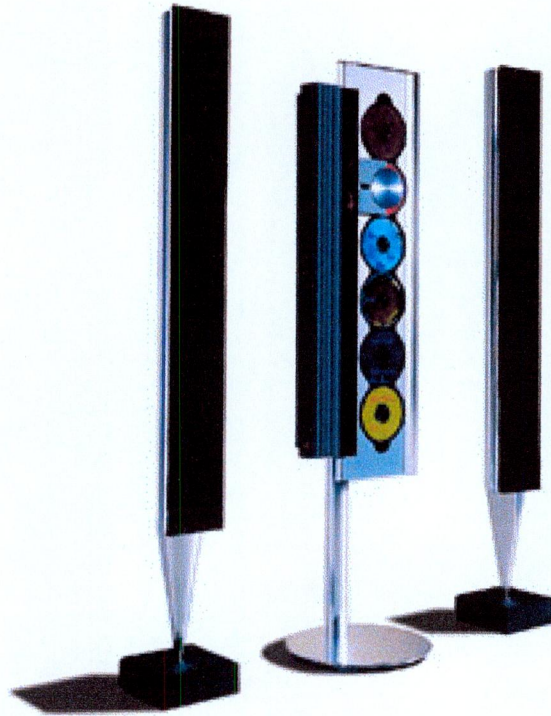
5. The striking Beosound 9000 in it's side sitting position.

The Beosound 9000 itself embodies the characteristics of design discussed in this chapter. There is no doubt that the unit commands a stunning visual presence. The user takes stock of his or hers preconceived ideas of what a CD player should look like. They are presented with a simple oblong unit with space for 6 CDs behind a glass panel- baring what other manufacturers hide away in a generic black box. A feature is made out of the aesthetic potential of the moving CDs. It is also intended that the unit can be positioned in different ways, again not just as one set of a of those black boxes. The speakers further add to the move against traditional perceptions of variations of yet more of those tired black boxes.



Fig. 1. The device shown in the photograph is a CD player.

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6. The Beosound 9000 standing upright with loudspeakers.

In terms of technology, there are motors to power the moving 'CD reader', microprocessors to calculate the time between tracks and adjust the position of the discs according to the unit's placement in its environment, as well as extended programmable memory, options for integration with other B&O systems and high quality radio and so on. If Bang & Olufsen remained 'true' to the 2,910 technological and mechanical components, they could be contained "in a modest box".{bang-olufsen} Instead, they let the technological compactness of their unit free their design vision. As one designer says "For me it's important that the design illustrates what the product can do. It's about using design as a language, which also makes the product easier to use." {bang-olufsen}



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Conclusion

The aim of this thesis was to provide an analysis of the relationship between industrial design and packaging design. To fulfil this aim meant identifying, highlighting and arguing for the responsibilities of the industrial designer toward the packaging of their product.

In conclusion, there are two underlying themes or threads that comprise and run through the thesis, reinforcing it by consistency. The first and most important of these was the idea of integration: the need for greater cooperation and involvement between various designers. The need for designers, or 'generalists', to possess the knowledge of related fields. In this case, the packaging designer possesses the expertise on suitable materials and manufacturing methods. The graphic designer possesses the knowledge of printing techniques and two-dimensional design method. The industrial designer possesses the product around which the package will go. As three separate entities, they are useless to each other, but if the industrial designer can complete the final stage of the design process, from factory to consumer, s/he has come closer to fulfilling their potential. The second theme is the significance of the link between industrial design and commercial retail, or more simply, money. The idea that a designer has not acted out their professional abilities unless they increase or provoke sales of their product is not a new one, or one that invites unquestioned acceptance. Either way, the conclusion is that the question of sales must play a substantial part in the day to day considerations of the industrial designer. Therefore as packaging is a powerful means to increase sales, it finds itself solidly placed on the industrial designer's ever-growing list of responsibilities.

As with regards the future, there can only be the inevitable technological progress and perhaps changing attitudes as the new millennium approaches. There is definite scope for every industrial designer to explore the function of their profession and involve themselves

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As with regards the future, there can only be the inevitable technological progress and perhaps changing attitudes as the new millennium approaches. There is definite scope for every industrial designer to explore the function of their profession and involve themselves

in the responsibility of package design. Trends point towards output growth and globalisation of the industry. New degradable plastics which disappear in as little as 60 days due to an intelligent additive that tells it when to break down may support an increasing use of plastics, while the development of edible soy bean based packaging in china may have countering implications. The future is unpredictable, but with design communication and integration, we have the ability to prove it rewarding.

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