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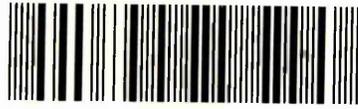
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# Understanding the Secondary Functions of Packaging: UK Domestic Reuse

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2007



## **Abstract**

This thesis describes a programme of research that provides an understanding of the effect of time and space on the processing and reuse of packaging by consumers. It seeks through ethnographic research techniques and design evaluation to propose a conceptual framework for understanding the phenomenon of packaging reuse in the UK.

The study recognises that many consumers creatively 'misuse' packaging without 'explicit persuasion or reward' and aims to gain a greater understanding of the way consumers take meanings from objects and find secondary uses for them to suit their own needs whether born out of necessity or playfulness. While much research investigates consumers' attitudes to branding strategy and packaging design to increase product sales, there is little evidence of work carried out that looks into the post-purchase issues of how consumers interact, reuse and dispose of packaging within their domestic environment.

The study takes the constructionist perspective that meaning of objects is created through interaction and use. It is also broadly phenomenological in its approach, with the objective to leave behind, or escape, the conventional mind-set of design - where designers are accustomed to commanding and specifying the form of the material world. This research requires the prosaic processes of consumption to be witnessed, but from a design perspective, bringing with it an understanding of the effect of changes to the form and function of objects. The study is based on a user-centred design approach and is interested in the way consumers behave with packaging, in order to provide effective approaches for designing for consumer interaction and reuse.

Evaluation of existing and new designs was appropriate to this study and allowed frequent testing and analysis of the findings from the various research exercises. The designs were represented in 2D and 3D pack formats and evaluated using observation and semi-structured interviews.

The study builds on a broad range of literature and develops themes particular to packaging in the areas of consumption, material values, the functions of objects, consumer types and ultimately presents theories regarding consumer behaviour when using and processing products and packaging within the home.

The contribution of this study is an understanding of how three main elements affect packaging reuse: the design of the object, the context/ environment the object is within, and the consumer type. Through evaluation of the research data, a scheme is presented that provides new knowledge as to the spatial and temporal aspects of packaging reuse. It presents the types of further functions UK consumers can recognise in packaging once its primary function is over, and how designers can build opportunities for reuse into packaging design.

The findings are useful to those interested in packaging design strategy, sociological researchers interested in aspects of consumption, and researchers from wider disciplines. The thesis also provides insights into consumer behaviour, their attitudes to material objects and acceptance of waste that are relevant to those interested in sustainable design, however the principal outcomes of this study are new insights into consumer practices, that may influence design decisions in the packaging industry and more widely.

## **Acknowledgments**

I would like to express my gratitude to the many people who have contributed and assisted in developing this research. I wish to thank my supervisory team at Sheffield Hallam University for the support, guidance and patience, Doctor Tom Fisher and Professor Chris Rust who have provided me with professional knowledge and the encouragement to keep going.

I would also like to thank my other professional colleagues in Design Futures, who indulged my need for time to do the work, and for their encouragement throughout this study.

I would like to thank my husband and my family and friends for having faith in me and providing me with love and support.

Finally I would like to dedicate this to my Mum.

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All photographs are by the author unless stated otherwise.

## Chapter one: Introduction

### *Why this study?*

In my 16-year career as a packaging designer, I have frequently defended the packaging industry against those critical of its role in waste production, whilst remaining uncomfortable with the largely unchallenged stance of the designer/ developer within the packaging supply chain.

This study is the result of my recognising, in my early postgraduate study and reflection on my experience as a packaging designer and manager that packaging reuse is embraced by many consumers, but receives little focus from industry or government bodies.

This study was triggered by an interest in how consumers reuse things, particularly packaging. This led to a need to understand issues of packaging recycling, reuse and disposal, and thence to waste/ environmental issues. Interviews and other research methods revealed that motivations for reuse are diverse and not always driven by environmental concerns, and the need to understand consumer motivations led to a mapping of consumer types.

The study's focus, research methodology and findings are useful to those interested in packaging design strategy, sociological researchers interested in aspects of consumption, and researchers from wider disciplines. This study provides insights into consumer behaviour, their attitudes to material objects and acceptance of waste and is therefore relevant to those interested in sustainable design, however it does not provide large scale solutions to current packaging waste management strategy.

Until recently there has been relatively little contact between academics, designers and the packaging industry when considering strategies for packaging design. In the UK, academics have had few opportunities to talk to packaging professionals and designers, but this is gradually changing with the introduction and growth of partnerships such as the Faraday Packaging Partnership and various sustainable design networks facilitating conferences and various one-day seminars and workshops helping to encourage knowledge transfer. These UK partnerships are also involved in

European and worldwide research projects and events such as Sustainpack<sup>1</sup> and the International Association for Packaging Research institutes (IAPRI).

This study bridges the remaining gap between the UK packaging industry, academics and designers interested and involved in the subject of packaging reuse with the aim, through research and design exploration, to bring new ways of thinking about packaging, its consumption and disposal out to these groups.

Although consumers are aware of green initiatives and schemes, there is a considerable amount of misunderstanding by consumers and designers as to what packaging reuse is and how it differs from recycling. Most simply use recycling as a term to describe all 'green' initiatives to reduce packaging waste.

Although this study does explore issues of sustainable consumption, this does not automatically mean consuming less. As explained by Charter et al (2002), it can mean consuming differently and smarter, and to substantially change the way consumer's behave involves many things not least changes in corporate activity. However this is not the concern of this study, which focuses on the way consumers behave in order to understand the opportunities this provides.

### ***What is meant by the term packaging reuse?***

According to British Standards the purpose of packaging is defined as:

*"the containment, protection, handling, delivery and presentation of products"*  
(BS EN 13429:2000)

Packaging can be classed as primary or secondary; primary packaging being the unit that displays, promotes and contains the product the consumer takes home and secondary packaging is the pack that contains and transports the primary packs.

The term 'packaging reuse' is used to describe the reuse of packaging for the same or different use. A definition by Corral-Verdugo (1996) of reuse is helpful, particularly when comparing it against recycling:

*"Reuse is the use of an object in a different, additional way from that originally intended when the object was purchased. In reuse, objects are neither discarded nor reprocessed, but keep their original form. The only thing that changes is their use or the person using them"* (1996: 666)

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<sup>1</sup> The SustainPack project team is involved in developing advances in fibre-based packaging and is comprised of a consortium of 35 partners from 13 countries, representing packaging research associations, academia and industry ([www.sustainpack.com](http://www.sustainpack.com)).

Closed-loop reuse describes the reuse of an item for the same purpose as originally intended within a recognised distribution system – an example being the UK's doorstep delivery and collection of returnable milk bottles. In contrast open-loop reuse is where the reuse occurs for other less controlled and monitored purposes outside a recognised system.

This study focuses primarily, but not exclusively on primary packaging reuse for open-loop functions, and on packaging items that can potentially be reused in their entirety. There are many types of packaging, and therefore it is important to consider the types of packaging this study is concerned with.

Before the mainstream introduction of packaging in the late 1800's products that needed protection and containment were packaged in an appropriate way at point of sale using materials such as brown paper and string. These bespoke packages have now been replaced with pre-manufactured packaging that is designed, manufactured and sold to protect, promote and dispense products suitable for self-service purchasing and consumer convenience. The product and packaging are often indistinguishable, and in some cases such as toiletries, household products and cosmetics the products exist because suitable packaging systems were developed.

There are sophisticated pieces of packaging such as spirits bottles, cosmetics packs and household goods packaging incorporating distinctive shapes and clever dispensers, and packaging that uses new technology and material advancements such as those using nano-clays, RFID or printed electronics. There are also those at the other end of the spectrum that are relatively low-tech, non-durable manufactured packaging solutions such as corrugated board transit packaging or cellophane wraps. This spectrum of low and high-tech packaging reflects the spectrum of low and high-tech products in manufacture and usage.

When product designers or researchers talk about advances in product design, they often primarily focus on electronic durable products, or specialise in an area such as 'white goods' or furniture and are not required to find solutions to all things such as non-durable or commodity products. In contrast when a designer talks about advances in sustainable packaging design they are expected to consider the whole spectrum of packaging types including the non-durable elements and components of packaging. The high profile nature of packaging waste means that many Material Scientists are concentrating their efforts on developing packaging components such as films,

laminates and wraps that are lighter in weight, use less material and are biodegradable.

In contrast, this study is concerned with intact packaging items that can be reused in their entirety or still in a similar form to their original design. Protective transit packaging that enters the home is included in this study, but it does not try to solve the issues surrounding industrial/commercial packaging such as stretch wrap, transit packaging and films. These make a significant contribution to household waste, but are the subject of other waste reduction programmes being conducted by the packaging manufacturers, users and distributors.

### ***Why reuse is significant?***

Industry debate centres on the hierarchy of waste initiatives (the packaging three 'r's) reduce, reuse, recycle. UK Industry, government, retailers and designers have previously dismissed reuse (apart from 'closed-loop') as a marginal activity that although part of the three 'R's of packaging waste minimisation, is considered the least important, with recycling overshadowing the others in terms of investment, awareness and understanding.

There is over-dependence in the UK on recycling as a method of packaging waste management. Some consumers do not exploit the recycling facilities offered to them and when UK produced products are exported to countries where there is no recycling infrastructure or effective waste collection, then the need to find alternative ways of thinking and designing packaging is even more important.

This study has provided evidence that open-loop packaging reuse is significant in its own right. It has uncovered many examples of packaging reuse where systems of sorting, collecting and reusing have been developed to suit the particular needs of an individual or family. Compared to recycling, reuse of packaging is a largely private activity being carried out all around the world, which requires no civil infrastructure (Corral-Verdugo, 1996).

However, because open-loop packaging reuse is hard to quantify in the short-term, it is likely to continue to receive little significant interest and research funding from industry or government funding agencies.

Although the findings from this study have proved of interest to the packaging industry when presented at conferences, there has been no call to extend the study, as the results at present are unlikely to directly affect product sales. Retailers to date see no

immediate economic benefit through increased sales or publicity, and the work is unlikely to provide short-term measurable benefits such as the light weighting of packaging and therefore meet the criteria to gain financial support from environmental funding bodies such as the UK Waste Resource Action Programme (WRAP). An example of the kind of project funded by WRAP is demonstrated through the Glass rite case studies. These projects focus on encouraging retailers, brand owners, packer-fillers and manufacturers to use and/or develop lighter glass containers in a number of market sectors. These projects aim to both reduce the amount of glass entering the UK waste stream, and improve the industry's carbon emissions profile.

Plastic carrier bags have received significant interest from retailers and the public, and many UK households reuse them. The secondary functions range from bin liners, poop-a-scoop bags or for use again as a carrier bag. This reuse for many households has become a way of life and prevents the need to buy additional bin liners or nappy sacks, and when plastic carrier bags were removed from supermarkets in the Republic of Ireland the sale of bin liners increased significantly (Retail Packaging, 2006).

This study aims to understand the reuse of packaging such as plastic bags within the home and build on the idea from Lucas (2002) that the home is a processing unit where packaging enters, is evaluated, categorised and then removed for disposal. The consumer is central to this process, making decisions as to the value or usefulness of packaging objects and how they might fit within their home.

Scanlan (2005) points out that while many social and cultural theorists point to the overabundance of consumer products in modern life these are not usually viewed in terms of waste. By understanding what we value as useful allows us to analyse what we throw away - how we separate the useful from the useless.

The packaging industry and government's over emphasis on recycling or biodegradable solutions to waste management may actually be counter productive as a long-term approach to waste minimisation, removing the ownership and responsibility from the consumer. Rather than continue the trend of instructive design that focuses on ways to enforce environmental legislation and 'green' consumer behaviour at a macro-level, this study aims to put the user at the centre of the subject to try to understand how consumers choose to behave at an individual micro-level.

This study is grounded in detailed observations of packaging reuse practice, and these observations are opened out using various ethnographic methods and design practice.

### ***What is the theoretical framework for this study?***

The study uses a grounded theory approach, using different cases and comparing their similarities and differences to build a picture of packaging reuse.

The epistemological stance for this study is that of constructionism, accepting that meaning comes from the consumer's individual experience of a packaging item within a particular culture and environment. The research methodology chosen is set within this constructionist framework acknowledging that understanding UK reuse behaviour requires access to the individuals themselves within their environment and being able to witness their cultural influences.

Due to time and resource constraints, this study is restricted to packaging reuse activity in the UK. A study taken beyond the UK would need to consider the many different cultural experiences, teachings and need driven states of consumers that affect reuse. Even within the UK, consumers construct meaning in very different ways; one person's empty decorative glass bottle suitable for display is someone else's recycling waste. Whilst acknowledging studies into waste management from other cultures such as Corral-Verdugo (1996), Rogers (2005) and Howes (1996), this study examines the different social interactions consumers have with packaging objects, the types of secondary functions that can be discovered and why and when consumers act upon them in the UK domestic environment. The home provides a unique environment for waste processing and disposal to occur, compared to that of the office workplace or the high street. It provides time and space for decisions to be made regarding the possible further uses of packaging.

The chosen methodology and the reasons for selection are presented in more detail in the next section, along side a brief introduction to the main themes covered in the thesis.

### ***What the thesis contains***

In this study reuse was observed occurring in almost every home, although many consumers do not regard their reuse activity as waste prevention due to the fact that they do it intuitively without instruction. From the initial observations it became clear that consumers decode the meanings encoded into objects in many different ways. A selection of these examples of reuse ranging from cardboard boxes being turned into painting stencils through to plastic bottles being turned into cloches for the garden can be seen in the appendices.

The study's ethnographic approach to the research is outlined in chapter three, with descriptions of, and the reasons for, the initial research involving observation of consumers in their home. This included 'cupboard and garage raiding', a term devised within this study to describe the process of looking into areas within the home that are out of view of the home owners and their guests and therefore often reveal interesting storage, and reuse behaviour. This chapter also describes the resulting series of questionnaires, surveys and interviews designed to find out greater detail about the factors preventing or promoting packaging reuse.

Building on the results from that phase of the research, design evaluation and exploration was carried out. Using packaging designs in further semi-structured interviews enabled initial theories to be tested and provided insights to allow the development and refinement of the study's methods and results.

The main body of the thesis is split into the three main factors affecting packaging reuse. The first chapter (four) is object focused and examines the material qualities of packaging and how design elements affect consumer's willingness to reuse. These include our perceptions of quality and value associated with certain materials, and the effect of surface aesthetics, shape and branding on our use of packaging in certain places within the home. The chapter progresses providing more detail of the varying functions packaging can have and how the design of the object affects these possible functions. It introduces the idea from Goffman (1969) that we have a "front stage" and "back stage" aspect to our lives, and that packaging reuse can have a different role depending on which aspect it occurs within.

Chapter five concentrates on the contextual aspect of packaging reuse and develops the theory that there are space and time elements to consider. It proposes different ways of thinking about function as packaging enters the home and goes through domestic processing, and presents an important part of the domestic packaging processing, called the 'Twilight Zone'. This is significant to packaging reuse because it allows the consumer a greater amount of time and space to re-evaluate the functions and transform the value of a packaging item.

Chapter six presents the third and final factor affecting reuse, the user. It examines the different types of consumers and their response to newness and second hand, and looks at individuals' different abilities and motivations to see and create opportunities for packaging reuse.

Packaging case studies using existing packaging examples as well as new explorative design work are used throughout the chapters to illustrate the various themes. The final chapter seven uses these practical case studies to present the study's findings and conclusions, alongside opportunities for further research in this area.

***What are the main contributions from this study?***

The study does contribute to the research and development of strategies for waste reduction and sustainable consumption, but it is the study's interest in long-term patterns of behaviour and the focus on what consumers have been doing for some time with packaging that is more important. It presents strategies that will allow changes in consumption habits at a micro-level, whereas the industry, NGOs and government funding bodies are interested in strategies that can be quantified and show significant waste reductions in the short term.

What this study does do is demonstrate that the user has an active role in the issue of consumption and suggests that understanding intuitive behaviour and developing design opportunities that work with consumers is a relevant alternative approach to affecting consumption and disposal practice.

The thesis provides new information regarding the processing of packaging within the home from entry when containing product through to disposal when it has no further recognisable function. It provides insights into an area of consumption studies that has been largely neglected till now, explaining what consumers do with packaging items, and the types of further functions consumers can invent for packaging that was originally designed only to be disposable. The study presents a scheme for understanding different consumer types, and how and why they respond differently to packaging strategies for increased reuse and waste prevention.

The thesis concludes with recommendations to help design for reuse that can be incorporated into the writing of the packaging design brief and the design process itself.

The next chapter reviews the literature from the three main interested parties involved in this subject, the packaging industry, designers and academics from a variety of wider disciplines. It positions the study in relation to these different groups with their different perspectives and agendas, and identifies the gaps and overlaps in current theory and knowledge.

## **Chapter two: Literature and contextual review**

### ***Introduction***

This chapter evaluates the literature from the three groups of people who contribute to the understanding of packaging reuse; packaging designers, packaging industry experts, and those from the wider range of disciplines that affect this study, such as sociology, archaeology and anthropology. It explains how they contribute to the understanding of packaging reuse and how the study might affect their future approaches when thinking about sustainable consumption.

An interesting observation made when reviewing this literature is the different attitudes that each of the three interested groups have towards the consumer. The work from those not within the industry or involved in design recognises the significance of the consumer and their different emotional responses to design affecting consumption and disposal practice. In contrast the industry literature focuses heavily on the object and describes consumer's actions and understanding as much more passive in the process of consumption, presenting the consumer as ill educated and waiting for instruction. Like the industry literature, the packaging design literature again focuses mainly on the packaging object and when it does recognise the role of the consumer, it presents the 'green' or creative behaviour of consumers as a curiosity, an accident and has a slightly patronising tone.

Other design literature from a product design or theoretical perspective does however recognise the significance of the consumer in the process of design.

The next section will introduce the three groups in more detail.

### ***Who are the interested parties?***

Packaging Designers are a minority group compared to the other design disciplines they work alongside, such as graphic or product designers. Many Packaging Designers originally studied product or graphic design and then worked in the field of packaging on one particular aspect, many only really focussing on the surface design, branding and marketing aspects of packaging. Only in the last twenty years has packaging design developed as a stand-alone discipline that can be studied at degree level, and even now there are relatively few specialist degree courses in the UK. Packaging Designers work almost entirely on commercial contracts and therefore can only afford to carry out the consumer and market research identified as necessary in

the design brief and agreed by the client. Clients range in nature from the product manufacturer, packaging manufacturer, small brand owner, to major retailers stocking proprietary and own-label products. There is some literature written by designers specifically about packaging but most is instructional, giving advice and tools to other practicing designers (e.g. Stewart 2004). Much of the literature concerning packaging reuse focuses on marginal craft activity such as Mackenzie (1991) and Cerny and Seriff (1996), and is largely descriptive. This literature explains how other cultures perceive and re-appropriate packaging waste, using photographic evidence to illustrate thrift craft and reuse phenomena. Case studies are used to demonstrate how designers and people from other countries, cultures and situations see packaging for the functions it offers regardless of its original purpose or branding. There are some examples of research and design study concerned with the reuse of packaging to make other useful or novelty products, for example Fig 1.

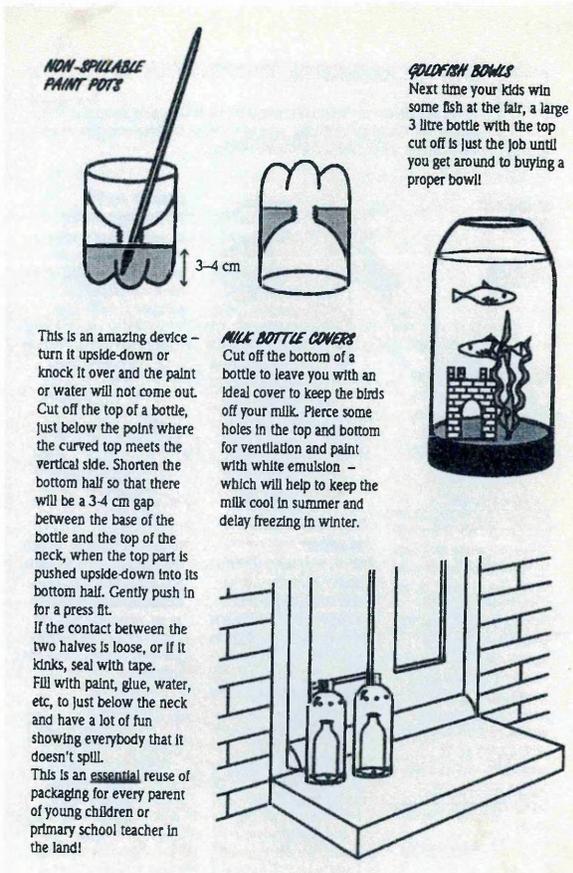


Figure 1. Harris's bottle reuse ideas (1992:29)

Studies such as Harris (1992) or Bailey (1998), describe ways to alter used packaging objects to create new products such as cutting down a 2-litre fizzy drink bottle to create a gold fish bowl. These examples are over simplified designs based on cultural preconceptions rather than thoughtful inquiry into the packaging reuse. These publications have helped create a general liking of the idea of reuse by consumers and the packaging industry, but this is generally followed by a well-humoured mocking of the concept of reuse by the industry as well-meaning but not significant in the drive for waste reduction. The usual and in many ways valid response from the industry is to question how many gold fish bowls or milk bottle covers one household actually needs and therefore how relevant this kind of book is in helping to manage the UK waste problem. However Harris and Bailey do recognise that consumers like to interact with packaging and are capable of more creative solutions to waste management than simply following instructions to sort and recycle.

Other literature concerning sustainable design either deals with broad ideas or catalogues case studies including design phenomena from other cultures e.g: Faud-Luke (2002) and Mustieries (2000).

Design literature coming from a product design perspective includes Chapman, who writes about design and emotion and how consumers could be encouraged to build relationships with objects through different approaches to design. He presents his idealistic ideas about sustainable design, and seems to find the view that these ideas need to fit into the 'real world' restricting:

*"The real world is a term that precedes a put-down usually attempting to jam new ideas for fear of them disrupting the flow of a superficially understood world".* (2005.164)

McDonough and Braungart (2002) look at the opportunities for products to have a full closed-loop cycles, and how the products can reflect nature and provide something for the future once the product's life is over.

Although thought provoking, much of this literature appears to reflect each author's personal perspective as a consumer and assumes that consumers behave similarly and have similar tastes and beliefs. They ask us to look at a different models for design and consumption in order to shape our future world, however they give little practical advice that would help most business or influence consumer behaviour.

McDonough and Braungart present positive case studies from corporate giants such as Nike and Ford that bear little relation to those designing, developing and using everyday objects.

Unlike much of the design literature, this doctoral research accepts that not all designers and their employers or clients are primarily concerned with sustainable aspects of design. It looks for ways of thinking about design that can be incorporated into everyday packaging design thinking and be adopted by consumers without asking for great shifts in behaviour.

Most packaging designers are not able to get involved in consumer research due to many of the commercial packaging projects being restricted in terms of time and budget. They therefore base designs on market knowledge and information from market research reports, and are not normally required by their clients or employees to understand consumer behaviour beyond the point of purchase. If they do engage in ethnographic or other consumer research it is normally outsourced and seen as an additional 'extra' service to be offered to the client.

The briefing stage of the design process is vital if challenging design work is to be commissioned, however the Product Managers, Brand Owners and Marketing teams who brief designers are largely unaware of significant research in the field of consumption and disposal, and those that are, such as Corporate Social Responsibility (CSR) Managers or Packaging Technologists, rarely get the chance to inform and affect this stage of the process. Therefore design briefs do not ask the designers to provide creative solutions to the use and disposal of a product or its packaging, and thus the designer does not do it. This problem is only made worse by the policy of most large UK brand owners and retailers such as ASDA, Boots the Chemist and Marks and Spencer, outsourcing more of their packaging development so that many specialist packaging technology teams have been made redundant. Therefore there is the loss of institutional memory with increasingly fewer specialist packaging technologists advising those writing design briefs of the design potential of packaging. Fewer companies whether large retailers or small to medium size companies (SMEs) have packaging specialists within their company who know how to specify and develop innovation through to production. This can result in packaging being over-engineered, risk averse and wasteful, as can be seen in most supermarket fruit aisles, electronic goods and gift retail sectors.

The packaging industry literature comes from a range of sources including Soroka (1996), Stewart (1996,2004) PIRA (2001) and DEFRA (2006) and those involved in packaging technology, specification, supply and manufacture. This literature represents the different roles and requirements of the packaging supply chain, briefly touching on design but focussing more on the manufacture, engineering and transportation aspects of packaging to get the product to the point of purchase. It rarely considers the role and requirements of packaging beyond the supermarket shelf and most of the individuals writing or interested in this literature are packaging technologists who are concerned with specifying, developing and testing retail packaging. These packaging technologists are also involved in the coordination of the design, the print and the final quality and suitability of the packaged product, and are likely to have come from a science, materials or engineering background. Packaging technologists are increasingly asked to document and account for the 'environmental' credentials of the packaging, information used for their company's evidencing of compliance with the UK's Essential Requirements Legislation.

Literature concerning sustainability coming from or influencing this group is mainly concerned with quantitative waste data and the hierarchy of environmental solutions. This is described by the UK government's Department for the Environment, Food and Rural Affairs (DEFRA) on their guide to recycling and waste:

*"People produce waste, it is a fact of life; a fact which we cannot change. However, what we can change is the how much we produce, how we manage it, and what we do with it. Indeed, managing waste in a sustainable way, optimising recycling and re-use, as well as limiting production, forms a core part of Government policy to protect the environment. The waste hierarchy is a useful framework that has become a cornerstone of sustainable waste management, setting out the order in which options for waste management should be considered based on environmental impact."*

(DEFRA. 2007)

The explicit concept of the waste hierarchy was introduced into European waste policy in the European Union's Waste Framework Directive of 1975 and incorporated into the UK's waste management policy in the early 1990s (SITA, 2004). The literature concerning waste strategies and the 'waste hierarchy' is not central to this study, focusing almost entirely on recycling and closed-loop reuse, but it does provide

context, background and an understanding of the current position viewed from an industry perspective.

There is little evidence of packaging industry specialists challenging traditional thinking and this may be because their mindset is conditioned by working with packaging manufacturers, or brand-owning buyers who rely on the cheapest, and quickest to market solution to sell the maximum units of product and packaging. Packaging design briefs are often written and presented by retailers to product suppliers who in turn brief their packaging supplier, totally by-passing the designer. This provides the opportunity for only small changes in design, as the packaging manufacturer will only suggest alternative designs that are easy to produce using only materials they manufacture. Packaging developed through this route is unlikely to consider consumer issues beyond getting the product home.

In the past retailers and brand owners have excused themselves for not introducing sustainable designs or materials on the grounds of additional cost, however most large retailers now recognise that to be actively involved in what is now termed Corporate Social Responsibility (CSR) is not only good for PR but is vital to provide risk management. Some large retailers in the UK such as Boots the Chemist, B&Q and Marks & Spencer are leading the way in terms of CSR with well developed web sites and CSR annual reports outlining and promoting their sustainable development activity. The literature written by, and informing packaging industry professionals is similar to the design literature focussing on the surface, structural form, or the material used in the making of the object, with less emphasis on the consumer and their needs beyond the initial purchase.

The third interested group, academics working in a range of wider disciplines are less concerned with the commercial aspects of packaging, but are interested in research questions that challenge existing thinking and practice. Few specialise in the field of packaging, although there are many interested in material culture affecting it, from diverse interests and backgrounds such as archaeology, sociology and anthropology. The relevant literature examining exchange culture and our relationship with objects also largely neglects packaging.

There is work concerning product life spans and tools for eco-design from members of funded research groups such as the UK's Sustainable Design Network and the UK's Engineering and Physical Sciences Research Council (EPSRC) funded Research

Network on product Life Spans. Packaging is included as an area of interest within this network, however the main emphasis is on design for durability and product life extension of large consumer goods such as domestic white goods or electrical appliances. These groups whilst researching product life spans acknowledge the significance of consumer choice, product attachment and design for durability (Cooper 1994, 2004, 2005, Tischner and Charter 2001, and Lofthouse 2001), however this work takes less account of the significance of the user, and the role objects play within 'systems' within the home and has a greater emphasis on sustainability policy.

Many material science departments are working on new materials to improve the sustainability of packaging, some of these are working on collaborative projects such as Sustainpack – a research project comprised of a consortium representing packaging research associations, academia and industry. However as previously explained material developments of packaging and its components falls outside of the scope of this study.

These three different sources of literature from design, industry and the wider disciplines have little connection to each other and all seem to demonstrate limited understanding of what is meant by the term 'reuse' by only recognising it in terms of marginal craft activity, ignoring it, or confusing it with the more generic term of recycling.

The next section reviews in turn these three main sources of literature that have a bearing on this study in detail. The first of which will look at the most relevant area, that from the wider related disciplines that help inform this study.

### ***The wider literature, beyond design and industry***

Both the design and industry bodies of literature have a bearing on this subject and provide an explanatory framework for it, but it is the literature from other disciplines that this study builds on to develop the understanding of packaging reuse.

The relevant work that this study uses in terms of consumption and disposal practice comes from Lucas (2002) and Hawkins (2001), it also includes examinations of work examining product classification and our relationship with material objects from such as Baudrillard (1996), Preston (2000), Appadurai (1986), and Shove (2003), and from a social geographical perspective Gregson and Crewe (2003).

Much of the literature this study uses recognises the importance of the context and culture in which the consumption is taking place and how this affects the relationships we form with certain objects due to the meanings we take from their design.

Anthropology seeks to compare the physical and social characteristics of human behaviour and recognises the interconnectivity of material culture with humans.

Ethnography presents qualitative and quantitative descriptions of human social phenomena, based on fieldwork and was developed within cultural anthropology and later adopted and adapted by others in other disciplines (Crotty 1998).

Lucas (2002:6), writing from an archaeological perspective, recognises that there is a shortage of work examining the phenomena of consumer interaction with waste. He explains that whilst there is much scholarship across the disciplines examining the concept of consumption, there has never been the same effort directed to the concept of waste. Waste continues to be seen as a problem by designers and the packaging industry rather than the motivation for another approach to social analysis and design. Shove also points to the lack of work focussing on consumer behaviour post purchase:

*“For most part, the sociology of consumption has concentrated on moments of acquisition rather than the consequent adjustment of what people do”.*

(Shove 2003: 14)

This literature can be categorised in many different ways, one being into two main themes: how waste directs us, and how we direct waste or object/consumer factors, another way would be to group the literature by its academic source; sociological or archaeological routes etc.

The approach chosen is to look at the main elements that emerged from the initial research and observation, and relate them to the question of whether the consumer or the object is the directing force. This also allows the question as to whether the consumer should be seen as passive or active in the consumption and disposal process to be examined further, helping to build the framework for the following chapters.

### ***Categorisation and sorting of the object***

According to Strasser's book, "*Human behaviour defines trash*", when describing historical accounts of waste management and rubbish sorting she explains that sorting appears everywhere (1999:5). It is apparent from literature such as Scanlan (2005), Lucas (2002) and Strasser (1999) and this study's initial research that how we categorise, sort and 'name' used packaging is a significant indicator of the amount of value we place on the packaging item. Lucas and Scanlan present historical accounts of our differing reactions to packaging and waste, and how since the 19<sup>th</sup> Century the act of sorting and categorising waste has been part of the domestic consumption and disposal process. Lucas explains that there has for many years been an act of sorting and categorisation waste taking place within households, but in the 21<sup>st</sup> Century the level of categorisation has increased "*in Britain today, 16 different kinds of waste are legally defined after the 1995 Environment Act.*" (Lucas 2002: 8)

He recognises that all different types of 'waste' have their own spaces, their own cycles and as such classifications. Strasser seems to agree with this but explains that these cycles and classifications are not fixed:

*"the categories of objects we use and know are fluid and socially defined, and objects move in and out of these classifications"* (1999: 8)

Anthropological work such as Douglas (1966) and Appadurai (1986) recognises that our relationship to objects and waste differs in different cultures and systems. The UK culture this study is carried out within is one that accepts packaging as part of the process of purchasing products, a throwaway society that has developed over the last century. Only in relatively recent times have issues of waste and the environment emerged as an issue concerning some UK citizens. This study would have been very different if it had been carried out in a different culture; Classen (1996) discusses the non-throwaway culture in parts of Argentina and how they place different values on

products designed for disposal. She uses examples such as the attachments to an empty box of tissues and soft drinks packaging to demonstrate the different values attributed to objects based on their design and functionality. In these cases the users do not see the objects as merely throwaway packaging of low value, they see the functional and in some cases aesthetic value of the packaging.

They see the object in terms of its material and cultural properties and usefulness, rather than its packaging purpose, and are not affected by pre-conceived understandings or status of the brand. This is evident in the durable objects such as lanterns made from empty Coca Cola cans found on a visit to Thailand (Fig 2) or Fanta cans and glass bottles turned into drinking vessels (Padros 2003: 108).



Figure 2: Coke can made into a lantern, Thailand.

Douglas explains that we respond to waste and disorder depending on the structures of our culture and society. Her anthropological research leads her to explain that where there is dirt there is a system, the idea of dirt is the by-product of a systematic ordering and classification of matter, in so far as ordering involves rejecting inappropriate elements (1966; 44). Like Hawkins (2001) she recognises the significance of the act of sorting, classifying and adding order to our environments. Hawkins building on the idea proposed by Douglas describes the approach New South Wales Environmental Protection Authority (EPA) uses in their educational video using an image of a carrier bag in an otherwise unpolluted river as the symbol of "*matter out of place*" Hawkins explains that the status of the plastic bag is not fixed:

*“from container to rubbish, it generates different attitudes and modes of relating. This is the stuff of ethics – not objects or practices classified as good or bad, but relations of thinking, feeling, acting, becoming”.* (2001: 7)

Hawkins’s explanation for our changing relationship with packaging waste is partly supported by the findings of this present study as indicated in the carrier bag case study in chapter 4, but it is the environment and ‘system’ the object enters rather than ethics that has a greater affect on the individual’s way of processing and viewing the object.

Lucas recognises that material culture itself helps to separate waste and that in the 21<sup>st</sup> Century we have objects such as bins and carrier bag holders etc. specifically designed for the process of sorting that fit with our interior spaces. These bins, methods and spaces for categorising waste make it what it is, we control waste by the act of sorting, separating and naming.

Discussing dispossession Thompson (1979) points out that when we have placed an object in the bin it is irrevocably no longer needed or desired, however evidence supports Lucas’s (2002:19) point that we can still feel responsible and possessive over material until it is taken from our property and mixed with other people’s waste. A research participant described an incident when her outside rubbish bin containing kitchen waste and non-personal bathroom waste was emptied and scattered near her house by vandals. She explained that she felt responsible for the waste and felt more embarrassed about the used cotton wool than she did the kitchen scraps and papers. She continued that if the contents of the bin had been emptied, scattered and mixed with other people’s waste she would not have felt anyway near as disturbed by the event.

Lucas recognises the importance of the objects that contain rubbish and how we can gain understanding of our willingness to engage with different types of waste depending on how we store and dispose of it. The object affecting our judgement could be a bin of mixed waste where the contents are considered worthless, a container used to collect sorted/ cleaned rubbish for recycling that would be considered slightly less than worthless, or a museum such as the Robert Opie Museum that has stored countless examples of used packaging and transformed them to become of cultural and historical importance.

### ***Transformation of the object***

Baudrillard (1996) states that every object is involved in transforming something else. This seems even more likely when considering packaging - an object existing to support another product or object. Packaging transforms a product, but before the product is introduced the packaging is an object in itself, by adding the product the meaning is changed. After the product is removed some of its original meaning remains and in other cases it changes. The diagram below (Fig 3) provides a tentative pictorial framework for this process; it was produced early in the research as an aid to mapping the stages packaging goes through from manufacture to disposal:

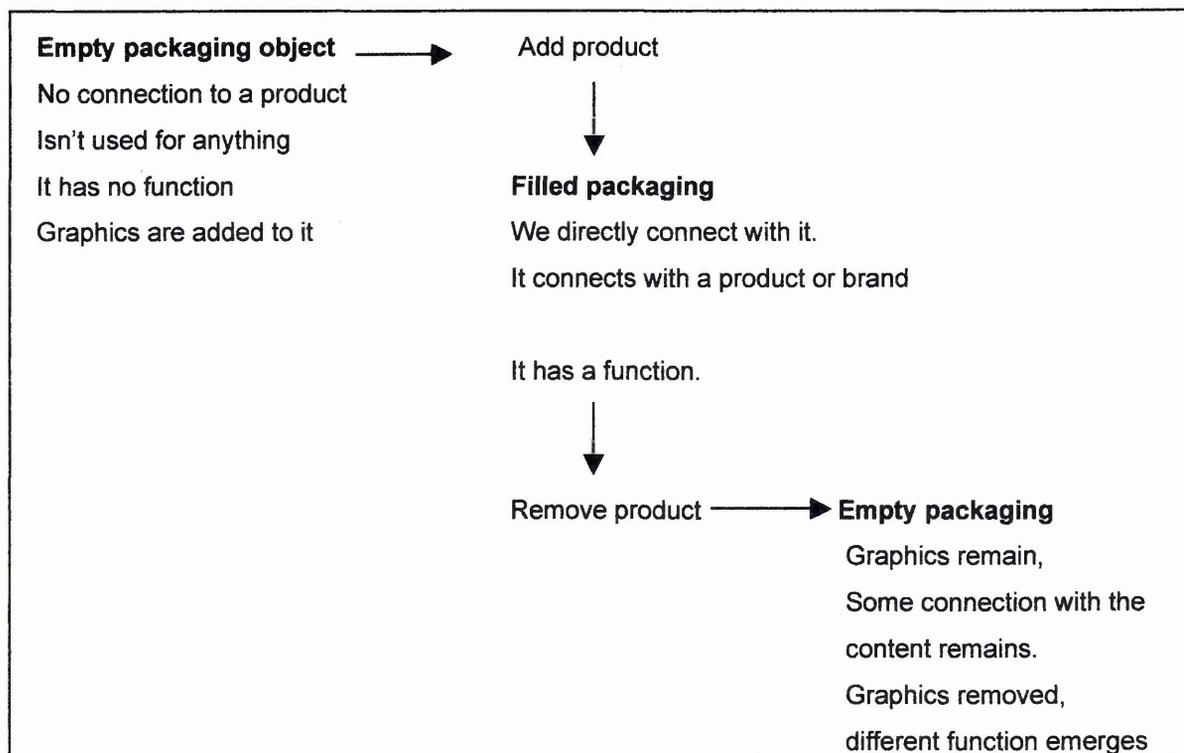


Figure 3: Diagram exploring packaging transformation through the supply chain.

The meaning of an object and therefore the value placed on it changes depending on the system it is within and its categorisation within the system. Strasser recognises that waste is a dynamic category with objects moving in and out of it and uses an old piece of furniture to describe the process of re-evaluation, re-discovery and the potential for reuse of objects, over time within the home:

*“The impossibly shabby cabinet, already repainted twice, ends up on the curb; a neighbour takes it into the basement, where it holds paint cans for twenty*

*years until somebody strips the finish, rubs in some oil, and carries it up to the living room". (1999:4)*

Thompson (1979) explains that rather than rubbish being simply disorder, it is a border category shifting in value depending on our actions. He discusses the importance of classification and transient and durable objects where the value of an object is negotiable by action. He defines rubbish as objects with zero value that mediate between objects whose value decreases over time (transient objects) and those which increase (durable objects).

Hawkins describes her mixed emotions when considering plastic bags:

*"rather than defend the plastic bag, I just wish to acknowledge the variety of relations we have with them in order to show that their status is not fixed".*

(Hawkins, 2001: 6,7)

Thompson, Lucas, Hawkins, Gregson and Crewe and Douglas from their various academic disciplines ranging from archaeology, geography, sociology and anthropology, all recognise that the function of an object is not fixed. Appadurai from his social sciences perspective and his research interests in mass culture and consumption recognises that

*"things can move in and out of the commodity state" and that "such movements can be slow or fast, reusable or terminal, normative or deviant."* (1986:13)

Although the movement of goods within time and space is covered at some length in the work of Gregson and Crewe, and Appadurai, these works focus largely on the exchange of goods beyond the home environment, involving different ownership. In contrast this present study is mainly concerned with movement and transition within the boundaries of the home and not between different owners. It does however recognise the biographies of long lasting items of packaging and that some of these objects are passed on over a period of time and exchanged outside the home environment before entering a new 'system'. Gregson and Crewe, and Lucas emphasise the spatial and processing aspects of the transition of objects whilst Thompson, Hawkins, Appadurai and Douglas reflect more on the sociology and anthropological aspects of objects and how they conform or miss-behave in social structures. Appadurai describes the diversion of commodities from their pre-destined paths and how they can gain

*“aesthetics of decontextualisation”* (1986: 26, 28). This is a significant theme in this study where items that are removed from the primary function context can gain new meaning in a new context.

These functional transformations of packaging are central to this study, and to understand what design factors support the change of functions and diversion from the pre-destined paths in particular contexts. One factor that might affect consumers' judgement of the functional attributes of an object is the material it is made from, this is now reviewed in the next section.

### ***Material Values***

Researching the material qualities of objects, Fisher (2003, 2005) provides some explanations for associations with and dislike of plastic packaging and waste. Fisher describes plastics as a different class of material – having particular sensual and symbolic value associated with its origins and chemical associations. He explains that we have cultural knowledge of plastics and are aware of plastic's chemical rather than 'natural' origins compared to wood or paper. We know how plastic containers stain, change in rigidity and surface texture with usage and time.

If as Fisher states, we do have problems relating to the fluidity, 'newness' and changing properties of plastics, then these findings are significant to this study as plastic packaging makes up 35% of UK packaging (Waste Online 2007)

Hawkins describes certain objects as having a presence as imminent rubbish that is difficult to suppress. She explains that:

*“plastic, paper and polystyrene discourage sensual attachments – and their use in the making of transient objects signifies a finite value, a value waiting to be used up”* (Hawkins 2001.9).

Fisher (2005) contributing to the design and emotion literature explains that many designers assume consumers do not understand or interact with materials in the same way that they do. However reflecting on his own research findings, he proposes that like designers, consumers engage in reflective physical 'conversations' with objects. The material of the packaging affects the messages and readings the consumer takes from the object.

The packaging examples in Fig 4 and 5 seem to illustrate this point. Paper based materials are used to provide visual and tactile qualities to communicate the natural and 'hand-made' properties of the products inside.



Figure 4: Pesto Packaging



Figure 5: 'Lush' soap packaging

Reviewing the appeal of 'real' materials from an architectural perspective Grunenberg (Kennedy and Grunenberg 2001) uses a quote from Anderson (2001) when describing his personal material associations and the stigmas that may be attached to certain synthetic materials:

*"When I was little, plastic objects were cheap and crummy. Nobody wanted plastic anything – even plastic toys were kind of suspect and low rent."*

Strasser, (1999.11) provides a credible explanation for these feelings, suggesting that our understanding and our ability to relate to the origin and material of an object affect our involvement and relationship with it. She demonstrates this by using an example of a dress, explaining that it is easier to discard a ready-made dress, cut and stitched in an unknown sweatshop than it is to throw away something you or your mother made.

### **Attachment**

Gregson and Crewe writing from a social geographical perspective (2003) also use items of vintage clothing to describe the attachments we have with objects, the imagined histories we build around things and the way items can bring back memories of previous times. They use items of clothing to demonstrate this principle but it can equally apply to packaging items and was evident in a curiosity stand at a country fair in the Lake District (Fig 6). The stall contained objects of nostalgia and general interest including old packaging metal tins and glass bottles, much like the items on display at the Robert Opie museum, none were for sale, they were just there to be viewed and remembered nostalgically.



Figure 6: Curiosity stall at a Cumberland show: August 2003.

There is a body of research that examines such collecting, for example Miller (2001), Belk (1995) and Gregson and Crewe (2003). Miller describes 'things that matter' as individual objects that have associations for an individual person– *'things that have lives in themselves'*. He describes an old lady who explained that for her acquiring 'old'

things through purchasing antiques were inauthentic, mere possession of the 'old' is not enough. For her it is the relationships with the history of material culture that provides the authenticity (Miller 2001:111).

Scanlan (2005) when discussing garbage explains that it is often an unwelcome shadow reminding us of our past and that the separation and disposal process is important in an attempt to move forward and leave the past behind. However many packaging items observed in this study fulfil a role closer to that described by Riggins (1994), they remain because they help keep alive the collective memories of societies and families with which otherwise would be forgotten. This literature helps to provide understanding as to why people save and collect artefacts and how packaging can gain in value as nostalgia and heritage allow the object to rise in perceived or actual value.

A 35-year-old research participant had saved a brown cardboard box in his garage. When moving house he considered throwing the old tatty box out, however due to the various post markings and addresses evidencing his different postings through his Royal Air Force career he decided to keep and continue using the box (Fig 7).

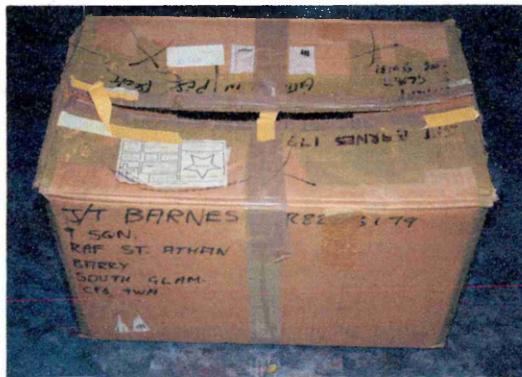


Figure 7: Cardboard box reused in a garage

Emotions are highly significant in constructing individual and social behaviours (Milton 2002) and design plays an important role in influencing peoples emotions and their attachment to things (Anusas 2006).

Price et al (2000) in their paper reviewing the dispossession process older consumers go through, explain how and why special possessions hold sentimental value and are handed down and passed on by older consumers. They explain why certain objects come to hold special meanings and transform in value from commodity item to become an heirloom.

When walking round antique fairs it became evident to the author that there are many biscuit and sweet metal tins or ceramic and glass bottles that display graphics and branding from a previous era. Even bags of flour or old cardboard packets are sold as collectables.

If attachment is more likely to happen with certain materials, production methods and designs that have a history then this may point to an obvious problem with much of today's packaging and our connection with it. If the item does not create a positive emotional response and we cannot form any relationship with the origins, production methods or history of the packaging item, this may prevent us engaging with it and finding future new functions for the object.

Chapman (2005), coming from a sustainable design education perspective, condemns modern designs as being short-lived and lacking in emotional durability, he compares objects to movies and suggests that modern products have no middle or end to the story. However rather than Chapman's analogy it seems more relevant to this study to build on that of the theatre provided by the sociologist Goffman (1959) and critiqued by Douglas (1966). Goffman and Douglas see our relationships and behaviour as more complex - a social drama with a beginning, climax and end. The drama involves the situation the person finds themselves in and their movements in relation to objects. The object is central to this performance, but does not work in isolation; it relies on the user and the context to create the performance.

Talking about materials but specifically plastics Fisher uses the idea of the 'affordance', a term introduced by Gibson (1979) to describe the properties an object possesses and their "*action possibilities*". A packaging item might afford reuse if it has the appropriate form elements (Schapiro 1953), e.g. be resealable if the secondary function required the pack to be airtight.

Norman (1999) takes this idea one step further and describes perceived affordances as the actions the object not only affords, but the actions the actor is likely to perform with it.

The pack might not look reusable and therefore the function may never be realised. Affordances will remind the user of the functional properties the object holds and the limitations and options for further use.

Although a perceived affordance is relevant to this study if looking at designing for prescribed secondary functions, certain form elements such as material qualities might

suggest a certain usefulness or develop a consumer attachment without an explicit secondary purpose, this open-ended design approach leaving the secondary function entirely open to the user would fit more with Gibson's former definition.

In either case an affordance always has two elements; the physical conditions that form what Gibson calls the 'invariant' in the natural or human environment, and the animal, or human, for whom this 'invariant' is relevant.

This study builds on Fisher's principle that material affordances are not embodied in the object in isolation. The object and person exist within a culture and that culture affects the affordances of the interaction between the two (2005: 2). The packaging object within a social context is interpreted in certain ways because of the physical form elements and the affordances these create, providing different types of possible secondary functions. These secondary functions and their realisation help determine whether the object is reused or not, and the relevant literature informing the issue of function is examined in the next section.

### ***The functions of packaging***

The function of packaging changes as it moves from the primary role of protecting and promoting its contents to either becoming waste or gaining a secondary function.

Archaeologists are used to studying the form of objects and how this determines the possible functions of the object in order to understand the behaviour of the people who made and used the object (Salmon 1982; Schiffer 1982, 1992, 1999). Therefore literature from this discipline helps to inform and direct this study.

Diverse strands of research from material culture studies use material objects as primary data to examine the beliefs, values, ideas and attitudes and assumptions of societies. Dittmar (1992:6) reviews work from such as Douglas and Isherwood (1979), Solomon (1983) and McCracken (1990) to illustrate the different perspectives and origins of material culture research.

Like archaeologists, anthropologists also use material culture to understand behaviour and social values. Dittmar explains:

*"People use material goods and consumption patterns as a fundamental way of understanding, orienting themselves in, and interacting with their social environment". (1992; 8)*

Binford (1962) describes a potential shortfall of archaeology being that “*they cannot dig up a social system or ideology*” These social and cultural systems are out of view from archaeologists because only the artefact exists, the social system containing the social values is unavailable for examination and analysis. Conkey and Hastorf explain that for archaeologists style has been referred to as the proverbial “*black box*”, the thing that might enlighten them to hidden information.

As in art history, archaeology has used style as a mirror, or even a key, in order to make the cultural materials of the past accessible to them (Conkey & Hastorf 1990:1,2).

So for disciplines such as archaeology and art history an object's function and style is vital to uncover the other secrets the object holds - the society it belonged to and how the owner behaved. Some go so far as to propose that archaeology is the new ethnography (Blyth and Roberts 2006) and studying the artefact may give truer insights into consumer behaviour than consumer focussed research. The approach taken in this study is to study the actions of the consumer, and the evidence from studying the object in the social context (Fig 8). This research uses the consumer and the object in active roles to understand the possible functions of the object.

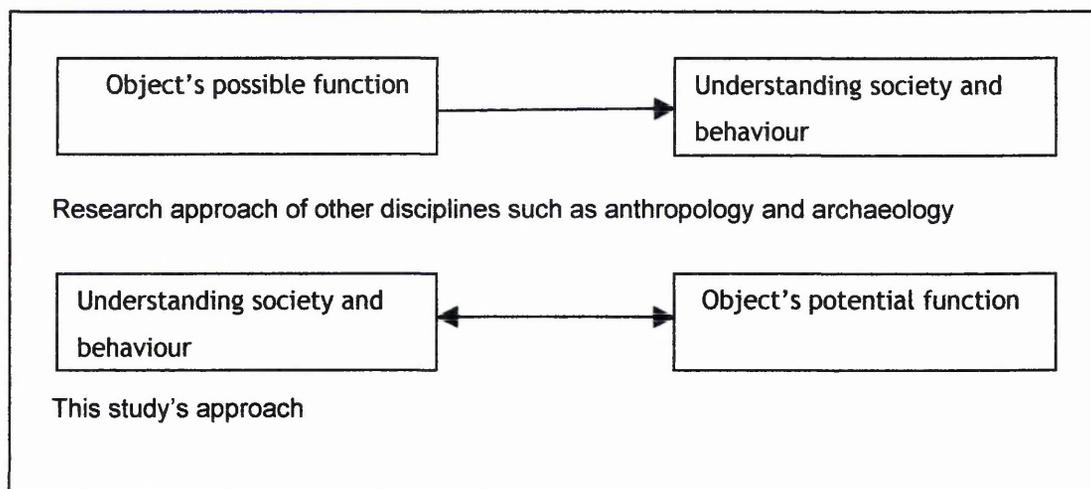


Figure 8: The role of the object within the research

The concept of changing and multiple functions of objects is presented by Beth Preston (2000). In the paper “the Function of Things”, she reviews various research defining function, and explains that there can be 'causal/ historical' and 'system' types. She presents different ways of thinking about function and reflects on the role of the user in constructing the accepted functions of objects. She introduces Wright's (1973)

definition of the 'causal' function of objects being the reason things exist, but it is Cummins' (1975) later concept of 'system' function that allows for evolution in the functions an object can fulfil that is useful to this study. This approach to function focuses on what an object does or is 'disposed to do' in its current 'system context' (2000: 24-25). She also introduces Ruth Milikan's (1984) concept of *proper function*, function that has caused an object to persist through time, and is also relevant to this study's ways of thinking about an object's function. The proper function of an item of packaging would be that designed into it by the manufacturer and this disappears once the product is removed or the packaging is empty. However the packaging item may have had a 'proper' secondary function designed into the object or can accrue secondary functions in the hands of individuals, and therefore acquire secondary 'system' functions. This study uses these terms, which can usefully deal with the changing functions of objects within the home (see chapter 4).

Archaeologists interpret objects in terms of their physical role within a cultural system, however not all objects can be viewed and used as evidence in the same way. Binford (1962:218.219) explains that artefacts have their primary functional context in different operational sub-systems of the total cultural system and therefore need to be considered through different frames of reference, in terms of the structure of the cultural system of which they are part. He makes the point that it is no more appropriate to consider artefacts through a single frame of reference than it would be to think about aspects of a human culture in that way. He provides a three-part system through which artefacts are considered, starting with "*technomic*" artefacts – those that have 'their primary functional context in coping directly with the physical environment. Then, "*socio technic*" artefacts – these form part of the social system, and provide identity and means of communication between social groups (for archaeologists they provide evidence and represent the complexity of the structure of the social system that no longer exists). Then the third type are "*ideo technic*" artefacts, with their 'primary functional context in the ideological component of the social system.' Preston illustrates this further by drawing attention to Schiffer's ideas on function (1992) that build on Binford's three-part system and present his own typology of functions. Schiffer's three different types of function, "*techno function, socio function and ideo function*", that classify functions 'in terms of their embodied purpose (Preston 2000: 29), are useful to this study. Techno function equates to utilitarian or physical function – a plastic bottle's function to hold water. Socio function keys into 'social facts'

– a bottle of water carried in public might confer status by indicating a fashionable concern for personal health. To illustrate the ideo function of an object, its relationship to shared 'abstract ideas values and beliefs' - the graphics of snowy mountains on a bottle of water may refer to the shared beliefs about nature on which a fashionable concern for health draws. Reused as a cloche, the bottle might have socio function, or ideo function, as part of a system of beliefs about a sustainable lifestyle, as well as the techno function of nurturing small plants. The two systems of classification presented by Preston and Schiffer interrelate. Any of Schiffer's three types of function may be either a proper or a system function. The current research employs Preston's and Schiffer's thinking about function and the link between the object's design and its eventual possible reuse functions, and is developed further in chapter four.

One of the main socio or ideo functions packaging may acquire is that of providing style or a symbol of identity to the consumer. The literature relating to this is outlined in the next section.

### ***Symbols of identity***

The relevant academic literature presents objects as having a much wider role to play than just the techno function the object is designed to perform. Scanlan discusses the way consumers construct their image by the items they consume, he explains, "*in consumption we buy the self rather than buying a product*" (2005: 131).

Dittmar (1992) a psychologist whose interests lie in the consumer society and individuals' sense of identity writes about cultural meanings in objects and material symbols of identity. She examines the meanings and functions of material goods and the identity we construct through them in everyday life. Although she recognises that objects can be material symbols of identity, she points out that as symbols they can only have meaning to the extent that individuals share the belief that they possess that meaning. For objects to have value as part of the self, they need to be within a 'system' that recognises that value.

Goffman's book details one sociological perspective from which social life can be studied (1959:9): what he describes as "concrete social establishments" can be seen as a more general concept. He uses the theatrical stage as a way of understanding human behaviour and self-presentation, describing the stage as having three aspects: the performance, stage and props. Parallels can be drawn with Goffman's three elements of the stage and the three factors affecting reuse presented through this

research. Here the performance is the person, the stage is the context or environment and the props are the packaging.

A performance needs an audience and the hidden, back stage part of the home does not have an audience, however in the visible front stage part the 'props' are important to present the self-image and a personal front (1959:34). Goffman explains that a personal front can be created and maintained in formal social activity, work, or informal recreation. In this study it is proposed that a personal front may be created by using packaging as a prop displaying the appropriate image, or it could be the visible 'performance' of recycling, composting, reuse, or rejecting these 'green' performances. Hawkins coming from a cultural theory perspective and specifically interested in the ethics of waste – expresses her annoyance at the time-consuming acts of dealing with rubbish, she also points to the act of waste sorting as important in our lives and “the different styles of waste elimination as styles of self”. The process of waste disposal is something that we all have to manage and what maintains “*a boundary between what is connected to the self and what isn't*”. (Hawkins, 2001:9).

Goffman (1959) argues that individuals perform differently when being observed front stage than when in private or not performing or back stage. This principle relates to the work by Dittmar looking at the role of objects as indicators of the 'self', and can be related to the way consumers present their personalities through the goods they conspicuously display within the different environments within the home. But it is not only different environments that affect our willingness to identify with and reuse objects; our individual motivations also play a part. Individuals draw on influences from different parts of society and place different levels of importance on the image they project. The assembled body of theory concerning consumer types and their motivations that supports this research is the next area to be reviewed.

### ***Consumers' motivations***

Rogers (2005: 4) explains that even though household waste contributes less to the overall UK waste problem than other sources such as manufacturing or agriculture, it is household waste that affects us because it is the waste that WE make that we are most aware of. Waste packaging is in front of us, is our responsibility and is something we can make choices about, directly affecting our individual lives at a micro-level. Consumer motivations can be reviewed in two ways, the first looking at motivations in general and the second how these lead into motivations in particular cases.

Both Hawkins (2001) and Lucas (2002) are critical of the general 'command moralities' associated with previous waste initiatives and discuss their shortcomings through various case studies. The point that more creative solutions should be sought to solve waste issues has been used as a starting point of this research study. Hawkins in particular argues that government instructions to recycle and reuse actually promote a feeling of apathy and disassociation from waste and its disposal. Such instruction considers the consumer to be passive in the process of decision-making and waiting to be instructed as to how to behave. Lucas suggests that the move towards recycling may encourage people to be more wasteful and ignore more sustainable methods of consumption. He explains that the emergence of recycling schemes since the 1960's and 1970's has perhaps coloured our perception of reuse and waste, and presented consumers with a seemingly easy solution to the problem of waste:

*"Thus recycling can be seen as taking on a reconciling role, resolving the dilemma of disposability: recycling permits a disposable material culture yet at the same time counteracts the apparent wastefulness in such a practice."*

(Lucas 2002:15)

Hawkins objects to being instructed to recycle and consider environmental aspects of waste. She seems to resent the years of public campaigns:

*" all those years of public campaigns instructing me to resist the easy convenience of plastic bags, to do my bit for nature, this training does not mean I've eliminated plastic bags from my life, far from it, but it does mean that my relations with them have become more complicated."*

(Hawkins, 2001:7)

She explains that hundreds of surveys examining attitudes to recycling reveal that people's commitment to it is based on a strong sense of 'doing something for the environment'. She continues that the demand to recycle and minimise waste has come from state programmes and structural transformations in domestic waste services that are coercive, but the success of these changes, in terms of widespread participation across populations, has depended on changes in micro-levels of everyday life, on the ways we have willingly acted on ourselves.

*“We participate because we believe in some abstracted sense of social and environmental good. We experience recycling and composting as autonomous gestures, as expressions of our environmentally concerned subjectivity”.*

(Hawkins, 2001:12)

Unlike recycling, domestic reuse is an everyday micro-level activity, a personal thing directly affecting the individual life of the user.

Described as a significant barrier to consumer change in the 2002 report from the

Environmental Services Research Trust (ESART), a person feels that they can make

little positive difference to the environment and that their positive actions will not negate everyone else's negative actions. Why should they have to pay more for a 'green' product whilst others carry on buying cheaper products?

However much of the reuse of packaging observed as part of this study does not rely on macro-incentives, it is largely pragmatic behaviour carried out to benefit the individual. Although much of packaging reuse is individually motivated for personal benefits, an individual's attitude to certain materials, objects and collective or individual consumption and disposal practice may be affected by their personality and inherent values.

Although certain consumer traits exist in individuals it is unlikely that particular consumer behaviour patterns just happen, they are created through experience, culture, teaching and social structure and values. Historical and cultural influences affect our willingness and ability to see further usefulness and reuse potential in objects. Literature from such as Strasser reviews the history and changing patterns of consumption and disposal in the US. She reflects on the effect that rationing and other historical events have had on our willingness and ability to reuse packaging items.

*“People in different social categories – rich and poor, old and young. Women and men – sort trash differently in part because they have learned different skills.”*

(Strasser, 1999)

From the initial ethnographic research it was apparent that individuals had quite different views and behaviour patterns when consuming and disposing of products and packaging. Whilst some were aware of brands, technology and the newness of objects, others showed little interest in new products, technologies or fashions.

Campbell (1992), Riesman (1950) and Wagner (1997) have developed three ways of describing different types of consumers; Campbell describes consumers in terms of

their desire for the new and their acceptance of replacing goods, ultimately effecting their disposal. His categories are:

*“Pristinians – those that fear contamination and will only crave the fresh and untouched.*

*Technophiles – those who crave new technology.*

*Neophiles – those that crave the novel, the strange, or even bizarre.”*

Campbell's categories are particularly relevant when considering the amount of new products introduced that then make the old ones obsolete, Strasser expresses her frustration at the *“the incessant proliferation of musical-reproduction formats and personal –computer technologies”*. She explains that sometimes expensive equipment is obsolete before it even hits the market (1999:5).

Riesman's (1950:14-22) proposition that consumers have a variety of belief systems still seems relevant today. He splits consumers into three different categories depending on how they deal with the social world around them. Riesman describes the three different mindsets as sustenance/ traditional, other-directed, and inner directed:

*“1) Sustenance/ Traditional – people who focus on day-to day concerns (like survival) and have traditional values and outlooks. They tend to be bound by ideas of community, duty and status.*

*2) Other – directed – people whose main concern is what others think of them – their appearance, image etc. They tend to favour progress over tradition and conspicuous consumers of icons of their own progress and status.*

*3) Inner- directed – people who look inside (rather than defer to the group consensus like the other two) and ‘do their own thing’. This is presented as the most advanced or ‘self – actualised’ mindset. People in this group are self-reliant but also have collective tendencies – such as eco-concerns.”*

Riesman's method of thinking about consumer behaviour is helpful when considering the role packaging objects might play in providing evidence of purchasing decisions and self-identity for some. It is likely that branding, aesthetics and style may be of greater importance to an other-directed individual than one that might be considered inner-directed.

Scherhorn's (2004) statement that one quarter of the population in the western culture is motivated by intrinsic values such as 'being' while three quarters are predominantly motivated by extrinsic values such as 'having' seems to relate well to Riesman's categories, suggesting that this three-quarters might be made up from predominantly other-directed consumers.

Strasser, when describing consumer types and their different connections to the material properties of objects introduces Levi-Strauss' (1966) description of the bricoleur:

*"An odd-job man who works with his hands, employing the bricoles, the scraps and odds and ends. Rather than using raw materials and tools conceived and procured for the purpose of the project, his universe of instruments is closed and the rules of his game are to make do with 'whatever is at hand'"*.

(Strasser: 1999: 11)

Padrós (2003: 161) explains that in primitive societies, the bricoleur used the materials that he had to hand; the difference with today's modern bricoleur is that industrial products and scrap materials are used to create what he needs at a particular moment. Participants in this research demonstrated different degrees of bricoleur behaviour, evident through observation and cupboard raiding research, and the discovery of saved 'useful' packaging is explained in more detail in chapter five.

One of the interviewees in this study showed particular personality traits of the bricoleur, creatively engaged in practical problem solving with everyday items. As Crotty states bricoleurs need to and are able to 're-vision' items (1998: 51).

These ways of understanding and recognising consumer typologies offer the basis for the interpretation of an aspect of this study's data, but consumers and objects do not present the whole picture. As previously explained consumers use objects differently in different parts of the home. The context in which consumers interact with objects is relevant to this study as it affects the potential functions a packaging object might need or acquire. The remaining literature that informs the spatial and temporal aspect of consumption in the home is considered in the next and final part of this section.

### ***The spatial context for reuse***

Gregson and Crewe provide a geographical perspective recognising the time-affected biographies of things and how second hand objects can circulate within certain spaces. They stress that when examining spaces and typologies of consumption second-hand worlds do matter, the changing environments and geographies of space where goods are exchanged. Although they particularly focus on places of exchange such as second-hand shops, flea markets and the emergence of the car boot sales, they provide useful insights into the way objects can shift in value depending on the context and the meaning consumers create in objects.

In contrast to Gregson and Crewe focussing on the movement of objects outside of the home, Lucas (2001) is concerned with the flow of objects and methods of waste management provided within the domestic environment. This concept is evidenced in the interviews within this study; there is clearly a 'factory' of waste within the home – 'goods in' and 'waste out' with rubbish being the product. Individuals design their environment to provide the appropriate 'system' for processing the waste.

Lucas discusses the historical issues of waste processing within the home and the reorganisations of domestic space, which occurred in the 19th century, and that the separation of kitchen refuse from bodily waste soon became standard practice and generated new types of material culture such as the indoor cistern toilet and the kitchen bin (Lucas 2001: 10, 11). He describes kitchens and bathrooms as systems or economies through which objects flow, waste being that which is ejected from the system as unused and inessential.

Strasser (1999) and Rogers (2005) like Lucas review the history of domestic waste management and our changing attitudes to waste and disposal but from a US perspective. Strasser explains that households and cities have become closed systems over the course of the twentieth century. She uses the term 'open' and 'closed' loop in the context of manufacturing, production or household recycling to describe the way waste is managed within communities. She reflects on the various roles of people in society who took on the role of collecting and sorting various waste and how this was managed to re-enter the economy to be reused. Rogers explains that in the first half of the twentieth century waste services no longer had to pay for themselves through salvaged materials. No longer was trash something to be sorted and put back into a cycle, trash was now becoming separated as "*an entirely different category of material that no longer had any use-value.*" (2005: 72)

Lucas when describing our involvement in the sorting of waste in the home calls places where objects are stored in limbo between regular use and disposal 'Twilight Zones'. This idea forms the basis of an enquiry into their relevance to the domestic space in which packaging is stored, rests and lies dormant postponing disposal.

Much attention has been given to the 'packaging supply chain' that enables successful design, manufacture, supply and filling of packaging, and the 'waste stream is also becoming well documented (Strasser 1999, Rogers 2005), however apart from the accounts described above from Lucas 2001, Hawkins 1999, consumption within consumers homes has been largely neglected. This study calls this grey area the 'domestic process flow" and provides new understandings of the mechanics of it in chapter five.

### ***Conclusions from the wider literature***

The literature relevant to this study comes from a range of disciplines including sociology: (e.g. Strasser and Belk), archaeology (e.g. Lucas) and anthropology and geography (e.g. Hawkins and Gregson and Crewe).

All of the relevant literature from wider sources assigns the consumer an active role in affecting whether a object is reused or not. It recognises that objects are part of our lives, with meanings attributed to objects allowing them to play a part in our private back stage lives as well as provide a means to communicate in a front stage way to others. The user and the context it exists within determine an object's function and meaning.

This literature recognises that different consumer types have different motivations to consume and dispose of objects in certain ways, most of which are affected on a micro-level by design factors such as the material type, function and aesthetics within a particular system. But the design of the object is not of central concern to this literature; the emphasis is much more about the way consumers use objects within different parts of their lives, developing 'systems' for use. The demands on the objects may change depending on the spatial and temporal changes to the context the pack exists within. Once the primary function is over it is the consumer and context that are likely to change and affect the likely reuse of the object.

The sketch diagram in Fig 9 helps to visually map the interactions between the packaging object and the consumer. It illustrates the bias of the literature towards the consumer or the human elements of the interactions.

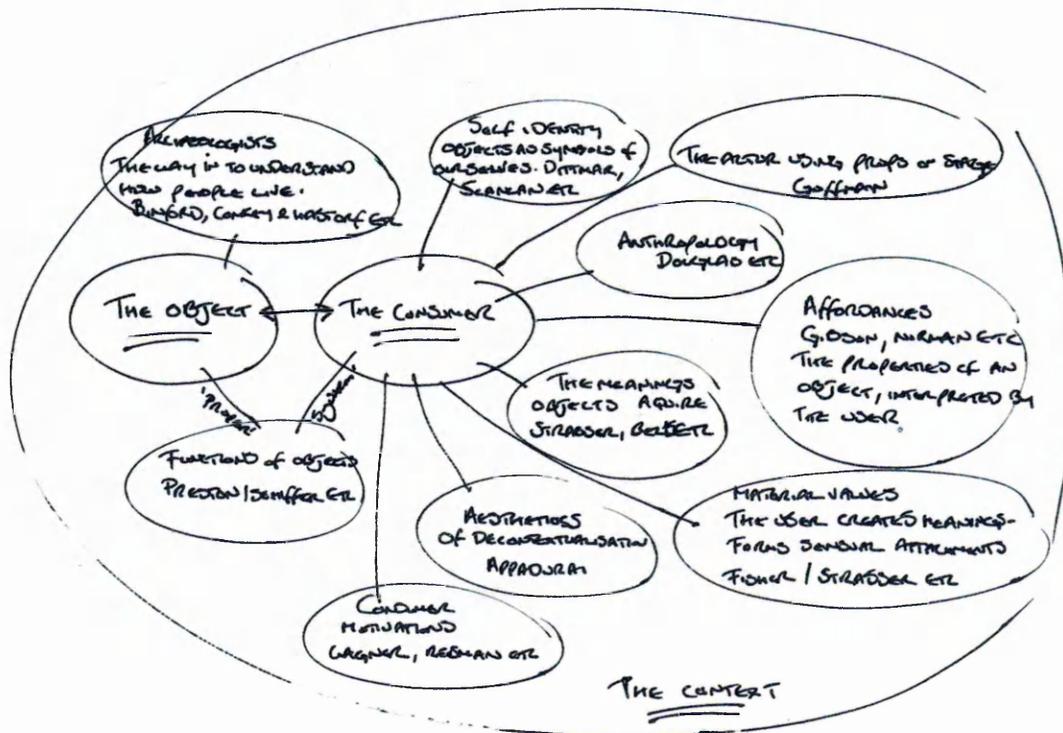


Figure 9: Sketch to emphasise the focus of the wider academic literature

The comprehensive assortment of relevant literature beyond that of designers or industry is scientific in approach and is freely critical of the current attitudes to consumption and the issue of waste. In contrast, the industry literature has different interests and agendas and promotes the benefits of packaging whilst defending it against criticism of excessive waste production. The government associations and NGO's provide guidance and quantitative data regarding waste reduction to provide short-term waste reduction initiatives.

This literature from the packaging industry is now examined in more detail in the next section.

## **The industry literature and contextual review**

### ***Introduction***

This section sets out to introduce the literature from the packaging community and how they view the issues of sustainable design and specifically packaging reuse. It provides an overview of the perspective of the packaging industry and those from related government departments and sources that affect the industry. It presents some of the positive work that some sections of the industry are involved with, whilst also highlighting the gaps in knowledge within other sections. The approaches taken by the packaging industry are examined by presenting both the contrasts and links with the other two interested parties, designers and those from wider disciplines.

### ***The packaging industry and related parties.***

The issue of packaging waste has been high on the packaging industry agenda since before the author started working in the industry sixteen years ago. Specific environmental management roles were being set up within large UK companies and retailers such as Boots The Chemist, Marks and Spencer and ASDA to ensure the introduction and compliance of The Essential Requirements Regulations (DEFRA 2006). The environmental roles in these large companies provided guidance and support to other internal teams such as marketing and packaging development, but often had to concentrate their efforts on the company's outward facing image in the face of environmental campaigns and media stories. The environmental concerns of the large companies seen in the 1990's have now evolved and been incorporated under a broader banner called Corporate Social Responsibility (CSR), Small to medium size companies although aware of environmental pressures, have remained largely unaffected with few investing in specific roles to consider environmental issues.

Although most large UK retailers have staff dedicated to CSR and packaging development, they pass on much of the pressure to their suppliers, which in turn is passed down to other parts of the industry, such as the product manufacturers, raw material suppliers and packaging converters. The packaging industry has a number of trade bodies representing the various material sectors such as Glasspac the packaging promotions arm of the British Glass Manufacturers' confederation, and MPMA the Metal Packaging Manufacturers Association. PIRA is a high profile commercial

consultancy, which specialises in retail supply chain technologies related to packaging, paper, plastics, printing, publishing and consumer goods. It provides guidance for retailers and producers of consumer packaged goods on packaging issues such as packaging waste legislation compliance; cost reduction and minimisation and pack design and development. PIRA also publish many of the key textbooks concerning the packaging industry.

The oldest institution representing the views of those working within the UK industry, and providing professional training, The Institute of Packaging (IoP) has become progressively less relevant, merging with the Institute of Materials, Minerals and Mining in 2005. In contrast the Faraday Packaging Partnership has gained strength and importance for industry as a means to share new ideas, knowledge and research. The Faraday Packaging Partnership provides an opportunity for industry bodies, academic researchers, environmental campaign groups, designer and manufacturers to come together and discuss all issues affecting the Faraday members.

Industry conferences and training events such as those run by PIRA and Faraday Packaging have included sustainable issues on their agendas and diaries for over ten years. Unlike other subjects covered in these training courses or conferences, sustainability sessions still present few new ideas or solutions apart from in the materials sector, and are largely overviews of current statistics, waste policy and ways for industry to legally comply with legislation.

At a recent event (Farapack 2006) the sustainable panel was chaired by the Director of INCPEN, The Industry Council for Packaging and the Environment. Presentations included subjects such as new closed-loop material manufacturing developments in HDPE, the current state of biodegradable polymers in plastic, and a representative from PIRA presented an overview of the issues and innovative solutions for more sustainable packaging. PIRA are one of the leading UK companies concerned with packaging research and technology, yet their presentation on packaging sustainability could have been presented five-years earlier, indicating both a lack of progress in the general recognised area of sustainable packaging, but also a lack of awareness of other new and innovative ways of thinking about packaging waste from other sources than the industry.

### ***Relevant Industry literature***

There are some rare pieces of consumer research provided by the industry that focus on particular products and materials. In 2004 Glasspac commissioned a consumer research study conducted by the University of Sheffield (Winder and Dallimore 2004) to gain a greater understanding of consumers' perceptions of glass. It described how glass remains a favourite with consumers, that bottled drinks are now considered important fashion accessories, and that 70 per cent of those questioned prefer the feel of glass to plastic ones, with 69 per cent preferring to drink out of a glass bottle than plastic.

According to its findings 76 per cent of consumers prefer to see glass containers on the table rather than plastic ones, with 81 per cent believing glass to be more attractive. 74 per cent believe glass is more natural than other packaging materials and 70 per cent of those questioned thought glass was better for the environment than other forms of packaging.

Examples of reused packaging uncovered in this study demonstrate that glass is associated with durability and quality. Many examples of glass packaging were discovered ranging from fancy shaped clear glass jars used for pickles, sticky liqueur bottles kept for their emotional attachment, through to empty blue glass wine bottles reused as a table decoration.

The Mintel's 2006 report on food packaging states that glass still represents quality to the consumer, and also recognises that plastic packaging manufacturers have been under pressure for the last few years due to rising oil prices and consumer concerns regarding the sustainability of their product. However since 2003 the food packaging market growth in value of 2% per year is mainly driven by plastic packaging, and material innovations developing more sustainable materials such as corn-based plastics (Mintel 2006).

The IoP's main area of interest has been packaging technology and education, rarely getting involved in packaging design beyond running one of the UK's major packaging design awards, the annual Starpack competitions.

The Institute of Packaging's literature is outdated as illustrated in *The Fundamentals of Packaging* (Soroko 1996), a core textbook for students studying for their packaging diploma, explains:

*“Packaging professionals will find themselves on the defensive against environmental extremists, poorly informed legislators, and equally poorly informed, though often well- intentioned consumers”.*

It continues to state that packaging waste is far less than the average consumer imagines and that in fact; domestic waste is much less than half the total waste stream.

The book portrays the consumer as ill informed and vulnerable to any given information or direction. It assumes consumers have a passive role in consumption and dispossession and have little understanding of and involvement with packaging:

*“Unfortunately, the consumer sees packaging as the part of a product that is thrown away: hence, packaging is rubbish. No home decorator would dispute the necessity of paint cans, yet when empty, these, along with other household packs that have fulfilled their function, are suddenly perceived as rubbish, unnecessary and a problem. Few consumers have the technical depth and knowledge to understand packaging’s complex functions”.*

(Soroko1996:13)

This passage acknowledges the way packaging changes in function from something of necessary functional value to something that becomes waste, but goes into no further detail to explain this process. Whilst defending the packaging item the author registers the importance of the context of packaging - whilst full the container has functional meaning and value as a method of branding and marketing material. However the author wrongly presents the consumer as ignorant and the empty packaging as not being waste.

INCPEN commissioned a consumer research study (INCPEN 2004) to find out about peoples’ attitudes to packaging. According to their report, consumers hold some very contradictory views regarding packaging. Consumers like the convenience, hygiene and safety of packaging but also view packaging as wasteful because, once the item is in the home, it has no further use. However it is clear from this study that consumers can see further use in some packaging. In their responsible packaging code of practice, INCPEN state their official position regarding packaging reuse, providing an industry perspective that only recognising the benefits of closed-loop reuse and reflects a general scepticism for reuse from the packaging industry:

*“Returnable packaging for refilling, such as drums, or home refill packaging, may provide environmental benefits. The hygiene, safety and wastage characteristics of such systems need to be considered, along with the environmental impacts of the return system and its effectiveness. It is of little benefit to operate return systems that fail to collect a significant proportion of packing, or which have high environmental impacts”.*

(INCPEN 2003)

Similarly, The Institute of Packaging only really considers closed-loop reuse as significant, and makes no attempt to consider the worth of post-purchase consumer reuse.

A report produced by PIRA and the University of Brighton (PIRA and WERG 2004) entitled Packaging’s Place in Society explains the changing role of packaging to meet the lifestyle needs of the ever-evolving consumer. Biffaward, Valpack, The Packaging Federation and Amcor Flexibles provided the financial support for the report, and unsurprisingly given the nature of these UK packaging industry sponsors the report praises packaging’s role in allowing the consumer to have products delivered in new and more appropriate ways. The food chapter includes the following statement:

*“There is more food packaging in our homes today than ever before. This is because the food we consume, more than any other product, is a reflection of our changing lifestyles and expectations as consumers.*

*More packaging does not mean more waste – across the food supply chain, there is less product wastage arising from prepared foods than is from a meal prepared from ingredients in the home”.*

(PIRA & WERG 2004: 6)

This statement may be statistically correct but this study is interested in the connections consumers can have with packaging and packaging waste. As previously argued by Hawkins in the wider literature, consumers can often find it easier to only deal with issues that affect them in a local way, where they can see the effects of their actions. They find it more difficult to connect with what happens on a macro-level e.g.: what happens to the plastic food trays once they are taken from the home and thrown into a bin or at best a recycling bin which is someone else’s responsibility.

Stewart (1996) writing from a packaging design and industry perspective explains that packaging is misunderstood by consumers and an easy target for environmentalists. However in his latest publication (2004: 141) a revised and updated edition of an earlier book, the section on sustainable packaging design has been changed to reflect the growing importance and recognition of the role of sustainable design, and reviews some of the design evaluation work completed as part of this research.

The consumer is also central to a research report commissioned by The National Waste Awareness Initiative (NWA) a nation-wide campaign with the aim of changing public views of waste production and management. The UK research study in 2000 called Rethinking Rubbish - Towards a New Campaign (Hartley and Howes) was conducted by Prescient Ltd and funded by the Environmental Services Association Research Trust (ESART). ESART receive their money through the landfill tax credit scheme and through contributions from companies involved in waste management such as Biffaward, Onyx, Global Environmental and Cleanaway.

The aims of this qualitative research study were to gain a greater understanding of consumers understanding of waste issues and specifically terminology in order to understand how communication of these issues can be improved, and become more effective. The NWA research explained that there are consumer misunderstandings regarding terminology, and that cultural factors and the context of waste affects consumer attitudes. It described problems with its qualitative research methodology and explained that they realised the audience within the focus groups were not seeing the subject in the same way as the experts within this project:

*"It is all too easy to assume that the subject being addressed exists in a vacuum, that there is nothing else that can affect comprehension of and reaction to the issues raised within a campaign". (2000:3)*

Although this is referring to the reaction and comprehension of campaign materials within the NWA research it is a common problem when using focus groups that the audience is taken out of the context that they would normally view, read or interact with the material or object. This is the reason why this doctoral research study consciously selected research methods that observed what consumers were intuitively doing within their home environment - the context where reuse occurs.

The overwhelming feeling taken from the NWA report was a lack of respect for the consumer. Throughout the report the consumer is presented as naïve and in need of

re-education regarding waste issues. It explains that waste management (only mentioning reduction and recycling) must be convenient to consumers and fit in with everyday 21<sup>st</sup> century life, however as this study points out - there is little understanding as to what 21<sup>st</sup> century life is like within the closed doors of the home. The NWA report does recognise there is some packaging reuse happening and uses the examples of carrier bags, ice cream cartons and bottles, but explains it is limited and usually only fuelled by financial savings. It describes many consumers as not having the time to clean out containers to reuse them and that the consumers' imagination is quite limited in the area of reuse. This over-simplification fails to recognise the variety of packaging reuse, and the complex motivations for it uncovered in this study.

The report's conclusions lay the blame firmly at the door of the consumer:

*"In short there is a growing aversion to the concept of taking responsibility for anything. [...] No matter how much rubbish is being burned or buried on a regular basis, the average consumer feels that they have had very little to do with it ending up where it does. The consumers view of the world of waste is very different from that perceived by industry." (2000: 3)*

This study has found that consumers do make decisions about packaging when deciding if it will be reused or disposed of after its primary use is over, contradicting the way the industry portrays the consumer as a passive when dealing with packaging. The lack of recognition and focus the industry gives the consumer has meant that the macro and even more so the micro motivations for this form of sustainable behaviour have been overlooked and disregarded.

The fact that consumers do not understand the waste terminology and the different types of waste disposal, seems to miss the point when reading the accounts of current waste disposal practice. Rogers (2005) describes a hellish picture of the waste stream and the resulting landfill sites. She makes it clear that disposal is not a simple solution, and that all efforts should not be focussed entirely on the waste stream, but also on the consumer and their role in the 'domestic process flow' of waste.

The industry's focus is currently on the packaging object, providing increasingly innovative ways to promote, deliver and protect products. The industry is concerned with sustainability, developing new and improved materials and pack formats for easier recycling and composting, but largely neglects packaging reuse, particularly open-loop.

The packaging industry is happy to place much of the responsibility for packaging waste at the door of the consumer, but largely assumes the consumer incapable of tackling the complex issues beyond being instructed to reuse or compost packaging. The industry see their main responsibility end once the customer purchases the product within its packaging, and accept that it starts again once waste is placed in the bin and leaves the house. This attitude has created a gap in the middle section of the consumption of packaging.

Like that from the industry, most of the design literature is also object focused, giving little recognition of the active and often creative nature of consumers in processing waste. The design literature is the final literature source to be reviewed in the next section. The focus is on relevant design practice and theory that fits with this study, whilst highlighting work that falls outside.

## Design Practice Review and Literature

The design literature can be split into two main types, the first being that from commercial designers, that focuses on the form and appearance of the designed object, showcasing new packaging designs. The second type is more concerned with design education, theory and exploring what design can achieve to meet the needs of consumer as well as focussing on the object.

Design literature does review methods and case studies for designing reusable and recycled packaging solutions such as Mackenzie (1991), but like Mustieries (2000) and Faud-Luke (2002) they rely heavily on case studies of products and packaging that are made from packaging materials from around the world. Whilst this literature serves as a useful catalogue of how different cultures use and design packaging, it does not explore the complex relationships we have with packaging in our daily lives in the UK. It presents a view of design for reuse that focuses on thrift craft and third world folk art, rather than the issues affecting packaging reuse in the mainstream UK economy. The most relevant literature concerning design practice comes from authors from different professional backgrounds. Postrel (2003), a journalist, provides a useful review of the importance of look and feel in today's society and presents the aesthetics of objects as a tool that allow us to build identities through the objects we own. Other work includes that from Verdu, and Hughes in the book *Alehop!* (Institute de Cultura de Barcelona: 2003) that reviews different innovative approaches to design that explore how objects can involve the user in different ways.

Examples of design for reuse do exist- the picture below in Fig 10 shows the Emium bottle designed over seven years ago [www.emium.com](http://www.emium.com). These reusable bottles are designed to fit together like LEGO bricks, and can be used to make furniture, or filled with cement and used as construction bricks (Mustieries, 2000). The designers of the packaging won the World Packaging Organisation's WORLDSTAR award for innovative packaging in Toronto on May 28, 2000, however it is yet to come into mainstream usage.

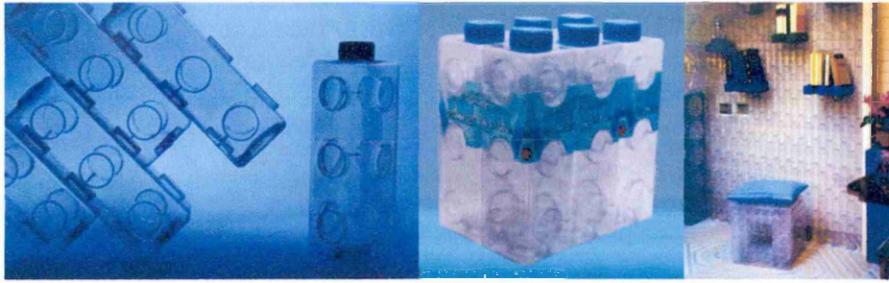


Figure 10: Emium bottle: <http://www.emium.com>

The Heineken Wobo bottle (Fig 11) was designed with the inhabitants of the Netherlands Antilles in mind, the secondary use being that of an airbrick once empty. 10,000 were made but Heineken's Marketing Department advised against a full launch. (Institute de Cultura de Barcelona, 2003. 79).

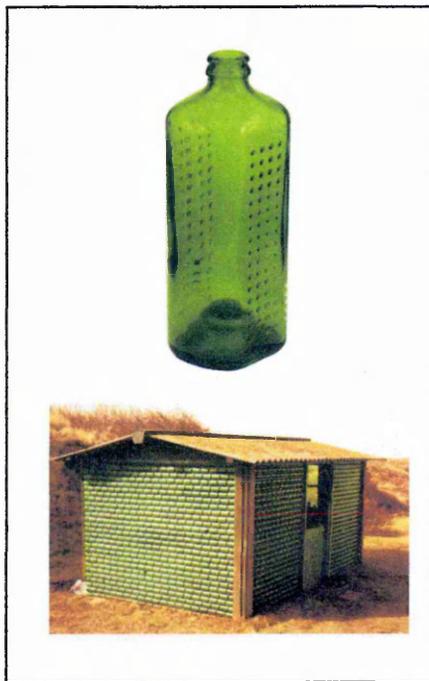


Figure 11: Heineken Wobo bottle (Institute de Cultura de Barcelona, 2003. 79).

Other design literature in tune with this study includes Payne (2002) reviewing the philosophy of the design agency 'Jam' and their approach to design and rule breaking with the miss-appropriation of objects. Although the examples in Fig 12 show reuse where the individual has chosen to significantly alter the form of the object (in this case turning a washing machine cylinder into a household lamp and a light bulb into a vase),

it does present their general approach to design using available materials and their desire to alter consumers perceptions of everyday objects.

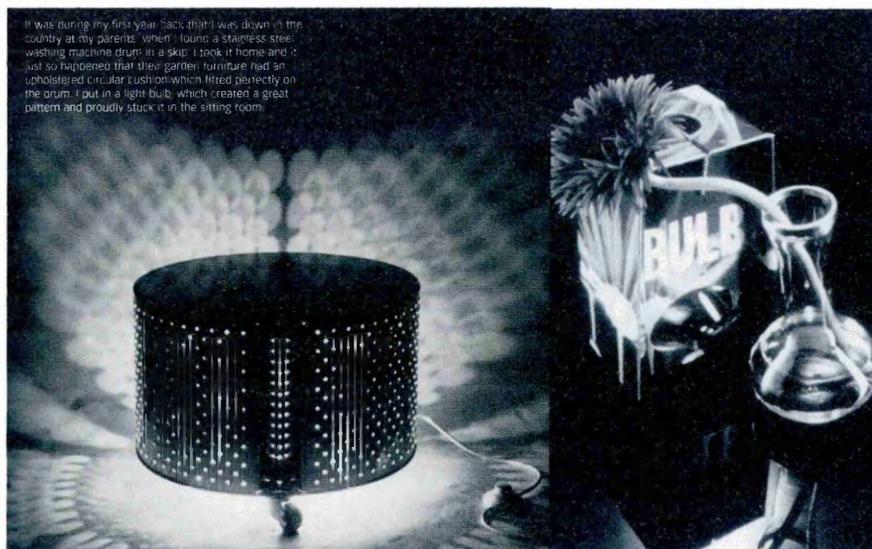


Figure 12: Examples of products that have been altered for reuse (Payne 2002: 3,10)

The Alehop! book (Institute de Cultura de Barcelona, 2003) and exhibition presenting approaches to design to help us reflect of the ways in which products can have a longer and richer lifespan, and illustrate how consumers might decide to employ objects for new purposes and endow them with new meanings. Padrós within Alehop! (P.160) describes users' relationships with objects and how design with hidden ingenuity can involve users in an active and a participative way. He splits the idealistic types of design featured in the book into those that show "*Design ingenuity*" new concepts found in the home and beyond and how they connect with the user, and "*design-remedy, those that adapt to the person, environment and lifestyle*" - objects designed for the user to finish and re-interpret.

### ***The Consumer as the Designer***

A significant section in Alehop! is that written by Hughes (2003. 167) where he reviews what it takes for people to be imaginative with objects. He quotes Thomas Edison when explaining what is required: "*To invent you need a good imagination and a pile of junk*" - Thomas Edison (1847 - 1931)".

Much like the gardeners and allotment holders observed as being heavily involved in reuse in this study, Hughes points to farmers as being highly creative individuals due to

both their need to create objects for specific tasks and their natural thriftiness.

*"To find a group of people who experience not only a necessity to repair, but who also have access to Edison's pile of junk, one has to look further than a high-street notion of the consumer. If there is one group of people who appear to live in a continuous state of necessity and junk, it is the farming community. (2003.167)*

The farm, like the vegetable garden or allotment is mainly a back stage environment, with any peer pressure only likely to come from fellow farmers who will appreciate inventive ways to make new objects out of old.

Design academic, Gaver (Gaver et al, 2004) acknowledges consumers ability to be playful with objects and interpret different meanings into things. The Drift Table is an example of him and the design team 'Equator' consisting of the RCA and Lancaster University putting this thinking into action. Developing a piece of furniture or simple decorative object where the design is not complete until the user interacts with it. Building on this theme, Faud-Luke (2002) extols the virtues of 'slow-design' and 'half-way' products that allow the owner to finish them off, therefore encouraging interaction, involvement and a connection to the object that may make disposal more difficult to accept. Also within this theme, Kajzer, and Grout (2003) writing from a design education perspective present the concept of "Living products". Their paper describes a perfect living product as being something that communicates with you, responds to diverse holistic needs of the user, connects the user with the environment and can be reborn with new purpose. They also explain that the product should move with consumer's needs, building a personal attachment with it. They believe that despite eco-efficiency the current design paradigm remains deeply rooted in material possession, individuality, consumption and newness; or the assumption of unlimited growth and the accumulation of waste. Their paper was built around initial reflections made from an exploratory project, in which they encouraged design students to think, act and design differently.

They seem to agree with the anthropological perspective of Appadurai (1986), that identity and experiences through life are strongly linked to products and they define much of our personal identity and value as well as our perception of self relative to society and our environment. They point out that that designers must consider how to

develop long-term relationships between the user and the object and consider how objects may grow and change with time.

Their study asks what would happen if the product was to be regarded as a living entity as part of a living system? What happens if designers look at products as living?

Objects can be viewed as such if thinking of furniture that become antiques and cars that are kept long enough to become vintage. Both sets of items are growing older and need restoration and attention; a relationship has built up beyond the initial functional ownership. This study has observed that packaging items can have biographies and that consumers do see packaging items as 'living things', with some items of packaging having long-term relationships with the user, evolving with time in value and meaning.

Strasser (1999), and Kirkham and Thom (1995) describe how consumers had to engage with products, and had to become the designer in wartime. They review the instructive nature of government campaigns and publications to encourage less wasteful, creative behaviour. More recent versions of these household tips are featured in 'Women's' magazines, and literature such as Bailey's (1998) *Weekend Wisdom*, a book providing handy household tips, many of which concern different ways we can reuse packaging and other objects. There are also websites that list ways to reuse household objects including packaging such as [www.JUNK.COM](http://www.JUNK.COM). Although these are well meaning it is unlikely they will significantly reduce the amount of waste we throw away. It may encourage creative thought when disposing of packaging, but the instructive and slightly eccentric nature of these sources of designs and ideas prevents them from being taken seriously. They suffer from the same type of presentation and image as the 'make- its' featured on the UK children's television programme 'Blue Peter' from the 1960's to the present day.

### ***Design Literature Conclusions***

The design literature is split into that from the packaging design field who are supplying the majority of design work, and those from different backgrounds such as journalists and design researchers who are questioning the theory and possibilities of design. The more inventive approaches are from design education and design theory sources of literature.

Work such as Gaver, Alehop! and Kajzer and Grout, in line with this study recognise that the user also has the potential to also be the designer - decoding, re-coding

meaning into objects. They present the consumer as having the potential to be the designer – providing their individual interpretation of an object and its possible uses. If we only provide consumers with products that are delivered in certain ways and allow only restricted use then consumers will only behave as instructed in restricted ways. This study aims to build on the alternative ways researchers and designers have started thinking about product design and to expand that specifically to the field of packaging design to provide alternative consumption opportunities.

### ***Literature Review Summary and Conclusions***

The key people that inform and contribute to the debate within this study are primarily from a range of disciplines beyond the industry or field of packaging design, including Fisher, Goffman, Gregson and Crewe, Lucas, Preston, Schiffer, Strasser and Thompson. The literature from these sources explores the affect of design on emotion and is interested in consumer behavioural and contextual issues that affect consumer behaviour. Much of this literature recognises the spatial and temporal aspect of objects and how this affects our method of behaviour with them, helping to develop this study's theories regarding the flow of packaging through the domestic home, and how space and time affects it.

Some literature coming from the field of design theory and education such as Gaver, and Kajzer and Grout provides ways of thinking about designs can allow the user to become involved and interact with the object.

Most of the industry literature, and some of the design literature is at odds with this study in terms of the status it gives to the consumer in sustainable consumption. Much of it considers the consumer too ill informed and passive in decision making, or views reuse behaviour as accidental and a curiosity. Industry and government campaigns only encourage and acknowledge consumption changes at a macro-level, ignoring the micro-level motivations and behaviour within UK households. This point is recognised by Lucas and Hawkins who come from archaeological and sociological academic backgrounds.

Only the literature from these wider sources give status to the consumer as an active decision maker who depending on the object, context and system has the ability to choose what to do with an object independent of instruction.

From the literature review it was clear that the field of enquiry was to be directed by some clear ideas and questions.

From both the industry (dealing with waste issues) and wider literature it is clear that the sorting and classification of waste affects consumers and their engagement with it. The affect of being able to sort different types of waste can change their status and our willingness to do something more with used packaging other than immediate disposal. This study needs to understand how packaging design can impact on the sorting and classification of packaging and how aesthetics and material type affect the perceived and actual functions of the object packaging.

Most of the industry and some of the design literature presents the consumer as passive in the process of consumption and disposal, just doing what they have been taught and following instructions. However this study builds on much of the wider sources of literature that questions that position and asks if the design of packaging can direct the user to other ways of disposal, and if the consumer can alter their behaviour and direct waste in more positive ways. The literature also recognises there are different consumer types and these respond differently depending on their experiences, lifestyle and ethical position. These different consumer types need to be recognised and used within this study to provide context to the ethnographic research evaluation and to understand the findings.

The significance of the context in which the packaging is to be reused also needs further examination, and if the 'domestic processing flow' of packaging within the home is significant then an understanding of how design affects this middle stage needs to be understood.

These cultural themes have allowed an appropriate methodology to be developed that addresses the three main forces in this study; the object, the consumer and the context. The research methodology selected to build on the literature and contextual review is described in the next chapter.

## **Chapter Three: Methodology**

### ***Introduction***

The aim of this chapter is to set out the key issues for the research and the aims of the study. It critically reviews the potential methodologies with reference to the literature discussed in the previous chapter, and sets out the reasons for the chosen methodology.

The links between the methods used in this study and those used by other related work are also presented.

This study's aims are to understand what consumers do with packaging within the home and why, and recognises the consumer as a non-professional designer, carrying out either conscious but intuitive design practice, or chance design.

As a practicing designer, the findings were viewed from a design perspective allowing tacit knowledge of materials, form, and design insights to emerge. Experience gained through studying packaging artefacts, and varying and adding to them to create different design results provides an intuitive understanding of packaging. The experience and knowledge gained through handling materials and manipulating designs to create different audience responses is what the author as a designer brings to this study.

Unlike a science research methodology, this study is not built on a series of repeatable tests or results. Wilson (2002:3) explains that one of the big differences between social research from research of the physical sciences is that the social researcher is dealing with 'research objects' who are interpreting the social world in individual ways.

Therefore the social researcher must make sense of others' sense making, and interpret and make meaning from their meaning making.

In contrast to 'design science' described by Cross (2001) as the development of a scientific method applied to design, this study is interested in the science of design. It is a study of design principles, practices and procedures, and reviews how consumers can also think and behave in a designerly way.

### ***The gap in knowledge***

The packaging industry and packaging designers have been primarily concerned with designing for the 'packaging supply chain', the design, manufacture, filling and transportation of packaged product to get it to the point of sale.

Certain sectors of the packaging industry and a select group of designers are concerned with designing for the 'waste stream' what happens to packaging waste once it leaves the house. Few designers or industry experts are looking at the area in between - the flow of goods and packaging post purchase through to disposal out of the home. Strasser highlights this when she explains that "*Public discourse about household trash has until very recently stopped at the borders of the household*" (Strasser 1999: 19).

This study is interested in what happens to packaging in this middle life stage and how design can affect packaging's flow through the domestic 'system'.

Unlike recycling, reuse is less understood by consumers, and their motivations for reuse are less clear than recycling. Most consumers are aware of recycling through media campaigns, local government instruction and the collection systems provided to facilitate this activity. In contrast reuse is a matter of individual choice, carried out either consciously or unconsciously for a variety of reasons beyond just being 'green'. When reuse is considered by designers, researchers or the packaging industry they concentrate their efforts on the easiest area to quantify - closed-loop reuse, largely ignoring open-loop reuse.

### ***Reasons for selecting the methods***

If the study had been interested in closed-loop consumer reuse then quantitative research might have provided the required data. Closed-loop systems such as the original Body Shop returnable/ refillable packaging system's success would be relatively easy to quantify, by recording the number of bottles bought from the shop compared to those returned for filling. Returnable transit and display packaging systems have been developed and their success recorded by simple tracking and data gathering systems. However this study's aims were to capture often spontaneous, individually driven open-loop reuse behaviour, requiring a qualitative ethnographic research approach. This needed to be carried out within people's homes, as this is where the majority of this open-loop reuse and disposal happens.

Carrier bags are items of packaging that are regularly reused and are attracting considerable attention from UK industry and funding bodies. However the approach the Waste Resources Action Plan (WRAP) took for the project "*Choose to Reuse*" (Falcon 2006) seemed inappropriate for both their study and this one. The WRAP research aimed to gain a greater understanding of the reasons people reuse supermarket carrier

bags. The attitudinal and observational study was carried out in selected participating stores, and focussed on quantitative bag data supplied by some of the retail partners including sales of reusable bags or 'bags for life' and volumes of free carrier bags used. The project included the promotion of the "choose to reuse" campaign that formed part of a 10-week media campaign, local promotions and in-store activity. WRAP admitted the research proved inconclusive, revealing little more than demographic trends in the sizes of shopping trips and how this affected the purchase of reusable bags. This study only captured closed-loop reuse, which inevitable excluded many impulse or 'top-up', less routinised shoppers. The media campaign took little or no account of individual's motivations to reuse and therefore had minimal effect on reuse rates. The qualitative research relied on 'indirect' observations (Wilson 2002) from individual accounts provided within the participating stores rather than this study's direct ethnographic approach of seeing the reuse evidence itself within the actual social context of reuse.

This current study has a user-centered design approach, using consumer observations and insights and evaluating them against existing pack designs, incorporating them in new work, and developing new designs to use as part of the research to test emerging themes. As a practicing packaging designer (Creative Director for Sheffield Hallam's design packaging consultancy Design Futures), the author was in a position to observe day-to-day design and industry practice alongside incorporating and trying out some of the ideas in suitable project work.

The epistemology for this study draws on constructionism, phenomenology and symbolic interactionism, all of which are linked through their recognition that meaning is created through action and human behaviour, their relevance to this study is explained in the next section.

### ***Constructionism***

This study used methods to witness consumer practices that were then understood through a constructionist interpretation.

The objects themselves do not hold meanings simply waiting to be discovered by the user. The meaning is created through the interaction between the user and the object:

*"It is the view that all knowledge and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction"*

between human beings and their world, and developed and transmitted within an essentially social context". (Crotty 1998: 48)

Ackermann (2001) provides definitions and comparisons between Piaget's constructivism and Papert's constructionism theory<sup>2</sup>. Although her concern is how they apply to children's education, her insights as to how individuals can construct their own meanings from artefacts are applicable to this study and help to determine some of the approaches to the research methods. She explains that for Piaget (1967), knowledge is not something that can be delivered at one end, encoded, memorised, retrieved and applied at the other end, instead it is experience that is acquired through interaction with the world, people and things. (2001: 3). She then explains Papert's theory of knowledge through constructionism is grounded in contexts, and shaped by users (Papert and Harel 1991). Although both Piaget and Papert's theories inform this study, it is Papert and his theory that the construction of new knowledge is through conversions with artefacts, recognising the role of tools and context in the development of knowledge that is most relevant. Papert is concerned with the dynamics of change and the fragility and contextuality of knowledge (Ackermann 2001).

It became apparent from this research that the same packaging object could provoke different interpretation and making of meaning by individuals in different social contexts. For example, many people reuse plastic water bottles, but the functions can differ from being refilled and reused further as a bottle to drink water from, through to a Christmas tree decoration (Fig 12), to a cut down cloche to protect seedlings (Fig 13).



Figure 12: Christmas angel. Figure 13: Plant cloche.

<sup>2</sup> Ackermann uses Papert's definitions to explain the differences: "Constructionism – the N word as opposed to the V-word – shares constructivism's view of learning as "building knowledge structures" through progressive internalization of actions... It then adds the idea that this happens especially felicitously in a context where the learner is consciously engaged in constructing a public entity. (Papert, 1991, p.1)

Researchers from other disciplines such as art historians or archaeology try to make sense of artefacts and cultural representations that are removed from their former context. To the Archaeologist the identification of different types of artefacts and their form enables them to map and understand social behaviour and lifestyles of the users. However in contrast to the work carried out by Archaeologists, this study is concerned with current behaviour and artefacts, and is in a position to keep the temporal distance to a minimum using available insights into the social context to understand how style and form are interpreted. This study is able to review artefacts in context and look for repeat patterns with a set of users to triangulate the research.

### ***Phenomenology***

The approach to the research was broadly phenomenological<sup>3</sup> in order to try to leave behind, or escape, the conventional mind-set of design. Whereas designers are accustomed to commanding and specifying the form of the material world, this research required that a more prosaic process of consumption was witnessed, but from a design perspective.

According to Wilson (2002:3), phenomenology seeks to understand how persons construct meaning through inter-subjectivity – we experience the world through and with others, the meaning we create is grounded in human actions and social artefacts. Although as previously stated the author had ideas and experience of packaging reuse, it was important in the interview stage to see the behaviour without trying to make sense of the data through my perspective of understanding. There was a need to breakdown the actions and perceptions of interviewees into parts to make sense of the motivations and reasons for these actions whilst also learning to listen and not make judgements about information without validation. The researcher must see the behaviour and interactions between other people and objects for what they are and only then can models and theories for patterns of human action be developed. The author's prejudices and pre-formed thoughts regarding packaging and reuse needed to be ignored and put to one side. There was a need to suspend immediate

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<sup>3</sup> "Back to the things themselves". Phenomenology suggests that, if we lay aside, as best we can, the prevailing understandings of those phenomena and revisit our immediate experience of them, possibilities for new meaning emerge for us or we witness at least an authentication and enhancement of former meaning. Crotty 1998 and 1996a

assumptions, tastes and cultural references brought to this study, whilst still listening to instinct in order to see traits and threads in which to follow and research further. By using this approach, surprising phenomena in packaging consumption and disposal were uncovered such as 'twilight zones', and the design evaluation proved more fruitful. It became apparent from the initial observations and literature review that there are three elements affecting packaging reuse, the object, the consumer and the context. The research methodology needed to provide an understanding of the importance and effect of each element and their inter-relationship.

### ***Symbolic Interactionism***

Hodder (1990:45) when examining and debating the role of 'style' asks if style is observed or acted, explaining that style is the subjective interpretation, but can also exist in material similarities and differences in comparison to other objects, and therefore is a subjective event. Hodder believes that the actor and observer are both involved in event and interpretation simultaneously – both the acts of doing and observing have style. There can therefore be a level of ambiguity that exists in the interpretation of events that increases over time and distancing from the events being observed.

Although the observer's style of interpretation can still affect the conclusions, in this study both the actor and observer's style is available to be analysed and understood. This study recognises interactionist perspectives and research such as that from Goffman, described by Crotty as a "*dramaturgical approach*" that draws on the analogy between life and the theatre (Crotty 1998: 76). This helped develop the idea that packaging can be used as a prop to overtly communicate to others and play out a particular role chosen by the individual. It was appropriate to picture the consumer as a potential actor using props within a stage to develop an understanding of the spatial and temporal nature of domestic packaging processing. The three elements involved; human, object and context are linked and need to be thought about as both individual elements but that have a bearing on each other.

The next section outlines the cultural categories and research questions addressing the three identified elements; consumer, context and object in turn and explains what methods were selected and why they are appropriate.

### ***The Cultural Categories and Research Questions***

The development of the cultural categories allowed the following research questions to emerge.

#### ***The consumer***

If the reasons for packaging miss-use, re-appropriation or reuse do not simply lie in the object, how does the user construct them? How are individuals motivated to reuse, and to what extent does exposure to reuse, and societal pressures such as those from their peers, government and NGO campaigns, and the individual's self developed role within society have on consumer reuse?

The observations and surveys provided evidence that many consumers and users of packaging although not recognised as designers are constantly involved in the process of invention and design. Therefore the research methodology needs to examine not only the object and what possibilities that holds, but also different consumer types and how they might interact with and behave with different types of objects.

Packaging reuse is unspectacular and hidden and much of the activity draws on cultural knowledge, a great deal of which is aesthetic. Therefore a way of understanding individual's aesthetic values and cultural associations was required to make sense of the research findings.

The methodology builds on the literature such as Hawkins, Wagner and Strasser, and examines how consumers might be motivated to reuse beyond macro-level instruction, but on a more micro-level that might affect the individual and their community.

#### ***The context***

The research methodology needed to access the largely neglected area of consumption and disposal within the home and provide an understanding of how goods come in to the home, are processed until ultimately ejected as waste.

An ethnographic approach to the research meant that human practices were observed in the social settings of the study, and to be "*treated by the researcher as anthropologically strange*, with the aim to '*get inside*' the way the participants view the world (Crotty 1998. 76).

From the literature review and the initial ethnographic research it became obvious that people behave differently in different parts of their homes, with different items, at different times and in different 'systems'. The significance of different 'systems' and spatial areas within the home was an area identified as needing further investigation. Packaging can transform in value and function and the status seems not to be fixed, but how does this happen within the domestic environment, transforming as it moves through the home and through the various stages of use? Lucas (2001) and Thompson (1979) suggest that the item might be transformed by adding or taking away the contents and by mixing with other objects. This needed to be examined further by examining different types of packaging and the places they end up, and why. An understanding of the places where packaging is collected, categorised, stored and rests was required, and how these places can allow packaging to gain value within the social system it exists or be categorised as having no further use.

### ***The object***

The same object can be interpreted differently by individuals, and communicate different things at certain times and in certain places. Objects can hold meaning and represent things unique to the individual. How objects do this and how further opportunities for this can be designed into packaging needed to be understood in order to encourage attachment and longer relationships with objects.

Many products cannot exist without packaging. The same item (such as a glass jar, or plastic bottle) can be sold as packaging containing a product or as product in its own right. If the categorisation and naming of waste has an effect on the way we reuse or dispose of an item then the categorisation as either product or packaging may have an effect on our relationship with the object.

The research methods needed to examine what aesthetic and functional attributes of packaging allow packaging to transform from a primary use to a secondary use?

### ***The chosen method of enquiry***

The following section describes what research methods were chosen.

The diagram below (Fig 14) lays out the methods used in this study and is then followed by a more detailed description of what these methods were, and why they were appropriate.

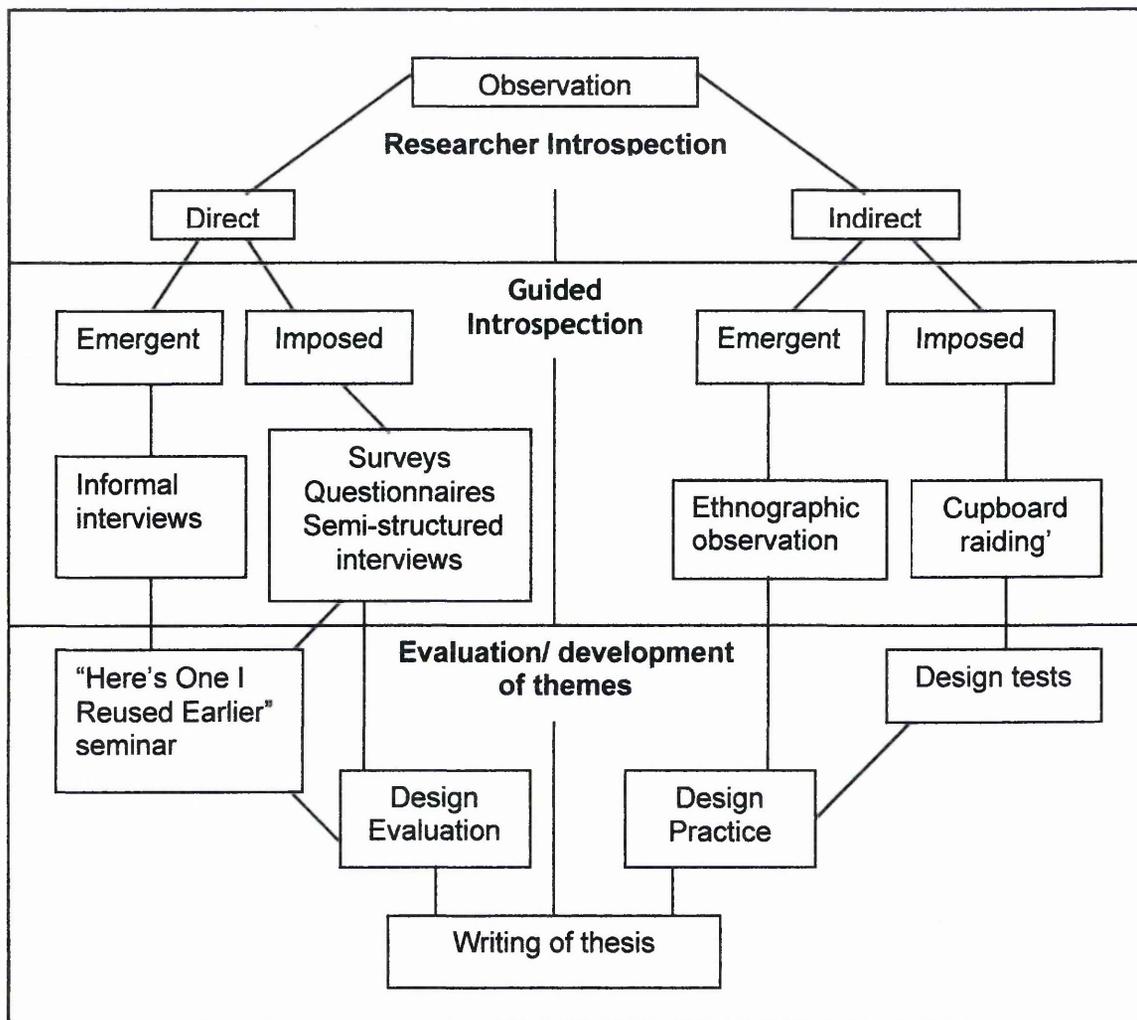


Figure 14: Diagram to explain the chosen methodology and methods

### ***Introspection***

My first consideration of packaging reuse and different modes of disposal was through initial researcher introspection (Woodside 2004), where I thought about my own behaviour and interactions with packaging items. Although a practicing designer the observation was of me as a consumer using products and then deciding what to do next with the packaging based on a number of different factors. On closer inspection and reflection it became apparent that there are packaging items and ranges of products that are designed to have greater value to the consumer than others. Some packaging items appealed to me because of their aesthetic qualities, others because

they seem to have an added value or possible after-use beyond their original function as packaging.

After the literature search, cultural categories (McCracken 1988) were reviewed in respect of the author's initial researcher introspection. The author considered the packaging items she reuse and why she reuse them. She examined the design elements of the packaging liked and reused, and if and why they affected the decision to save or dispose of items. The review and development of cultural categories such as environmental context, the effect of surface design and branding, materials etc. helped to identify cultural themes and helped direct the construction of the surveys. They also helped in the data analyse stage where relationships, matches and miss-matches were being sought to gain a greater understanding of the subject.

The researcher introspection was initially important to realise the research question, and then later as part of the validation process once the interviewee findings had been broken down and recorded separately. Rather than create bias, the initial introspection and review of cultural categories provided important understanding to the analysis of the data. McCracken points out that unlike other research traditions, in the qualitative case, *"this material is the very stuff of understanding and explication. It represents vitally important intellectual capital without which analysis is poorer"*. (1998. 34)

The research methods moved from researcher introspection through to guided introspection<sup>4</sup> (Woodside 2004), including direct observation where the author witnessed the reuse first hand, and indirect observation (Wilson 2002) where respondents were asked to provide their self-observations and think aloud about their actions and feelings regarding packaging.

Using both researcher and guided introspection expanded the sample beyond the researcher but also incorporated details of the researcher's life experiences. This combination was used to uncover similarities and differences between the researcher and participants' experience. The researcher's experiences were not shared with the research participants, but helped provide a deeper understanding and confirmation of the material than either researcher or guided introspection alone could have provided.

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<sup>4</sup> Guided introspection: People other than the researcher are asked to introspect or think aloud about themselves and their actions; answering a written questionnaire is one form of guided introspection. (2004: 990)

### ***Observation***

The process of observation was expanded to other contacts in the author's home region of Nottingham, allowing easy access to a wide range of people.

It was important to carry out the initial direct observational research with non-participants before involving research participants in the research process.

This method of collecting visual evidence was chosen as it was not subject to the possible effect of the participant's interpretation of the research questions, retrieval of information from memory, editing and reporting as other methods could have been.

With much of the ethnographic research being visual and needing to be seen in context, it was recorded as notes and photographs. The photographs allowed me to build up an initial inventory of reuse activity which continued throughout the study (see appendices), in people's homes but also in other locations where packaging can end up once re-categorised such as outdoor events, markets, antique fairs and public houses. This photographic inventory was then added to and used throughout the study to examine and review relationships, themes and patterns, allowing for a more accurate review of the research and preventing subtle and easily overlooked relationships being missed (Prosser 1998).

When collecting indirect observations and asking participants if they reused any forms of packaging, most said no or under-estimated the number of examples they had within their homes. Once the author looked around their home, evidence of reuse was normally found.

### ***Visual ethnography: 'cupboard raiding'***

This stage involved cupboard raiding and looking into sheds, medicine cabinets, kitchen drawers, pantries and garages (Fig 15).

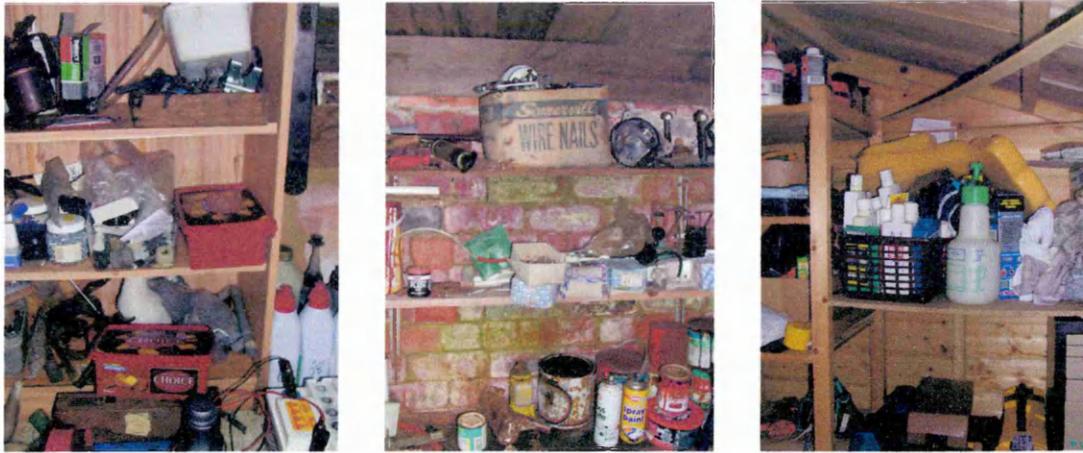


Figure 15: Examples of sheds and areas of storage where reused packaging was found.

'Cupboard raiding' a method developed as part of this study to examine back stage cupboards, sheds and garages, was a significant part of this research and provided important information about consumer behaviour involving full, partially used, empty or reused packaging. As the storage, hoarding and reuse was normal behaviour for the research participants, they did not see the relevance or in most cases even remember that the packaging existed in these places, and therefore using only indirect observation would have left many examples undiscovered.

The research participants were behaving as they normally do according to the environment they live in, the interactions of others and objects they have around them. As the researcher with an idea of cultural themes to examine, certain aspects of the situation were immediately relevant to the research and others only became so on further reflection of the research findings.

My approach to the photography was overt, as participants were happy for me to take photos of packaging in their homes even in cupboards and sheds. Few had issues with allowing access to dark corners of their home, although none had been given specific warning that this would be something I would want to look at.

Some instances of photography where permission from the individual was not given were outside the domestic environment. These occurred when reuse behaviour was witnessed in public places such as tourist attractions and public events, and the identity of any individuals concerned has been obscured.

Whilst this observational research providing evidence of a variety of packaging reuse was important, it needed to be extended to a larger sample. Further indirect

ethnographic techniques of surveys, 'show and tells'<sup>5</sup> and questionnaires formed the next stage of the research.

### **Surveys**

The visual data was triangulated and validated by surveys, questionnaires and interviews.

An emailed survey was sent out to 30 non-expert consumers working at the UK retailers Boots the Chemist and Next PLC. within the Nottingham and Leicester region. This region was chosen due to its diverse population and its proximity to the researcher. A roughly even selection of male and female interviewees was selected, some single, others married, but all either homeowners or renting properties. The occupations ranged from administration through to technical departments, with the age of the interviewees ranging from 22- to 63.

The survey asked what items of packaging the participant reused, a direct 'category' question (McCracken 1998), intended to be brief and open in style in order to allow the receivers to give formal answers to inform the subject.

The survey responses provided a comprehensive list of reuse behaviour and information about the most likely packaging items to be reused and most popular secondary uses for these items. It also provided interesting insights as to the respondent motivations for reuse and how they regarded their behaviour, responses ranged from embarrassment, pride in their behaviour and general lack of interest in reuse.

The survey was a useful way of reaching more consumers and gaining quick insights to back up the previous observation work, it also provide insights as to which cultural categories needed further investigation.

### **Questionnaires**

Posted questionnaires were sent to 20 non-expert consumers in different geographical locations in the UK. The criterion for the non-expert selection process was to provide a mix of gender, age, family status and living arrangements. As with all the research

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<sup>5</sup> 'Show and tell' describes where individuals were asked to show me reuse examples within their homes. or photographic evidence.

participants, a level of practical involvement with packaging was required, but this criteria was easy to fulfil as it included all those who purchase consumer goods. The only exceptions would be those that would be classed as extreme samples such as possessive accumulating (Belk. 195; 141), hoarders, or those who are self-sufficient and do not buy packaged goods.

Selected participants for the posted questionnaire fell into two categories, either friends of friends, or contacts of an ex work colleague, and allowed the research to extend beyond the East Midlands area. To prevent some of the confusion regarding the terminology concerning packaging or product, reuse or recycling, the questionnaire started with definitions of what is meant by packaging, and reuse. Initial questions were broad in nature and asked if the individual reused packaging and if they bought second-hand goods. The questions were designed to gain more understanding of the relevance of the cultural categories such as consumer types, and motivations for reuse. Questions enquired about reuse experience and when and where they might have been taught to reuse.

Two questions asked the participant to list any packaging items that they wished were reusable, packaging they liked, and why. These questions were designed to see the extent of participants interest in packaging, and whether they really considered it as anything more than inevitable waste.

The data from both the surveys and questionnaires allowed a list of common packaging reuse items and a hierarchy of uses for these objects to be drawn up (see appendices).

The findings from both the emailed survey and posted questionnaire helped form the basis of the questions used in the semi-structured interviews.

### ***Semi-structured interviews***

There were two stages of interviews with a participant base of 6 'non-expert' individuals to provide two different levels of enquiry. Using the same participants for both stages rather than using different ones meant that the individual's different values, behavioural traits and beliefs could be brought to the subject, making the findings from the second interviews more useful being put into context and related to the particular consumer profiles already built up from the first stage.

The interviews were conducted using consumers from the Nottinghamshire region and were chosen due to their geographical location, different age profiles and lifestyles. The interview sample size was limited, as this study was conducted by one person and set out to understand particular grounded phenomena, and not represent a population. The participants were selected due to their range in economic circumstances, family backgrounds and age, but were not intended to include the whole spectrum of consumers. Due to the sample size, the participants were selected to provide a picture of 'typical' consumers, standard participant information can be found in the appendices. The interviews required the participants to be introspective and think about their experiences and beliefs, and as the interviews were conducted in the participants' homes, physical evidence was available to confirm the individual's introspection. Most individuals felt comfortable discussing and showing me their reuse activity alongside their waste categorisation and disposal process. Conducting the interviews in this environment allowed me to observe the types of packaging and places where it existed without restriction, providing direct and indirect observations (Wilson 2002).

Both sets of interviews were taped, transcribed and then analysed to discover themes, questions, generalities and patterns. The transcripts were re-read and thematic files were manually completed illustrating specific themes. The transcripts were used throughout the study to reflect upon ideas, check understanding and clarify emerging theories. Overarching themes then became evident and were used in design evaluation; these are documented and interpreted in the main body of the thesis.

### ***First stage interviews***

The first interview was designed to gain an initial understanding of the interviewee's general attitudes to consumption, disposal and packaging reuse. Questions were asked that were not directly related to packaging or reuse, but were designed to uncover thoughts held that might be applicable to choices made later in the interview process, and reveal any unconscious or conscious editing of answers by the participants.

Due to the length of interviews (90 minutes minimum) and the intimate nature of them it allowed the author to enquire at greater length about some of the feelings the interviewees had towards material objects, their environment and their self-presentation. Questions asked about the individuals taste in home decoration showing

different images of rooms within houses to gauge responses to new materials and décor compared to older and more natural. The participants were asked to take part in 'show and tells' where they were asked prior to the interview to find a piece of packaging that they particularly liked and explain the reasons why. These object related narratives allowed the participant to describe physical features they liked and develop an open-style of discussion based around something they were familiar with. Further packaging samples were used by myself as tools to gain an understanding of the individuals likes and dislikes. When looking at and touching different packaging items participants started to discuss examples of what they considered useful in contrast to other items they disliked.

Familiarity with the packaging caused some initial problems when interviewing individuals as they had prior understanding and feelings towards the products the packaging had contained, and the subject of waste reduction – mainly recycling. This confusion and mixing of the terms 'recycling and reuse' was an obstacle that had to be circumnavigated. This was achieved by allowing the participant room to discuss all aspects of sorting, categorising, identification for recycling and reusing that provided some useful insights into the importance of this domestic ritual to the individual and their attitudes to packaging waste. This approach also allowed the author to gather evidence as to how terminology was being used by the participant and with minimal obtrusion the participant was guided back to the subject of concern – reuse, by discussing packaging objects on display around the participants home and using them as interview prompts.

Structured questions were used to provide understanding of material values and test the theory that certain products and materials have an imminent presence as rubbish (Hawkins 2001.9), interviewees were asked to list artefacts that they associated with wood, metal, plastic, paper/ board and glass (Chapter 4).

Another question asked what brands the interviewee was loyal to, probing deeper by asking what car they drove and what mobile phone they used if any. These questions were intended to get a greater feeling for how brand aware the interviewees were, what type of consumers they might be, and how this might affect their willingness to reuse items.

### ***Second stage interviews***

The second interview stage built on themes that emerged from the first interviews, enquiring deeper into specific areas such as material values, processing and finding

more evidence and gaining a greater understanding of the area where packaging is diverted and remains within the home 'twilight zones'.

Questions within the second stage of semi-structured interviews and the design evaluation exercises were designed to gain an understanding of the different aesthetic and functional attributes objects need within the different environments. Questions relating to Goffman's (1969) concept of a front stage and back stage of our lives were used to understand the role objects play in display and presentation of ourselves. An exercise was included where participants placed objects in order of preference.

This exercise was designed to see if there were patterns in different people's responses and if certain materials, colours or designs were seen more or less favourably. The items ranged from packaging objects with a seemingly inherent permanence such as tin gift containers, glass bottles and wooden cheese boxes through too much more seemingly disposable items such as crisp packets, plastic water bottles and cardboard sweet containers. The results show useful patterns related to material types and design features; these are presented and evaluated in chapter 4.

### ***Design tests***

Building on the cultural themes and findings from the observation, surveys, questionnaires and first set of semi-structured interviews two designs were created to be used within the structure of the second interviews. The designs were used to build on and test some of the findings from the earlier stages of ethnographic research. This research provided evidence relating to some of the literature themes from Lucas and Gregson and Crewe, that one of the factors affecting the likelihood for packaging reuse to occur is the environment the packaging enters and how it can be processed within that space. As different consumption and disposal behaviour was displayed in the garden compared to the house, the domestic garden emerged as one of the most likely places for packaging reuse to occur and therefore the garden was selected as the context for the design testing.

The design projects research process involved reviewing the reuse examples in the garden, talking to people and observing outdoor spaces such as allotments, sheds and gardens. Composting networks and The National Vegetable Society were contacted to see if they had any insights or understanding of the role of packaging and packaging reuse.

Packaging research took place looking at current products on the market and the way they are currently packaging and displayed for various retail outlets. Research was undertaken to understand what activities take place in this garden and how various products are used. These findings were fed into the development of a reusable packaging solution resulting in a 3D model.

A design board showing the current packaging format was presented alongside the new 'reusable' design as part of the semi-structured interviews. Interviewees were asked to give their opinion of the two designs and asked if they preferred either, and if so, would they be prepared to pay more for either design.

Further design tests were carried out to test findings from the first exercise and explore a less prescribed approach to packaging design for reuse.

A3 design boards explored the initial theory that aesthetics, branding and conscious design for reuse can be used as design tools to affect the reuse potential of certain packaging items. The tests also tried to understand to what extent the design of the packaging could connect with the consumer's emotions and how important the functional attributes of the packaging are to aid reuse. The designs, interview feedback and evaluations are described further in chapter four.

The second stage of interviews further explored the concept of the home as a processing unit referred to in the literature chapter (Lucas's 2001). Lucas presented an historical account of waste separation, processing and disposal, and focussed on the rejection and alienation stage of the processing of objects. He himself explained that he only touched on the dynamics of rubbish and consumption and therefore this study extended it by conducting the interviews within the subject's homes. Participants in the second interview were asked to describe the process of shopping and bringing goods into the home. They were asked to demonstrate how the shopping enters the house and how they sorted, stored, used and finally disposed of it.

This information was analysed and presented as a diagram to map and gain a greater visual understanding of the process, reviewed in chapter 5.

### ***Design practice***

Throughout the study the commercial packaging design briefs from UK companies such as Marks and Spencer, Heinz and Northern Foods were changing in focus from those of cost reduction and shelf impact through glossy branding and new pack styles to a greater focus on natural materials and reducing the weight and complexity of

packaging designs. Consumer research indicating that over-packaging was becoming less acceptable to many consumers' and briefs such as the M&S sandwich pack were developed and presented.

Rockware Glass commissioned a piece of video ethnography (Naked Eye, 2006) to build on the initial findings of the Glasspac report (Winder and Dallimore 2004) that presented glass as a material that communicates quality to consumers. The ethnographic research was an exploration into occasions in consumers everyday lives, looking at shared times and individual moments and how consumers behave differently at these times. The footage of five participants was very general, but provided some examples of how glass is viewed as a durable, desirable material, whether through specific examples where a participant discusses her reuse of jam jars for holding loose tea, or the repeated reference to candles in glasses for stage setting at shared moments.

This research helped inform a design brief from Rockware Glass which asked the author as part of Design Futures to develop concept designs for bottles for the whiskey and light spirit markets to increase consumer interaction, add value and to provide 'something special' for the brands. The resulting designs explored the way packaging can build in further open-ended function and attachment and are reviewed in chapter 4.

### ***Design exploration and evaluation***

The original intention was to create more design tests based on the findings from the semi-structured interviews to uncover more consumer responses to pack designs created to be reusable. However the findings from the interviews changed the emphasis of the study from focussing on the object affecting packaging reuse to one that acknowledged the user and context or system as fundamental to whether a packaging object is reused or not. Simply focussing on designing objects with greater or lesser degrees of reusability designed into them and testing them with consumers would have directed the focus away from understanding the significance of the consumer act of processing waste and the decisions this involves.

Design practice combined with the evaluation of 'real' pack designs proved a useful way of testing, observing and analysing the themes and findings from this study. The author could have concluded the study with a table, framework or toolkit for designing for reuse developed from a series of repeated design tests, however that would not have captured the complexity and grounded nature of the subject.

### ***The categorisation and naming booklet.***

It was apparent from various research studies from such as Lucas, Thompson and this study's research findings that the categorisation of packaging items relates to amongst other things, the material the item is made from, the form and the perceived function. To explore this in the context of this study a booklet was designed and sent out to a consumer base of nine. The booklet used images of various types of packaging ranging in material type, original intended purpose, and design. It asked the consumer to firstly give a description of the packaging item pictured and then mark where the individual felt the packaging lay in descriptive terms. These terms ranged included decorative – functional, old – new, valuable - worthless and reusable – non-reusable. This exercise was used to explore and challenge some of the earlier analysis and assumptions regarding pack shape, material and design and how that affects consumer perceptions and interpretation of the object. The results and findings from this can be found in chapter 4, the booklet can be found in the appendix 7.

### ***'Expert' interviews***

Informal interviews and discussions took place with packaging 'experts' such as staff from the UK design agency Dragon Brand, Design Wales and Design Futures. These were limited in their usefulness, as most referred back to their experience as a consumer rather than providing any insights as Designers. This was not surprising, as designing for reuse has rarely been considered by packaging designers in their professional roles. A number of designers have however shown interest in this study and therefore attended the event designed and planned as part of this study "Here's One I Reused Earlier".

### ***Seminars: Here's One I Reused Earlier***

In order for the three interested groups; designers, packaging industry and academics to get together and share ideas about packaging reuse, a one-day seminar was designed and arranged called "Here's One I Reused Earlier". The event was held in the independent cinema "the Showcase" (itself a building that has been transformed in use from its primary function as a car showroom) in Sheffield on March 17<sup>th</sup> 2004.

Attendees included representatives from retailers such as Boots the Chemist, industry such as INCPEN, the Institute of Packaging and Faraday Packaging Partnership, designers including Design Wales, and Dragon Brand. Academic attendance included Loughborough University, University of Sheffield, and Kingston University, from interests as broad as Materials science, Geography, Industrial design and design for Sustainability.

Although invitations were sent to contacts within brand owners/ manufacturing companies such as Unilever, Proctor and Gamble and Cadbury's, none attended the event.

This only emphasises the lack of commercial interest open-loop reuse could attract at this point in time.

The invite asked attendees to bring photographic evidence of packaging reuse within their home, and a range of poster sized reuse examples were displayed around the conference room.

Complimentary research presentations were provided by Tim Cooper (Centre for Sustainable Consumption, Sheffield Hallam University), Nicky Gregson (University of Sheffield), Tom Fisher (Sheffield Hallam University) and Anne Chick and Paul Micklethwaite (Kingston University). Bringing together researchers and practitioners from different disciplines such as design, geography, engineering, social sciences and design for sustainability resulted in some clarification as to the strengths and weaknesses of some of this study's emerging theories.

The work was also presented at other cross party industry events such as Faraday Packaging Partnership's annual conference and Learnshop Seminars at various UK industry exhibitions such as Packaging Innovations (2006) and Pro2Pac (2007).

### ***Continual photographic evidence***

Once colleagues, students, friends and family knew the subject of my study they reported back to me with examples of packaging reuse in the form of photographic evidence or actual samples. Although this indirect photographic evidence of reuse was useful, without seeing the object in the domestic environment or 'system' it existed reduced the meaningful information that could be gained from the images. Within the home the individuals would walk the author through the process of products entering the house and the processing of the goods through the domestic environment. They

could physically demonstrate their sorting behaviour showing me the storage places and the material objects.

### ***Data collection and analysis***

The initial data from observations and the emailed surveys provided examples of consumer behaviour related to the decision process of whether to dispose of or reuse packaging. The visual evidence in the form of photographs allowed categorising and groupings of behaviour and object related themes. Further examples of similar or different behaviour were collected through the questionnaire and first interview data, and using a grounded approach to the data analysis, themes or questions were developed that provided an appropriate direction for the further research stages. An example of this was the early observation that many packaging items were being reused in the garden, this was initially gathered through the lists of packaging reuse provided through the emailed survey and initial observations. To gain a greater understanding of this, photographs were taken of individual's gardens and reuse behaviour, and from the analysis and grouping of the data it became apparent that packaging reuse within the garden environment was different from reuse within the house. However it became apparent through further reading of the data and more observations of different gardens that not all spaces within the garden are treated in the same way. Domestic gardens and spaces nearer to the house were often regarded as more decorative than other more distant spaces, and therefore design tests and questions were included in the semi-structured interviews to examine this further. Through this later research it became apparent that what was true of the garden was true of the house and a clear 'front stage/ back stage' (Goffman 1969) aspect to the home and packaging reuse emerged, see chapter five.

Other themes were developed using the same methodology, where an initial observation or phenomena was built on by observing and recording similar or different behaviour. The initial research provided data regarding the object and the environment or context of reuse, but the later questionnaires, observation and semi-structured interviews provided the understanding of the different motivations for reuse and how important consumer types were to the study. This allowed the author to identify the need to examine consumer types in more detail.

### ***Typification***

Wilson describes the development and profiling of 'types' of people as a key process for making sense of things. They provide a way of identifying and comparing social action, using defined criteria for the assignment of phenomena to type. (Wilson 2002:4).

Wilson describes Shutz's development of ideal types to present the different ways humans learn and gain knowledge. We seek information differently at different times and in different circumstances and can shift between '*well – informed citizen*' to '*expert*' to '*man on the street*' (Wilson 2002).

The development of 'types' was used in chapter 6 to build up a profile of different types of consumers and their motivations to reuse. Interview participants were then viewed against this map of 'types' to enable patterns of behaviour to be examined and understood.

### ***Relationships between the methods***

The combination of the methods described above helped to provide a comprehensive understanding of packaging consumption and disposal practice. Combining different ethnographic tools such as observation, interviews, surveys and categorisation exercises, and repeating them as appropriate allowed the author to gain insights into the different packaging reuse behaviour of different types of consumers. Initial questions were developed through researcher introspection and defined and developed through guided introspection. An initial understanding of the collected images of individual packaging reuse was built up by using the data from the guided introspection research stage, where themes were identified and incorporated into the next research tools for further evaluation. The questionnaires and later semi-structured interviews were developed to evaluate the early themes and provide insights as to the three main aspects of reuse; the user, context and packaging object. The data provided an understanding of the common consumer interpretations of different design features. These could then be incorporated into further design work and commercial design practice in order to evaluate and develop the ideas further. The methods used, their order and connections are explained by revisiting the diagram presented at the beginning of this chapter (Fig 16).

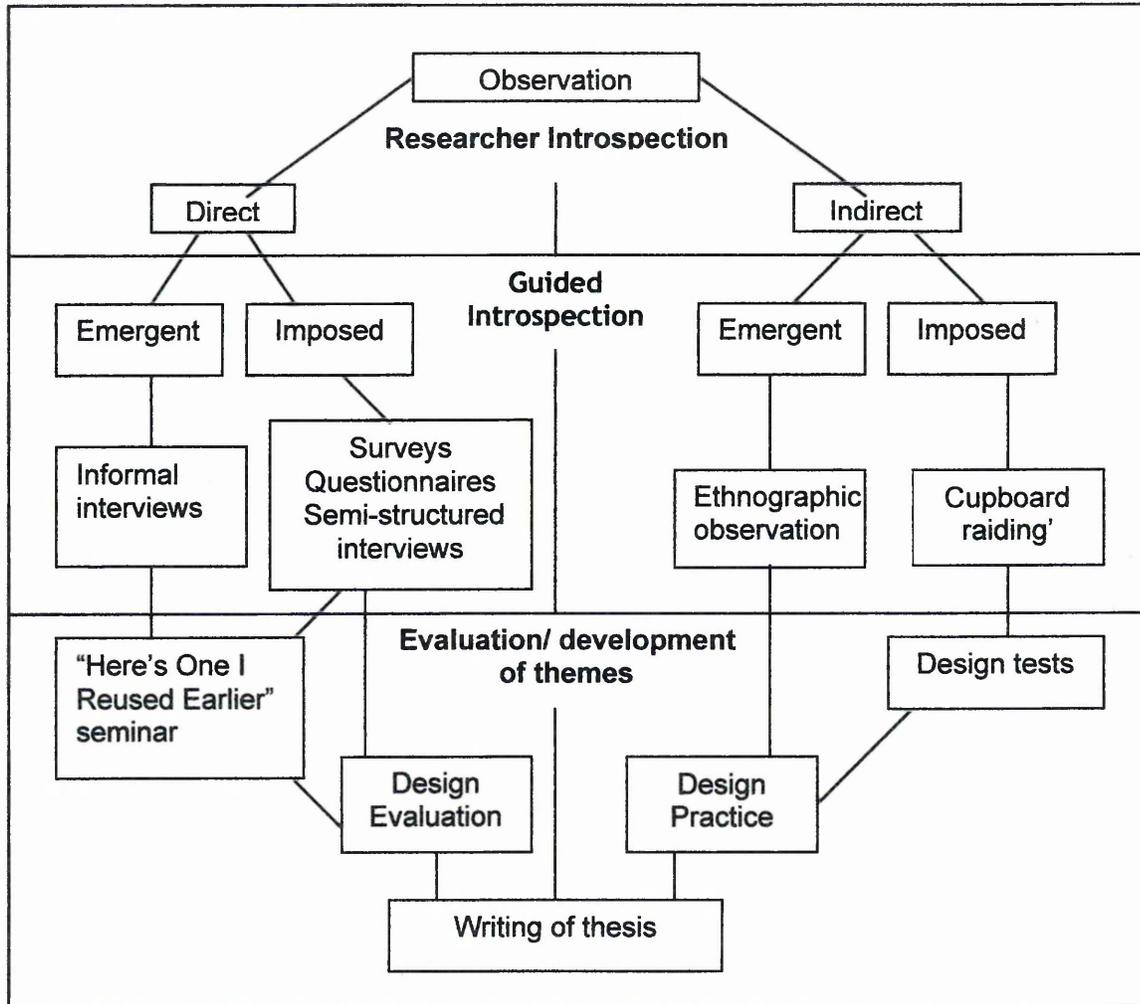


Figure 16: Diagram to explain the chosen methodology and methods

Using design tests within the second stage of semi-structured interviews allowed verification to occur of the previous findings and assumptions. The response of individuals to the design proposals demonstrates the value in this approach to designing that starts by understanding the practices into which its results are intended to fit. Design evaluation and direct observation continued until a true understanding of the data could be confidently assumed and resulted in two complementary ways of ordering the reuse uncovered by the research. The first distinguishes four 'tendencies' for reuse. These are distributed on two axes using Goffman's notion of the front and back stage of every day life against the durability of the reuse; front stage/ back stage against long term/ short term (Fig 60, page 144).

There then followed a discussion of the idea of function, which draws on Schiffer's principle of 'system' function, and lead on to a discussion of the temporal and spatial dimensions of the processing of packaging (Fig 86, page190).

### ***Challenges to the methodology***

Although many individuals were happy to share their reuse activity, a minority were embarrassed by their behaviour and were reluctant to discuss at any great length their consumption and disposal practice. These participants seemed to disavow their connection to reuse and the 'make do and mend' culture.

Over familiarity with the subject also caused some problems when interviewing individuals and using packaging objects as prompts. Although many people reuse packaging, their motivations for doing so are individual and based on unconscious decisions. Asking direct questions about packaging objects and their thoughts about them provided little useful information, as participants were so familiar with packaging and its primary function they struggled to see beyond the primary use. A participant expressed little interest when asked to tell me what she thought of a Marmite glass jar:

*"I don't know what to make of this really, I suppose it's a bit boring".*

And when discussing a Tic Tack box:

*"This is pretty boring isn't it – I mean it's all that it needs to be – it's not meant to be anything is it".*

Most of the research participants were familiar with packaging and sustainable issues, but ranged from being not at all interested in 'green' behaviour to participating actively in domestic 'green' behaviour.

Some used their prior knowledge of related subjects to try to provide informed answers; others were completely free of any pre-conceived ideas.

Interviewees trying to please caused some difficulty, with some assuming that the author would want to hear their views about recycling as they were being interviewed about packaging and waste. Many referred continually to the term recycling at stages within the interviews, and rather than correct them of interrupt their flow, the text was evaluated later to ensure the meaning of terms was understood using the context and structure of the surrounding interview.

Participants were encouraged to move on from the topic of recycling by moving on to other questions within the semi-structured interviews that enquired about other aspects

of consumption. However the issue of recycling over-shadowing other methods of waste management is an important factor in this study, as to be recycled is another secondary function of packaging.

For participants to anticipate shifting values, or how they might use the item in the future in many cases was impossible, as how time and context may affect the usefulness or value of the object is very difficult to predict. Instead direct observations and asking indirect questions about objects and consumer behaviour was much more fruitful.

Prescriptive design work such as the first design project was successful in getting reaction and opinion, however most of the evidence of reuse is of a non-prescriptive nature where the consumer finds their own individual use for the object. Some of the most useful insights were from the second less-prescriptive design project that looked initially to be unsuccessful, but actually provided more useful insights as to how people make decisions about reuse.

### ***Methodology conclusions***

To understand domestic consumption and disposal practice it was important to put the user at the heart of the study/ research. This meant understanding the current interaction and behaviour with packaging within the domestic context to uncover and see opportunities that might be adopted naturally if the design was appropriate. The methods needed to be a combination of direct ethnographic techniques with much of the research occurring in the subject's own home so not only existing behaviour could be witnessed, but the interviewees could demonstrate potential packaging interaction and reuse with the design tests.

This studies research approach is qualitative, but if the approach had been more quantitative then methods such as bin weighing and product tracking might have been employed. These may have provided data about what reuse was happening at that point in time, but provided less useful information about consumer motivations and behaviour that may be used for future strategies to increase reuse.

Recommendations for further quantitative research in this area (see chapter 6) to build on the findings of this study, include using RFID tracking technology to measure packaging going into the home and the quantity of waste coming out.

This type of work would build on the findings this study provides concerning the key times and places in the home where function is gained or lost.

The next section, the main body of the thesis, is split into three chapters reflecting the three main factors that affect packaging reuse; the object, the context and the user. The three chapters describe and discuss the observations made and sets them into a framework that allows the theoretical contribution of the thesis to be developed.

## **Chapter Four: The packaging object**

This chapter addresses the first of the three elements involved in packaging reuse; the packaging object. The emphasis of this chapter is to examine the different elements of the packaging object that may affect consumer reuse, splitting the chapter into three main themes to demonstrate the findings in relation to the relevant literature. The first section examines the significance of the material the packaging is made from and builds on research by Fisher, Hawkins and Baudrillard and the increasing attention of the packaging industry on the differing consumer reactions to synthetic or natural materials.

The second section takes aspects of the pack aesthetics and structural design in turn and examines what effect colour, texture, branding and shape have on the various functions packaging may have. Combining the work from such as Goffman with this study's research findings, this section examines the affect of the various aesthetic and design features on the spatial and functional aspects of reuse.

The third and final section examines in greater detail the transient nature of packaging and the ways it can change in function. It builds on the theories of Preston, Schiffer and Appadurai by introducing case studies examining the various functions of the plastic bag, and the results from this study's design tests.

Whilst this chapter focuses on the packaging object, the three elements that affect reuse, the object, context and user are not separate and do not work in isolation, and therefore the chapter gradually introduces the connections and inter-relationships with the context and user as appropriate.

This chapter is split into the themes that interrelate and affect each other, and details the research methods and the relevant participant responses to provide evidence and clarification of the themes being presented.

### ***1. The material packaging is made from***

The packaging material is made from forms a major part of the visual and tactile aesthetics and functional attributes of a pack. This section examines the material qualities of packaging and how it can affect consumer's willingness to reuse.

The proposition that the material packaging is made from can affect the messages and readings the consumer takes from the object is explored in greater detail, reviewing some design case studies that have exploited different materials to communicate different messages.

This section reviews the research methods used in this study to understand the affect of packaging materials on reuse, and describes the findings from the research and how they inform the further sections in the study.

The research uncovered examples of participant's feelings towards different materials, demonstrated through this comment from a 33-year-old male participant:

*“glass bottles are essential for cold drinks – they also have a perceived quality – duty free spirits bought on a plane no matter what the brand seem cheap if they are in plastic bottles”*

A female participant explained that she liked to drink certain products from glass due to the tactile qualities:

*“I have a thing that when I drink herbal teas I have to drink them from glass. I can't drink it from a mug because it doesn't feel right”.*

The many examples of strong feelings towards different materials highlighted a theme that needed further exploration. It was necessary to gain an understanding of the way consumers construct meaning and attachment. As part of the first set of interviews, participants were asked to list artefacts that they associated with wood, metal, plastic, paper/ board and glass, and the responses showed that non-synthetic materials, even non-permanent ones such as paper and board, were mainly associated with products with a certain permanence, quality and display value. Wood was associated with furniture and fittings, picture frames and garden fences. Glass with crystal, coffee jars, glass ornaments, drinking glasses, and lighting. Paper and board with books, wallpaper and newspapers. Metal was associated with cars, cookers, fridges, machinery and cutlery, yet plastics were primarily associated with commodity/ utility items, packaging and storage such as bags, containers, jars/ bottles, Tupperware and sandwich boxes.

Interview extracts revealed strong feelings towards packaging materials and the aesthetic qualities both visual and tactile of the items, supporting the findings in the Glasspac report (Winder and Dallimore 2004) stating that 74% of consumers believe glass is more natural than other packaging materials.

Participants in this study's interviews provided evidence that glass is a material associated with durability and quality:

*“Things like jars and that, because it’s a glass product – I think I should reuse it in some way rather than chuck it away. I think it’s because it seems more substantial and you feel it’s not a disposable thing”*

*“ I’ve got a passion for glass – I think of crystal straight away. Anything that’s glass I can think of is eating, drinking, looking at”.*

(extracts from an interview a 63-year-old female)

Building on Hawkin’s and Strasser’s theory that certain materials have an inability to create sensual attachments, it seems that in contrast to glass, other materials such as plastic have clear problems due to their lack of authenticity and understandable origin. This can affect the consumer’s attitude to the product inside and has led some retailers to change their packaging format from plastic to other materials to meet the consumer’s perception of how quality ingredients and less processed products should be presented. In the case of the UK retailer Marks and Spencer’s sandwich pack changed from a clear plastic skillet to the paperboard pack in 2005 pictured in Fig 17, Consumer research conducted by the retailer provided evidence of a general dislike of the plastic skillet pack. A packaging concept redesign exercise was briefed in by Marks and Spencer and undertaken by Design Futures. In response to the growing number of adverse consumer complaints regarding the quantity of plastic waste created from the plastic skillet, Marks and Spencer decided they needed a pack that created a feeling of homemade, authentic and natural, and therefore the packaging material needed to change. The new packaging design using paperboard and a corn starch window proved a success with consumers, and sales increased significantly as a result. However the lifecycle analysis of the two pack formats carried out by M&S as part of their CSR strategy showed little difference in the environmental impact of the two pack formats. (Environmental Resources Management, 2003). Although the pack displayed some environmental credentials, it seems likely that the success of the pack lay as much in the perceived environmental benefits read into the redesign by the consumer as the actual benefits.



Figure 17: Marks and Spencer sandwich pack - pack design and opening method.

Other approaches companies take to alleviate consumer's mistrust and dislike of packaging include attempts to disguise the material the pack is made from using different print techniques, surface coatings and laminates. These packs receive mixed responses as seen in an interview with Dave, a 37-year-old male interviewee when discussing plastic cheese packaging:

*"They've started wrapping cheese in plastic that's been designed to look like paper. I mean at one time cheese came in this plastic film that you used to cut yourself to death opening and now it comes in plastic with a matt finish to try and say you've got it from a deli counter – fantastic – fooling nobody..."*

These consumer responses are significant to packaging designers and industry as the growth in food packaging is mainly driven by plastic packaging even in the face of rising oil prices and a growing concern for the environment. (Mintel: 2006)

To explore these different feelings of material mistrust, and perceptions of authenticity, as part of the second stage of interviews, participants were asked to place in order of preference a range of packaging items. The 6 interview participants taking part in this exercise were supplemented by a further 2 survey participants.

Thirteen packaging items were selected that covered a range of materials, designs and primary functions within the fmcg (fast moving consumer goods) sector.

The packaging items can be seen in the appendices.

Giving points from 1 to 13, with 13 points being given to the piece of packaging ranked highest, the following averages and can be given to the packaging items:

Wooden Camembert container	11
Metal churn	9.9
Small glass hand cream glass jar	9.8
Blue glass bottle	9.8
Clear glass bottle	8.6
Small glass olive oil bottle	8.6
Thornton's cardboard carton	7.8
Tango plastic bottle	6.0
Plastic film container	5.2
Deodorant aerosol metal can	5.0
Buxton water plastic bottle	4.1
Ribena board laminated tetra pack	3.9
Skips laminated crisp bag	2.5

Looking at the list it is not until the eighth packaging item in the hierarchy placement do you get to an item made from plastic. The seven placed above are made from wood, metal, glass and paperboard. The bottom five are made from plastic or materials that feel synthetic such as the tetra pack that has a plastic coating to the board and a plastic cap. The reasons for the positions are now looked at in more detail to uncover the complexities of the participant responses.

Alyson, a 43-year-old female placed the packaging items in the order pictured below (Fig 18).



Figure 18: Packaging placement 1 (left to right)

She did not really know why she put the metal churn first (originally it contained individually wrapped Swiss chocolates and was presumably designed with added value in mind); she explained that there is something appealing about the material.

*“Metal – there’s something a bit quirky about it – a milk churn for chocolate”.*

She explained that she liked the chunky cap on the churn and thought it made it look expensive. She also placed the traditional wooden Camembert packaging in a relatively high position and explained

*“it just says it’s really nice in the wood packaging”.*

When describing why the other packs were further down the line she dismissed them as being merely functional packs. The last five packs were all made from plastic, plastic laminate and paperboard.

When questioned about the low positioning of the plastic film cartridge pack she explained that it is just a functional item but that she would not always throw it away due to its practical design features rather than the look of the item:

*“ I do use it sometimes for putting bits and bobs in you know seeds things like that – so it is quite useful item is that cause it’s got the lid on that has a good seal to it. From an aesthetics point of view it does nothing for me, but it’s useful in that way”.*

This participant made a clear distinction between those packs that offered something pleasing or ‘nice’ and those that were merely functional. She used descriptives such as ‘quirky’, ‘traditional’, ‘cute’ and ‘different’, along with the repeated use of ‘nice’ throughout her process of describing the packs made from wood, glass and metal. The packs placed lower in her hierarchy were mainly made from board and plastic, and in contrast were described as ‘useful’.



Figure 19: Packaging placement 2 (left to right)

Dave, the 37-year-old interviewee placed the packs in the order pictured above in Fig 19.

This interviewee had some trouble seeing the packaging item as an object in its own right. Like Alyson, the previous interviewee, he was constructing criteria for his ordering mainly based on functionality, and explained that the packs placed to the right were there due to them being useful. However unlike the previous interviewee he also made a decision based on his environmental understanding, which was largely limited to recycling:

*“ that I can’t recycle – I don’t like it (pointing to the Skips crisp bag) it’s not nice. I mean I use them everyday, but I don’t particularly think they add any value to a product.*

*The aerosol spray can men’s deodorant whatever – I wouldn’t be certain if I could recycle that – I do throw them into recycling bins, but I don’t think I should.”*

His responses to the packs were similar to the previous interviewee, again using ‘nice’ and ‘functional’ as ways to describe the aesthetic and practical attributes of the packs. However for Dave, recyclable packs were mainly described as ‘nice’ in contrast to Alyson who used the term to describe packs that she liked due to their visual aesthetics.

When describing the metal tin, Dave referred to the material the item was made from explaining it would probably prevent him from throwing the item away:

*"I don't know how I'd reuse it but I wouldn't throw it out until I'd probably found a use for it. Maybe slightly over engineered, but it's got a certain niceness to it".*

He explained that he liked the Camembert wooden cheese container because it is tactile and reinforcing the points made by Strasser and Fisher that the origins and understanding of the manufacturing process are important, he mentioned the traditional material it is made from:

*"If I had two pieces of Camembert at the same price, one wrapped in plastic and one wrapped in this – you'd have to go for this. You don't particularly want the packaging but it adds to the experience - I think this Camembert is going to taste tastier than plastic wrapped Camembert. And also you'd have no problems even if it went to landfill cause I know it would degrade. Like I might keep a few spices in there – whatever."*

The packs Dave described as merely 'functional' were made from either plastic or board, with the exception of the aerosol, but he placed it there because it could not be recycled. He discussed the merits of the remaining packaging items based on his understanding of their environmental credentials explaining that the plastic bottles were at least recyclable, so he had no problem with them.

These pre-conceived ideas about environmental solutions to packaging waste were identified from the start of the study as significant.

Dave throughout the interviews made decisions based on environmental instructions, however his understanding and interpretation of this information was often incorrect:

*"Oh it's got an arrow on it - oh maybe I can" (recycle it).*

When it was explained that the arrow (green dot) symbol he was pointing out did not mean it was recyclable, he had the following response:

*"Ok that's poor then isn't it, anyway I would throw it in anyway and let somebody else sort it out."*



Figure 20: Packaging placement 3 (left to right)

David, a 63-year-old male placed the packaging objects in order of preference (Fig 20). This interviewee also had initial problems separating the empty containers from their original primary function and his ideas about recycling. He described the first items in his order of preference:

*“In order it’s from the glass – I like glass, because to me glass I’ll use in the bottle bank. In other words it’s recoverable, secondly you can use them for other things – so there’s a storage reuse application.*

*Then the one I dislike the most tend to be aerosols because aerosols you use the contents and that’s it the whole lot gone”.*

When asked why he placed the two glass bottles in that particular order function seemed more important to David than aesthetics, he explained that his decision was due to the blue glass being probably not so easy to recycle.

He understood that it is more attractive for its selling purposes, but it’s less attractive for its recovery purposes. His way of categorising packaging items was not purely on aesthetics but also the practicalities of disposal as well as the functionality of the object:

*“Well I’d probably put the little round one the other way round if I thought about it more functionally, But I put it there in the first place because to me there is no secondary use to it, but it’s immediately saying what it is – it’s small and it could still be recovered, but I wouldn’t reuse. Something that size - I’d probably use the film canister. I use film canisters now to store seed; cause they are brilliant for it – they’re airtight and they’re also dark which seeds like.”*

Mary, a 21-year-old female interview participant, when describing her reasons for putting the items in the order again used the word 'nice' and 'different' when referring to materials other than plastic:

*“Urm.. The Camembert is the preferred end [“”] it’s nice because it takes away the plasticky taste from cheeses that you get – it’s a bit more of a – you get more of a feeling of it being from France or something with it being in this – Just a bit different”.*

This extract provides more evidence that for Mary the design providing a connection with the product’s origin was a positive thing.

Other participants placed the items in the following order:



Figure 21: Packaging placement 4. 39-year-old male preference (right to left)



Figure 22: Packaging placement 5. 22-year-old female preference (left to right)



Figure 23: Packaging placement 6. 30-year-old male preference (left to right)



Figure 24: Packaging placement 7. 34-year-old female preference (left to right)



Figure 25: Packaging placement 8. 56-year-old female preference (left to right)

This research exercise seems to support the findings from the Glasspac report and the M&S consumer research, that consumers do value glass higher than some other materials with it being placed above the carton board and plastic packaging items in the placement exercise. However wooden and metal packaging items were placed first and second in the overall ranked positions.

This preference for wood, metal and glass is consistent with the re-occurring descriptions of 'nice', 'traditional' and 'different' when discussing the items made from these materials. The plastic items were at best described as 'functional', at worst strongly disliked.

### **Conclusions**

This section set out to explore how the material the packaging is made from can affect consumer attachment and reuse, and presents the point that the choice of material is a

design variant that can be used by designers to build meaning into the object and create sensory attachments between the user and the packaging, with different materials providing different perceptions of authenticity linked to our understanding of their origin and methods of production.

As demonstrated in the pack placement exercise a clear distinction was made by many of the interviewees between packs that offered something 'nice' or visually aesthetic and those that were merely functional. 'Nice' being the term often used when participants were discussing packaging made from metal, wood or glass. There were references to the 'plasticky' nature of traditional cheese packaging in contrast to the natural feel of the wooden round box.

The packaging items made from plastic were generally described as 'functional' and were placed lower in the hierarchy of likes, and most interviewees liked the Camembert wooden container base on it being tactile and traditional/ authentic, seemingly adding strength to the point made by Strasser, Fisher and Baudrillard that the origins and understanding of the manufacturing process are important.

*“ Wood is so sought after today for nostalgic reasons. Wood draws it's substance from the earth, it lives and breathes and labours. Time is embedded in its very fibres, which makes it the perfect container, because every content is something we want to rescue from time” (Baudrillard 1996.37)*

Metal, glass, wood and carton board were the materials used to manufacture all the packaging items in the top half of the placement exercise, the remaining five were the plastic and non-durable items such as the crisp bag, tetra pack, plastic water bottle and deodorant aerosol. There seems to be a relationship between the placement exercise and the interview question regarding materials and what products come to mind when the interviewees think of different materials. The materials that featured in the top half of this hierarchy exercise were all the one's previously associated with permanency in the earlier research exercise.

This section's attempt to analysis the affect of the material the pack is made from has been useful, but it is clear that our relationship with packaging is affected by more than just the material. The next section looks at what other aspects of the design have a bearing on the values we give packaging throughout its life and how this can alter depending on the context and system the packaging exists within.

## **2. Design, aesthetics and packaging reuse**

This section builds on the findings laid out above that the material packaging is made from can affect our decisions regarding value and reuse, but introduces the other design factors that also contribute to feelings of attachment and greater functionality. Building on the work by Postrel, the section reviews the 'ingredients' (Postrel 2003) of packaging design and what affect this has on the object's various functional roles. The section explores the role packaging can have as a tool to communicate and how the spatial aspect of the home can affect its function as a way to present ourselves. It examines the relevance of Goffman's (1959) front stage, back stage theory when applied to packaging reuse, and looks at the complexities and contradictions when presenting ourselves through the use of packaging.

Vance Packard points to three different ways that products can be made obsolete:

- 1) *"Obsolescence of function. In this situation an existing product becomes outmoded when a product is introduced that performs the function better.*
- 2) *Obsolescence of quality. Here, when it is planned, a product breaks down or wears out at a given time, usually not too distant.*
- 3) *Obsolescence of desirability. In this situation a product that is still around in terms of quality or performance becomes 'worn out' in our minds because a styling or other change makes it seem less desirable".*

(Packard 1960.55)

Types one and three are of most significance to this study. The second type, obsolescence of quality although still a concern is difficult to predict for packaging. Design aspects that are seen as poor quality within the primary use of the packaging object may actually help to create a secondary purpose or vica versa. An example being ceramic packaging that when smashed is often used as drainage material within other patio plant pots, or the flimsy, low quality plastic bags actually being reused as many times, if not more than other superior quality one's. Their low quality here supports the secondary use of being bin liners or poop-a-scoop bags. Packaging does not have defined quality criteria or consumer expectations beyond the primary function. The contents are bought due to their quality and promised life span but its packaging is only expected to support this by providing promotion, protection and presentation.

Packaging's intended function is normally obsolete once the contents are removed or used up. This is the intended pattern for most packaging, but it is how this pattern can be interrupted or disturbed by providing further functionality for reuse that is of interest here.

Functional design features in the sense of what physical things the packaging can perform help secure the progression of packaging items to become reused. Designs need to allow for the convergence of the primary and secondary functions, enabling the packaging to perform equally well in both stages, whilst engaging the consumer to ensure the packaging reaches its full potential. However, as apparent in the research exercise described in the last section, physical functionality alone is often not enough to build reuse opportunities into packaging, it is also the aesthetics and style that give the object meaning and provide the required desirability for new secondary functions, avoiding the third of Packard's types of obsolescence: desirability.

To consider only the physical functional design features of packaging items as important would be to ignore the significance of aesthetics and their role in building relationships and attachment to objects. Postrel (2003:5) points out that

*"sensory appeals are everywhere, even where function used to stand alone. [...] and are increasingly personalized and intensifying".*

Aesthetics create the reason for objects to be used for a display function, as a way of personalizing our surroundings and us.

The blue wine bottles on display within two homes pictured below in Fig 26, demonstrate that objects do not exist within the domestic environment purely because of their functional attributes.



Figure 26: Two examples of blue wine bottles on display

Postrel explains this further by using the case study of 'fancy stoves' in the 1990's. She explains that the company making a particular brand of kitchen stove were well aware that their buyers were "look, don't cook" customers. She points out that these stoves were quite clearly providing something other than functional needs (2003: 76).

Postrel suggests that objects such as these are 'signals of wealth'. Whiteley makes the point that products within a consumer society are not just bought to fulfil primary functions, they are also bought to confirm status and confer prestige (1993: 137). As packaging often carries the branding and evidence of the purchase, packaging can be a form of communication, signalling other things the owner wishes to project. So in order for the packaging to take a new path it must have suitable material, sensory and design qualities considered by the owner as appropriate as a means of communication to a particular audience.

### ***Aesthetics as a means to communicate***

Postrel provides useful ways of thinking about aesthetics:

*"Aesthetics is the way we communicate through the senses. It is the art of creating reactions without words, through the look and feel of people, places and things". (Postrel 2003 p.6)*

Verdu when describing how objects can provide identity or communication explains that:

*Objects talk, they look at us, they comment on our identity amongst themselves. (2003, 161)*

In this study aesthetics is a term relating to the aspects of a pack design that mean something to the consumer. Interviewees taking part in this research did not talk about pack design using the term aesthetics; they regularly used the work 'nice' or 'lovely' when providing positive comments about the design of a packaging item.

*"I also had my tea bags in a very nice Yorkshire Tea tin. It was an offer that was on and now I use that tin all the time - I take the tea bags out of the cardboard boxes to put them in the tin which is lovely, yes, I reuse that."*

Extract from interview with a 63-year-old female.

Aesthetics or recognition of the 'niceness' of packaging within the home does not happen as an abstract concept in isolation to the context and individual's taste at a particular time. A mother of one explained in the survey what items she reuses both for herself and her young daughter:

*"I tend to keep boxes if they are rigid enough. I have one for my living room that used to be a shoe box to keep loose bits and bobs e.g. Diary, pens, nail clippers etc. and another shoe box for Chloe (her daughter) that was covered in Pooh Bear design that she keeps some craft items in".*

She mentions the surface design of the shoebox for her daughter, and therefore it can be assumed that the pattern is significant to its reuse.

If aesthetics is a means to communicate to others, others need to receive the messages in the intended way in order for it to be effective. Postrel (2003: 128) makes the point that meaning is in the eye of the beholder and that identities and tastes differ depending on the individual. The communication requirements change according to our social environment and audience. The audience that receives this communication here is key and is part of the analogy presented by Goffman (1959) where he considers consumers to be actors on a stage using objects as prompts.

Packaging as a means of presenting ourselves and the choices we make can be thought of as moving from *"simply providing on-shelf appeal to on-self appeal"* (Whiteley, 1993: 38)

### ***The front stage/ back stage of reuse***

This study's collection of images of packaging reuse in the home and garden, demonstrate a clear difference in the functional requirements and aesthetic qualities evident in the two different environments. Of the 27 reused packaging items plotted on the chart (appendix 8. p.281), 19 could be categorised as being back stage. On examination all these 19 items seem to be reused primarily for their functional attributes rather than branding or aesthetics. In contrast the remaining 8 packaging items that are reused in the front stage of the home are there primarily due to their branding and aesthetic design qualities.

Goffman presents the idea of the way we create social identity through the performance both front stage and back stage. This 'performance' is for others to see and can be observed in the pictures of wine bottles above (Fig 26), where two different

consumers have chosen to display their lifestyle through the products they have bought and packaging that carried the image and branding of the product.

In both these cases the blue glass wine bottle were categorised by the participants as an object of visual/ aesthetic appeal with no other function. Neither was performing any obvious function other than providing decoration to a room in the house.

Dave, the 37-year-old male, the owner of one of the blue glass bottle shown, discussed his loathing of mass consumption and dislike of brands. He provided visual evidence of this through his front stage display of books such as Naomi Klein's 'No logo' (2001) and other titles concerned with the environment and social issues.

He also chose to display objects and souvenirs from an extended tour of India and the sub-continent in a glass cabinet on his wall (see Fig 27 below). This echoed the kind of display described by Belk (1995) where *Wunderkammern* display cabinets and museums were used to display private collections of exotic finds between the 1500's and 1700's. Some of the items in Dave's glass cabinet were packaging items and global brands such as Polo mints and Coca Cola bottles (Fig 28) from other cultures. Belk finds this kind of collection unsurprising - in a society where consuming is everything, we surround ourselves with consumer goods and collect them. Consumer goods are now used in the way that handcrafted pieces were previously used to provide status and evidence of exposure to travel and other cultures.



Figure 27: Collection of items from Dave's tour of India



Figure 28: Collection of Coke bottles

Dave had bookcases full of photograph albums all labelled and dated ready to be picked up and looked through by any passing guest. He also decanted vitamins and minerals from their original brown glass packaging into clear jars that he felt were more attractive and suitable for display on his bedside cabinet.

This individual seemed initially to have a very no-frills, anti-consumption stance however on further inspection he was also particularly conscious of how the products he bought provided a front stage display of his beliefs and personality. For many of the items in his house, the function of front stage presentation was their primary function.

David, a 63-year-old male participant as part of an interview described his two garden sheds, one in his small domestic garden and the other in his allotment a few streets away.

Pictured below (Fig 29) is his garden shed in his domestic garden with its lace curtains and surrounding flowers and creeping plants, presumably helping it to fit in with the aesthetics of the front stage part of his and his family's life. When asked about his other shed he just described as somewhere he keeps all his allotment stuff – *"nothing special"*.

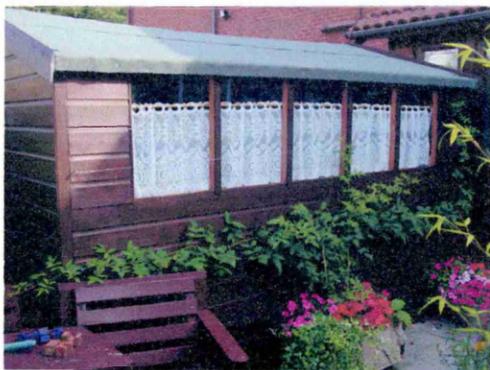


Figure 29: David's garden shed

Examples of the different meanings aesthetics can provide is demonstrated in some of the interview transcripts, if a piece of packaging is to be used within the garden environment it is less likely that colours associated with synthetic materials will be accepted. David, explained that his wife kept brown paper bags for him to reuse within the shed and garden environment but not white ones and admitted this was strange as both perform the same function equally well. David's wife's view suggests that colour can have different meaning and importance depending on the context.

The aesthetic qualities of packaging and the brand it may display seem to affect the likelihood of reuse depending how they work with the taste of the individual, how they fit the environment or the owner's 'system'. The importance of consumption for self-identity is well known and the curation of domestic interiors is a relevant example of this (Warde 1994, Dittmar 1992).

One person may value a particular brand because of the status it provides in their particular 'system' of interior decoration (Baudrillard 1996: 26). This front stage display is about identity creation, by displaying the owner's knowledge of what is stylish, well designed and in terms of the material of manufacturing process 'authentic'.

A 32-year-old female participant explained that she liked to decant the cheap bath crystals into the nice glass jar beside the bath. Explaining that nobody knows and it looks better in the bathroom. Conversely a packaging object might be made from a material, or display a brand or graphic design deemed as unattractive - unsuitable to presenting the self - and might be consigned to the back-stage part of the home; a cupboard, shed, attic or wardrobe.

Appadurai describes the diversion of commodities from their pre-destined paths and how they can gain "*aesthetics of decontextualisation*" (Appadurai, 1988: 26). This can

be seen in the examples of Dave's Coca-cola bottle collection and Indian tins pictured in Fig 27 and 28 above. Padros (2003:161) when describing objects that fit with the Alehop! design philosophy explains how objects that are decontextualised can be assigned alternative uses and have a longer and richer lifespan than might be imagined. The Coca-cola bottles in their primary use would have aesthetics appropriate to protect and promote the product in the particular country of origin, but once taken out of that country and put together with other bottles from other countries the graphics provide more intrigue, interest and status. The various designs of the bottles support a collection that provides nostalgia and sentiment for the owner, and intrigue and novelty to other audiences. According to Gregson and Crewe (2003), individuals often select second hand items to display their individual taste and their ability to appreciate these unique objects.

The items in the display cabinet were commodity items diverted from their usual destined paths as waste within their own countries of origin. Dave, the 'collector' displays the items in the front stage of his home as '*tourist art*' or just '*authentic objects*' (Appadurai 1988:26) The novelty of the brand's representation within different cultures is important to these items being valued as 'tourist art', they are different to the representations of UK packaging and brands and therefore are collected because of their authenticity and obvious origin. These collected items are valued objects and the material they are made from 'glass and metal' supports this acquired value. Alongside branding and the material qualities, shape, colour and texture were also mentioned many times in the research exercise described in the previous section.

If aesthetic value and meaning is hard to predict due to the changing tastes and individual needs of consumers the best we can do is to identify the "*ingredients*" (Postrel 2003) that can create or affirm our own aesthetic personas.

This chapter now takes a closer look at these physical design 'ingredients' that affect our attitudes to objects and willingness to reuse.

### ***The physical shape of the packaging item.***

The shape of the packaging item is significant to reuse because the object needs to have certain shapely qualities in order for it to perform its secondary function. As part of the research methods, lists of the observed and recorded packaging reuse were made and then categorised according to the physical properties the items had to see where patterns emerged in the physical form of objects. Obvious design attributes

relating to shape such as wide openings and reclosability were observed as key design features. Many research participants explained that they reuse or have seen others reusing reclosable margarine tubs. Here are just three accounts from different female participants:

*“Margarine/ butter tubs for freezing chillies and curries”.*

*“A LOT of older women seem obsessed with Vitalite margarine containers too! Primarily as sandwich boxes – but they crop up in the most unusual circumstances”.*

*“Vitalite (margarine) tubs for painting and decorating, sandwich boxes and freezing food”.*

A packaging-naming booklet was designed and given to nine research participants to fill in (see appendix 7). The booklet asked participants to describe the ‘packaging type’ and then mark on a scale how relevant they thought the descriptions were for each item, these ranged from decorative to functional, old to new, valuable to worthless and reusable to non-reusable. The items that were seen as most reusable were the square plastic OXO pack, the clear heavy plastic Kilner jar and the Plastic Malteser tub (Fig 30).



Figure 30: Most reusable items from naming booklet exercise

All of which are durable, easy to clean and have resealable wide openings. The other two packs that were seen as highly reusable were two cardboard carrier bags. The least reusable were those items that were hard to open and clean, and had small openings, such as an aerosol can, a small drinks bottle and the round shallow cheese box (Fig 31).



Figure 31: Least reusable items from naming booklet exercise

Although this was a small-scale exercise it provided some interesting correlations with the study's inventory of reused packaging, and so was helpful to understand what design features might aid reuse. When looking at the responses for any correlation between 'reusability' and 'decorativeness' – there were no real conclusions that could be drawn.

Reuse seems not to be dependant on surface pattern alone; the OXO pack was viewed on average as being low on decorativeness, but high on functionality, whereas the cardboard pack scored higher on decorativeness. Both are relevant to reuse depending on what the reuse function is.

Interestingly even though in the previous section the author had explained the high position of the camembert box in the packaging placement exercise, this did not mean that participants saw this pack as particularly reusable in this exercise. The pack was obviously generally liked in the previous exercise, but perhaps it seemed too shallow or not easy enough to clean to be categorised as reusable here.

Almost all the packs were considered more 'new' than 'old' with the exception of the plastic Kilner Jar and the wooden Camembert pack, it can be assumed this was due to their traditional styling and perceived (the Kilner Jar was presumed to be glass on a number of occasions) material.

As part of my professional design practice, when discussing alternative packaging designs with a UK food manufacturing company, they explained that they would like their retail packaging for their curry sauce mix to create less packaging waste. Their motivations for this were less to do with the environment and more to do with costs saving for both the packaging and the waste disposal. The packaging format as seen in

Fig 32 is a plastic take-away style re-sealable carton that holds the curry sauce powder and a carton board tray.



Figure 32: Chinese curry sauce powder packaging

Although it is easy to see that the plastic pack within the carton is a case of over-packaging, the impact of potential design changes is not so simple. Many of the participants in the research listed take-away style cartons like this one as a pack format they reuse:

*“The only thing I’ve kept for a long time is chinese take away packaging, they have these plastic things that they come in now and they’re quite good for things – you know if you’ve cooked some meat or something – instead of putting them on a plate with foil”.*

Extract from interview with

21-year old female

The design features of resealability, transparency, large openings etc. were the re-occurring features that were found most often on reused packaging. It can be safely presumed that many of these clear plastic packs would be reused and therefore be delayed on their journey to disposal. These plastic packs can be bought as empty freezer/ food storage containers, and therefore the reuse of the sauce pack could reduce the purchasing of new containers.

Other similar packaging examples include the moulded ceramic effect seen on the margarine tub in Fig 33 that disguises the plastic nature of the pack and provides a feeling of another material and added authenticity.

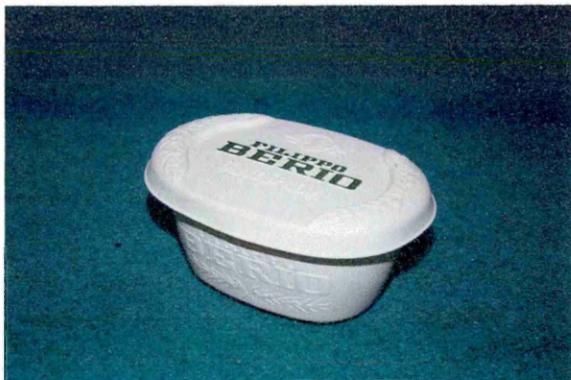


Figure 33: Plastic margarine tub with ceramic effect

Many participants said they preferred and reused square or different shaped glass jars over round jars (Fig 34 and 35), providing further evidence that shape supports the aesthetic qualities as well as the functional performance affecting the reuse of packaging.



Figure 34: Shaped glass jar



Figure 35: Various shaped glass jars

The table in appendix 8 takes the first 27 packaging items reused in the home from the list of 50 in the appendix, and charts their reuse in either the front stage or back stage of the home and what the likely primary reason for reuse is, i.e. the functional attributes of the pack, the branding, the nostalgia the design provides, the pack shape, or the prestige the pack provides the individual.

It is clear from the table that there are some relationships between whether an item is reused in the front stage or back stage of the home and what aspect of the packaging's design is the primary reason for reuse. In the back stage of the home the functional suitability of the physical properties is paramount. In the front stage reuse relies more

the aesthetic design, shape, branding, and what these provide to communicate and aid the 'performance' of the individual.

A participant in the Rockware Glass video ethnography explained that the shape and reusability of the glass packaging (to store loose tea) affects her purchasing decision when buying jam:

*"I like to buy the same brand and so I can have a few jars all of the same style and then I've got myself a set of containers whilst buying normal products at the same time – I don't see why you have to buy separate jars and throw away at the same time".*

In the case of the glass coke bottles; the Coke-cola branding is as much about the iconic shape of the bottles as it is about the typography or colour. The collection pictured in Fig 28 is largely about the iconic shape being the same regardless of the country of origin and language the brand is displayed in. In the case of the Coke bottles the only colour of significance is the red Coke-cola branding that remains the same throughout, but as seen with the blue wine bottles other reuse examples can rely heavily on the colour of the object.

### ***The affect of colour on consumer attachment***

Colour means different things to different people in different times and places:

*"What is true for colour is true for other aesthetic elements, even those originally created with a particular meaning in mind. Their connotations shift over time." (Postrel 2003. 95)*

The colour of an item of packaging rarely prevents the item functioning in the physical sense of a secondary task. Bright, bold colours are used to provide branding and communication that shouts and makes no attempt to be neutral or pretend the product is natural, as seen in Fig 36 and Fig 37 below.

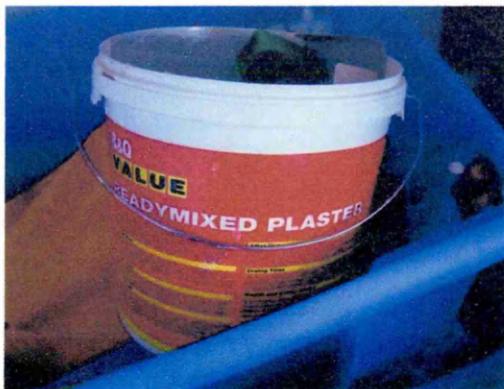


Figure 36: B&Q cement packaging

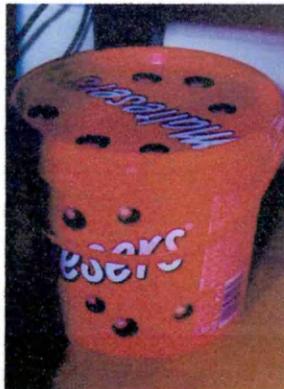


Figure 37: Malteser packaging

In contrast, muted colours usually reflect natural materials and allow us to relate to the origins and history of the object. Fig 38 shows 'Lush' soap packaging, promoting the natural qualities of the soap using muted tones combined with natural looking materials.

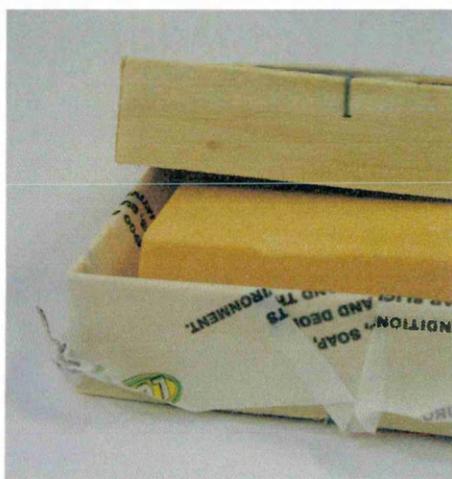


Figure 38: Lush soap packaging

The reasons for our interpretation of these colours may be due to bright colours largely became available with the introduction of new print techniques, plastics materials and the dyes that are compatible with relatively new materials and therefore carry a modern and synthetic message with them. Older brands or less mass produced products did not use bright colours because they were either not available, or too expensive. Therefore muted colours and natural materials seem to fit with the current trend in the UK towards less mass produced and authentic products. It seems likely that wooden

Camembert cheese box would not have proven so popular in the earlier packaging placement exercise if it had been stained bright yellow or red.

An example where colour has a functional, non-fashion affect on reuse is when the transparency of the packaging item is important. In many cases a functional requirement of the secondary use is for the light to transmit through the material. In the case of the garden cloche, Harris' goldfish bowl (Fig 1), or the Carte D'or ice-cream tub (Fig 40: 120) used to contain toy figures, the transparency is all-important for the content to survive, content identification or display qualities.

The display qualities of an item can overshadow its functional inadequacies, one of the interviewees Dave described how he decants vitamins from a brown glass container into a 'nicer' clear glass jar'. The brown glass jar, although not as attractive to the Dave, is designed that way to prevent the light affecting the active ingredients in the product.

### ***The texture and feel of packaging***

Some of the examples such as the Berio Olive Oil Spread containers in Fig 33 combine shape and texture to provide an authentic, mock-ceramic appearance. Texture works with the other design factors to provide meaning and associations of culture and value.

An interviewee described her feelings towards a little empty jar:

*"Yes, things where I like the feel of it – like the tactile nature, like a soft touch bottle – things like that – a nice tactile feel".*

(Extract from a 63-year-old female interviewee)

Many interviewees have described the sensory qualities of packaging in terms of touch and feel in different ways. A reoccurring theme is that of the plastic nature of packaging with various descriptions referring to its perceived low quality and nature.

Texture works with colour and material qualities to represent fashion and styles that convey a time, origin and a product category. Pictured in Fig 39 is a matte ceramic jar that contained chocolate spread, made and imported from France. The texture and material qualities give a sense of tradition and small batch home cooking.



Figure 39: Matte ceramic jar

Although many dislike plastic packaging, plastic food containers were one of the most frequently cited reused packaging items in the interviews, questionnaires and surveys. Even Dave who throughout the interviews expressed his dislike of plastic, when asked what packaging items he reused explained he would reuse some margarine tubs, and some sealable containers.

Below are two examples where the users explained their attitudes to the design of plastic re-sealable containers and how their branding affected their reuse.

### ***Branding, help or hindrance to reuse?***

The owner of this item of packaging (Fig 40) explained that it was saved from the rubbish and reused by his young son to keep small toys/ model figures in. The design features that aid this reuse were listed as the semi-transparent base and top, and the resealability of the pack. When asked if the non-removable label containing the Carte D'or branding was a problem the user's father explained that rather than it being a problem, his son liked the graphics and felt they displayed a quality and desirable brand to be associated with.

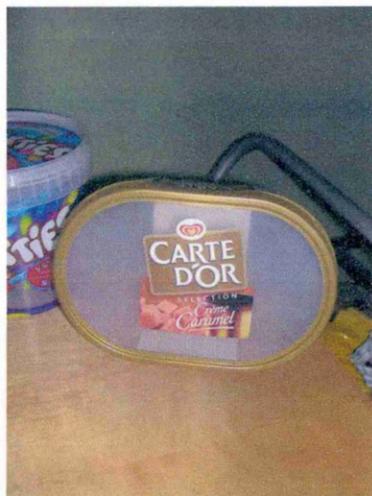


Figure 40: Carte D'or plastic ice cream carton.

The owner of a Sainsbury's plastic Mozzarella tub (Fig 41) explained how he wished to reuse the tub because of its handy size and re-closable lid. Unlike the previous example, the issue of removable graphics was highlighted as a problem here for reuse. He had tried to remove the label which contained the Sainsbury's logo and product information, but without success. This had caused annoyance and had prevented him from reusing the object. He suggested it might be a good idea if the label was made removable, as he did not want branded graphics to remain on a pack reused for a different purpose in the home.



Figure 41: Sainsbury's Mozzarella pack

In this instance it seems that that particular branding was not desirable enough to make the user want to display and reuse the object and therefore because of the branding, the otherwise useful pack was disposed of.

### **Netto bag case study**

Figures 42 and 43 show two styles of Netto carrier bags displaying the Netto logo and black Scottie dog branding. Although the Netto brand represents a non-prestige, 'value' shopping choice, it might be assumed that the black dog is an aesthetically pleasing 'nice' visual design for some consumers. However Netto have recently published their decision 'as part of their commitment to the environment' to take the branding off the bag in order to aid reuse (Packaging Week 2006). The article states that:

*"To stimulate repeat use of bags, Netto chose to promote an unbranded version as it emerged that consumers prefer to reuse such carriers".*

This action presumably reflects their acceptance that the Netto branding is not appropriate for the front stage presentation of their customers.



Figure 42: Netto carrier bag with Scottie Dog branding



Figure 43: Another version of the Netto carrier bag with branding

## **Conclusions**

This chapter looked at the different types of obsolescence (Packard 1960) and focussed on obsolescence of function and desirability as being the most important to the disposal of packaging. The examples described within the chapter prove that to consider only the physical functionality of packaging as relevant in preventing obsolescence is too simplistic –the spatial and display qualities of packaging are also important for reuse. Aesthetics in the form of shape, colour and branding build visual meaning into objects and can provide a display reuse function. Building on the scheme presented by Goffman (1959), this front stage function is about using the packaging item as a ‘prop’ to communicate certain things to a certain audience.

The aesthetic requirements change depending on not only if the pack is front stage or back stage, but also the environment the packaging is placed in. Certain materials, colours and textures are deemed more appropriate for environments such as the garden or the inside of the home. Within the front stage part of the home items need to fit in with interior design schemes and individual’s ideas regarding style. Postrel (2003) calls these things that work with and help build our personas ‘ingredients’, and for packaging these have been identified as either the physical functional features such as wide openings, resealable closures etc, or the aesthetic features such as shape, colour, design, branding etc.

The design features that support the secondary functions do in some instances affect the initial purchasing decision and encourage consumers to collect ‘sets’ of packaging. This is evident in a number of the examples of reuse, not least the jam jars being selected to perform the secondary function as a collection spice jars once empty, and the Carte D’or ice-cream bought instead of other brands of ice-cream because of the packaging is appropriate for the secondary function as storage boxes.

As explained in this section it is relatively easy to point to some of the physical design features that provide opportunities for reuse, but to capture the different aesthetic features and suggest how these work as a means to communicate to others is difficult, as style and the meaning of aesthetics are constantly changing and are affected by time, space and context. Branding is a good example where there can be no one rule or recommendation.

The particular brand, the type of packaging and the environment in which it will be reused will affect its suitability to support reuse secondary functions. For some functions such as communicating prestige or status it is useful to have branding (Carte

D'or ice-cream pack etc), for others no branding or the ability to remove branding is important (Sainsbury's mozzarella pack, Netto bag etc).

The next section explains how the findings from this section can be built on in order to understand the complexity of packaging's potential functions, it explains how and why functions change, and explains in more detail the relationship between the form of the object and how this is translated into function by the user.

### **3. Form and function: the transient nature of packaging**

This section builds on the previous explanations of the role of design in developing different front stage and back stage functions. It seeks to develop a deeper understanding of the relationships between form and function and how the act of reuse transforms an object from its primary use through to one or more secondary uses. It provides a brief history of the macro-level functional changes of packaging demonstrating that packaging has changed in function at certain points in its history due to changing merchandising, societal demands and consumption patterns. It presents a case that packaging may see another shift in its role in response to future societal, consumption and environmental pressures. However the chapter's main focus is on the micro-level changes in packaging's function within the home, examining the affect of time and space, and the role that style and form may have on changing the function of packaging.

The section presents the carrier bag, as a case study alongside two new design studies to demonstrate that physical functional and aesthetic design features are important. It introduces Schapiro's names for the physical properties of an object '*form elements*' and those properties that only emerge from the interaction between the object and the user '*form qualities*'<sup>6</sup> (Schapiro 1953).

It finally questions whether distinct definitions of function particular to packaging can be proposed to represent the life of the object from manufacture through retail to the home until finally becoming waste?

#### ***Macro-level changes in the function of packaging***

The Institute of Packaging's core textbook describes packaging as:

*"a co-ordinated system of preparing goods for transport, distribution, storage, sale and use"*. (Soroka 1996: 3)

Although it is recognised that the role and functions of packaging change and evolve to meet the changing needs of society, industry interest wanes at the door of the household, with very little recognition of further possible functions beyond that point. Packaging in very primitive forms has been created and used for thousands of years, but it was not until the onset of the industrial revolution that barrels, boxes, kegs and baskets were needed to transport new consumer products around the country.

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<sup>6</sup> 'Form elements' are the physical attributes of an object and 'form qualities' are the things that give the object meaning and interaction within a social context (Schapiro, 1953)

Although the resulting new individual city dwellers no longer had the space to buy in bulk, the shops where they bought their produce still did. Shops measured produce into the customer's own container or packaged portions to suit the needs of the particular customer. It was the 19<sup>th</sup> century with the development of the metal can and their improved storage properties that packaging began to change. Manufacturers names were used on bulk deliveries of products, but the first real brand names appeared in the late eighteenth century on higher value goods to represent their particular brands' set of values. Packaging changed from being just protection, containment and storage etc. to having to function as a communication and promotional tool. (Baren 1997, Soroka 1996, Strasser 1999). During wartime, particularly the Second World War, packaging designs had to be adapted to become less wasteful using less metal and valuable resources, but then the 1960's saw the introduction of supermarkets where consumers came face to face with products and made purchasing decisions based on the packaging they could see, touch and read. Packaging's functions evolved again to encompass the role of promotion, marketing and sales through the packaging's form and style.

In the early years of decorative packaging many items such as tins were deemed so decorative that they were saved, however since packaging has become so prolific, it has largely been manufactured and sold to provide a supportive function to the product inside and once the product is removed or used up, the packaging becomes functionless and is intended to be disposed of.

The function of packaging still continues to change, but now the change is driven primarily through advances in materials and manufacturing processes creating and supporting new consumption patterns such as '*Food on the Go*', '*Dashboard Dining*' and the '*Cafeteria Kitchen*' (Mintel 2006). Packaging increasingly leads new product developments through the introduction of new innovative materials and technology that allow it to provide new functions. Its emerging additional functional requirement is to be sustainable and easy to be disposed of – to be suitable for recycling, composting or reuse.

The Institute of Packaging presents the recognised function of packaging as:

*"Packaging is a service function, that cannot exist by itself: it needs a product. If there is no product, there is no need for a pack".*

(Soroka, 1996: 3)

However the evidence of reuse behaviour witnessed through this study's ethnographic research, questions whether it is as simple as this statement suggests.

Whilst this may be the reason why the packaging is manufactured in the first place, this study proves that once manufactured the item can change in function many times regardless of the product inside.

### ***Functions of Packaging***

Change is a basic characteristic of the function of things - that function is an unstable category is very evident in the packaging examples demonstrated throughout this study. To understand how we modify functions and how designers might be able to manipulate that process to promote reuse requires that we understand the concept of function. This line of enquiry is especially fruitful here as functionality in packaging items transforms and mutates more quickly and in more complex ways than it does in many other objects. A simple translation from 'functional' to 'non functional' as the product is used up or removed from the packaging does not do justice to the myriad ways in which consumers intervene in the functionality of packaging items.

The form qualities (Schapiro 1953) of the pack are interpreted and create meaning that can affect the functions of the packaging item. Some work relevant to this exploration has been done, specifically Gavin Lucas' (2002) empirical study of waste from the perspective of archaeology, Hawkins' (2001) discussion of the multivalent identity of plastic bags, Gregson and Crewe's (2003) study of the 'after life' of goods in the second hand market. This relatively recent work exists in the context of earlier studies that emphasise the importance of the temporal and cultural context of consumption for the meaning of goods in the domestic environment such as Baudrillard (1968).

Thompson's (1979) study of the changing value of objects through time is particularly relevant when considering the classification of both transient and durable objects. His work is helpful to this study as he considers the *classification* of objects, as valuable or as 'rubbish', defining rubbish as objects with zero value that mediate between objects whose value decreases over time, which he calls transient objects and those which increase in value over time, which he calls durable objects. Thompson notes that the classification of objects is negotiated by actions, which is evident in the life cycle of packaging objects, and is discussed in some detail below.

In many cases the grounds for this classification can be located in the *function* that the packaging object may fulfil. The ethnographic research carried out as part of this study

has demonstrated that consumers regularly recognise unique or learned potential or 'latent' functions that may or may not have been designed into objects, re-categorising them to suit their own needs. These actions are 'misuse' because they pervert the 'normal' function of packaging or alter its intended path to contain, protect and display goods.

Preston (2002) notes that it is the exception rather than the rule for a thing to only have one function. She explains that functions are dynamic and things are constantly losing, changing, or acquiring functions.

Packaging goes through a sequence of stages from the time it arrives in a domestic setting to the time it leaves as waste. The stages seem to be defined by changes in the function of an object, therefore to understand what might determine the decision to, for instance, reuse or dispose of a packaging object it is useful to sketch out the ways in which an object's function might change.

### ***Archaeologists view of function***

As reviewed in the literature chapter Preston (2000) compares a number of definitions of and approaches to the idea of the function of objects as they affect archaeology and the study of material culture. The most relevant to this study is Cummins (1975) concept of 'system' function and Milikan's (1984) concept of 'proper' function.

'Proper' function is the function that caused the object to exist through time, so the 'Carte D'or' plastic ice-cream tub's (Fig 40) presented in the previous section has the proper function to contain, promote and protect ice-cream. 'System' function focuses on what the packaging is 'disposed to do' in its current 'system context', so the Carte D'or plastic tub when being reused to hold small toys has a secondary 'system' function as a toy container.

Preston's observation that these two views of function appear to be contradictory might seem true in the context of packaging for domestic goods. The proper function of an item of packaging would be that designed into it by the manufacturer and this normally disappears once the product is removed or the packaging is empty.

Preston's own example of the water bottle used as a cloche points to the variety of functions packaging can accrue in the hands of individuals. Such functions are defined by the systems made relevant by the lives of these individuals. However, we need to understand the particular functions that packaging does acquire, which are discussed below. As Preston proposes, it is useful to see system and proper function as

complementary rather than contradictory and to move towards terms that can deal with the particular functions of objects.

### ***Definitions of functions***

Preston offers Schiffer's (1992) typology of functions to allow this attention to the particular. Schiffer builds on an important paper in archaeology provided by Binford in 1962. Binford describes three major functional sub-classes of material culture: technomic, socio-technic, and ideo-technic and the process of change within each class:

*"Technomic signifies those artefacts having their primary functional context in coping directly with the physical environment".*

*"Socio-technic artefacts are material elements having their primary functional context in the social sub-systems of the total cultural system".*

*"ideo-technic artefacts are items that have their primary functional context in the ideological component of the social system". (1962:219)*

Technomic artefacts allow a direct correlation between the object and its environment and use. Socio-technic artefacts need to be seen within the nature and structure of the social system in which it exists. Ideo-technic artefacts are items that symbolise and signify the ideological beliefs of the social system.

Binford explains that cross cutting these three types of artefacts are formal stylistic characteristics, or aesthetics. These are qualities present in the artefact that are directly related to the design, materials, production or technology, but that have their primary functional context in providing a form of communicating beliefs, customs, values, but also social distinctiveness. (1962)

Schiffer builds on Binford's three different types of artefacts and provides three definitions of function; techno function, socio function and ideo function. The techno function of the reused ice-cream tub is its physical function to contain small toys. The socio function is the decorative nature of the pack possibly promoting a desirable or fashionable brand. The ideo function of the pack may be status the brand provides the owner or might refer to the shared beliefs about the superior quality of the previous contents on which the quality branding draws. Reused as a container, the plastic pack might have socio function, or ideo function, as part of a system of beliefs about a sustainable lifestyle, as well as the secondary techno function of being a container for small toys. The proper function/ system function categorisation is the 'mechanism' that

confers function, whereas the techno/socio/ ideo function categorisation indicates the 'content' of the function that can be significantly affected and altered depending on the formal stylistic characteristics as proposed by Binford (1962). Preston emphasises that system functions change with changes in systems, but proper function remains in place in the face of these changes. However this may not hold for packaging if the proper function of packaging is to be function/less after use. To preserve Preston's point would require us to think of part of the 'proper' function of packaging as 'being waste', to think of waste as functional. And of course this is true in that waste can be designed to be recycled or composted to create something else.

If the function of packaging changes, it does so by moving from its proper primary function to a system secondary function, if it changes at all. 'Being reused' (or 'being recycled' or disposed of 'properly' for that matter) could be part of packaging's proper function too, if this was designed into it – but as explained in the previous chapter, this design effort could never ensure that this function was enacted, as it would take place in the domestic 'system' where the specifics of which are beyond the control of the designer.

Preston notes that due to the volatile nature of material culture, over time a system function can come to be a proper function – this describes the potential for the water bottle as cloche to become a conventional form that is designed for. In fact Preston notes that '*...proper functions inevitably are born out of pre-existing system functions of things...*' (2000:32) though there are countless system functions that are never 'adopted' to become proper functions. Many reuse functions for packaging are likely always to be what she calls 'ongoing system functions' and therefore by definition to be beyond the scope of design. If design IS to engage with them, then they have to be captured, by research such as this and the systems have to be identified. Design *for* reuse therefore requires that we understand more about the domestic 'system' of waste processing, and the forces that are behind the 'practices' that the research has uncovered .

Schiffer (1981) offers a very broad typology of reuse, one element of which encapsulates the packaging reuse instances observed in this study. He uses the terms 'lateral cycling' and 'conservatory processes' as well as 'secondary use'. 'Lateral recycling' is used to describe instances where an object is passed to another owner to use for its proper function. This has not been the major concern of this study. For Schiffer, secondary use describes reuse where an object is used unmodified for a new

purpose, usually making use of techno function - this study has observed a large number of such examples. While this might be predictable, as previously described, this study has also collected examples where packaging is reused for reasons beyond its techno function. As in the case of the Coca-Cola bottles shown in the last section, some of these appear to fit Schiffer's class of 'conservatory processes', they are forms of collecting.

Observations of packaging reuse demonstrated a difference in the aesthetic qualities of the reused packaging evident in the two different environments – in the home and in the garden or marginal spaces like sheds and garages. The difference between these two parts of the home raised the question of what part the socio or ideo function of a packaging item may play in whether it will be reused or not, and if so, where and how. These ideas are explored further using two case studies, the first using existing designs of a frequently used packaging item, the carrier bag. The second uses a packaging case study designed as part of this research and used within the second stage of semi-structured interviews to test some of the previous research findings.

### **Case study: Carrier bag reuse**

Hawkins expresses the complex relationship she has with plastic carrier bags, reflecting many of the consumer's views seen throughout this study:

*“Rather than defend the plastic bag, I just wish to acknowledge the variety of relations we have with them in order to show that their status is not fixed”.*

*(Hawkins, 2001:7)*

The ethnographic research showed that people categorise carrier bags in three ways: according to their material type, through their appearance in terms of the graphic design and because of the branding they carry.

Alyson, the 43-year-old mother of two described her feelings towards different carrier bags, clearly distinguishing 'nice' bags associated with clothes shopping, and carrying the brand of the store from others:

*“Carrier bags - from IKEA I've got my little carrier bag storage thing – I shove them in that. If it's clothes shopping with posh carrier bags I put them in a different place. I'm quite sad with carrier bags – I keep the nice carrier bags”.*

These 'others' are physically weaker - they are 'flimsy':

*“The flimsy one's I'll use for whatever and the nice carrier bags I'll keep in a different basket and they get used for when you want to go out”*

'Nice' carrier bags can demonstrate the status that might accrue from their owner's consumption choices (e.g. Fig 44). Reusing such a bag out of the house is an extreme form of front stage display - there a sense in which a bag is 'worn' and advertises its owner's sense of style, fashion and consumption choices. The bag is providing the required socio function.



Figure 44: 'Nice' front stage carrier bags



Figure 45: Back stage carrier bag

In contrast Fig 45 shows a sturdy plastic carrier bag that would have stood up to reuse for its original purpose being used in a shed to protect the blade of some gardening equipment. For the owner, the branding and design meant the bag was not suitable to put on display though the physical properties give the item the required techno function and make it useful.

These two carrier bag reuse examples are quite conventional but they demonstrate that the design of a carrier bag contributes to how it fits into existing practices. Dant (2005:109) explains that objects that are not natural have been designed to be shaped for a purpose. The skill of the user is to work with the objects, in ways designed into the object and sometimes in other more creative ways.

An element of consumer creativity is involved in determining whether a particular item 'fits' or not, which can draw on cultural knowledge, as in the example of the 'nice' bags. This type of knowledge, accessed through the feelings and emotions that tell an individual if an object is in its 'place' or not, is combined in the example in Fig 45 with embodied 'know how' to produce a solution to the problem of tools rusting in a damp shed. Dant writing from a sociological viewpoint explains that what he calls 'material interaction' "*depends on the socially acquired human skills for recognising in the form*

*of things what can be done next with them*” These skills are embedded in the object but are also a result of the culture it exists within. (2005:111).

Similar creativity drawing on embodied knowledge was demonstrated in another less conventional example. Fig 46 shows a carrier bag worn on the body - used as a turban to keep off the rain. This middle-aged Asian man was caught in a rain shower in a queue at a visitor attraction in the South of England and had seen the reuse potential in a light green carrier bag, turning it into a temporary turban.



Figure 46: Carrier bag reused as a turban

One might guess that bold or unsightly graphics may have dissuaded this person from reusing the bag in such a relatively public but intimate way. Similarly, graphics or branding was never likely to positively affect the reuse potential of the bag because rather than being a fashion item, it was providing an emergency function. The graphics that the bag did have were subtle and insignificant and did not disrupt this extreme front stage reuse.

This example of reuse was possible primarily because the bag *could* physically perform the techno function of being transformed into a turban - it had the right physical properties or form elements. Transforming it in this way was also socially acceptable to this individual and provided the required socio function. The lack of graphics meant it had the makings of a temporary turban and he could transform it into an object that served this function through his embodied cultural knowledge. It also provided the appropriate ideo function; he presumably chose to make a turban rather than a hat knotted at four corners because this fit his familiar practices of headgear wearing.

Fig 47 shows an example of a branded plastic bag designed to be reused. It is branded as a reusable bag and is made from a heavier plastic than the others to give it a longer

life and extend its techno function. It is purchased along with groceries as a deliberate reusable object.

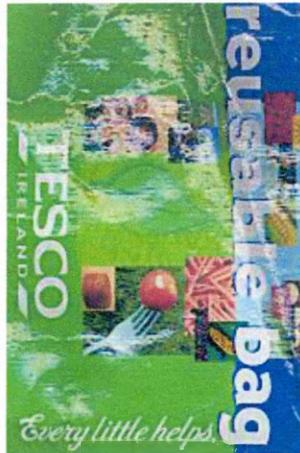


Figure 47: Branded plastic bag designed for reuse

It is marked not only with the supermarket's brand but also, in bigger letters, advertises its reusable qualities. This bag is clearly reused because of its techno function, but the graphic scheme and branding also provide potential socio and ideo functions. They function to display the user's values, their ethical beliefs and 'green' credentials, as reflected in their purchasing decisions. The function of the bag to display these values to others while shopping constitutes a proper socio function, because it is 'designed in' to the bag. The details of the design, the use of the colour green, the representation of plants and natural foodstuffs, indicates that the bag also has a distinct ideo function, appealing to shared beliefs about the goodness of 'nature'. Fisher when providing his historical account of plastic and describing the attitudes to plastic of the 1970's hippies, explains that

*"There is an association of moral qualities with particular materials and with a life close to nature" (2003:100).*

This bag with its carefully designed graphics tries to play on its environmental credentials and its role as a 'bag for life'.

In this case decisions about reuse have been taken out of the hands of the consumer, as reuse is part of the proper function of the bag. This means that this bag is an exception among the examples above, as the bag does not need to be categorised as 'waste' or 'not waste'. The branding and surface decoration instructs the user how to

categorise the item and reduces the likelihood of the item becoming waste before it has been reused.

The design is a conscious attempt by the retailers to persuade consumers to reuse. There are other similar attempts within different market sectors, such as the Nutella packaging with a base that becomes a beaker to drink from (Fig 48), and the tic-tac pack that is promoted as a cereal container/ dispenser (Fig 49).



Figure 48: Nutella reusable packaging



Figure 49: Large tic-tac reusable packaging

To gain a better understanding as to how 'proper' and 'system' functions might be designed into objects, a design project was conducted for this study to develop a pack with 'proper' secondary reuse designed into it for easy interpretation by consumers. The resulting design was used within the second stage of semi-structured interviews.

**Case study: Design test 1**

Using the information built up from the ethnographic research some factors had become apparent that provided the correct conditions for packaging reuse. A strong theme from the research was that the environmental context of the packaging item is key to whether an item would be reused or not and how design might affect this. The speculative packaging design work focussed on one of the most prevalent contexts for reuse that the research uncovered - the garden.

The first design exercise was to take a traditional garden consumable product and re-package it into a more reusable format. The chosen product was the popular branded plant feed 'Miracle-Gro' a product consisting of loose crystals contained in a non-resealable plastic bag, which in turn is packed in a carton (Fig 50).

It can be reasonably assumed that once opened this packaging is stored in the shed or greenhouse until the contents have been used up and interviewees confirmed this when expressing their opinions on the packs. They provided information on how the pack is stored outside of the house and often over long timescales. They explained how the contents go solid over time because the pack is not watertight and that slugs can sometimes get at the contents. Once opened this product and its pack may enter and remain in back stage storage, perhaps for many years, while the contents go solid and useless or are devoured by the slugs. It is very unlikely that this packaging will be re-categorised and removed from the twilight zone as anything other than waste.



Figure 50: Old Miracle-Gro pack design

The new pack was designed with a prescribed 'proper' secondary techno function as a garden cloche. A cloche was chosen, as the research had already pointed to this being a common secondary use for clear plastic bottles, and plastic bags.

One participant described how she made cloches for the garden:

*"Plastic milk bottles cut off make good small cloches for tender young plants".*

Visual evidence of two examples of packaging reused to make cloches, can be seen in Fig 51, 52. Fig 53 shows products on sale that perform the same function.



Figure 51, 52 and 53: Examples of plastic cloches

The new design concept (Fig 54) is a plastic transparent base container with an air vent located in the base recess (sealed until used) and a reclosable plastic slip lid. As products are designed and sold with the primary function of a cloche (Fig 53), this seemed an appropriate secondary function to design into an object, potentially preventing the purchasing of new products.

Interviewees were asked to compare and comment on the two pack styles presented using the same graphic layout and printed onto the same size paper.

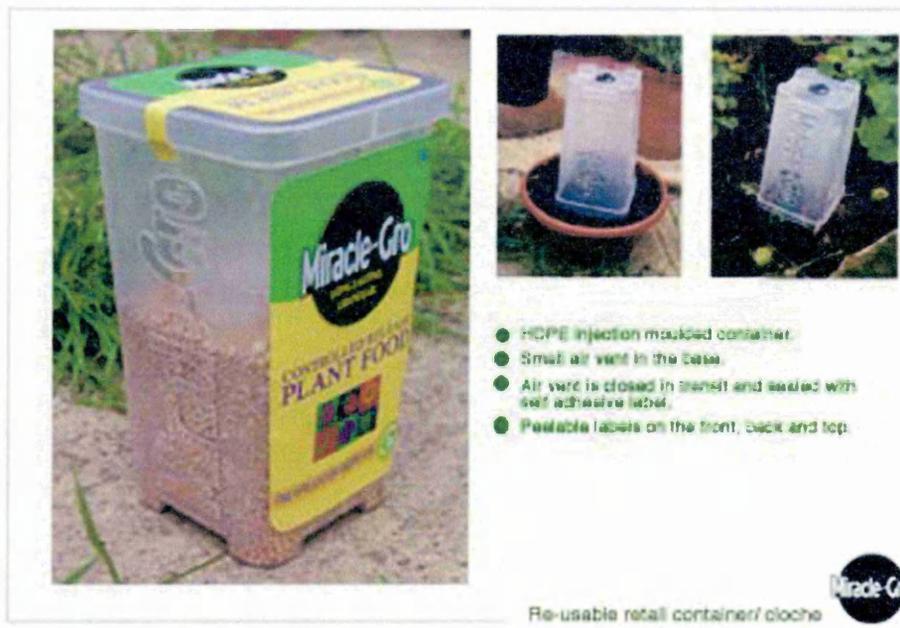


Figure 54: New Miracle-Gro pack design

David, a 63-year-old male preferred the new design:

*“The one with the reusable retail container would be an immediate seller to the gardener. The beauty about that one is that it’s got a re-sealable top and forget the secondary use. These bags once you open them the contents go solid. In that they wouldn’t go solid and the fact that you could use it as a miniature cloche is very appealing”.*

He explained he would pay possibly twenty pence more for the reusable pack.

He recognised the techno function was superior to the carton design for both the ‘proper’ primary function of effectively storing the product and the ‘proper’ secondary function of becoming a ‘cloche’.

Alyson, a 43-year-old female participant had the a similar response:

*“The only one I’ve ever bought is the carton, but I like the other one because it’s good for keeping it in and reusing it, and the slugs won’t eat the carton. I like it because it looks substantial, you can take the top off and use it and put the top back on, and it’s obviously got a bit of an additional use for cultivating your plants hasn’t it.”*

*I wouldn't pay twice the price, but if it was a small amount, yes."*

Both these individuals are interested in gardening and both described situations where they reuse packaging within the home and the garden.

Mary, a 21-year-old female when asked to study the two pictures of styles of packaging preferred the reusable design based on its aesthetics as well as its potential techno function:

*"you can see the product quite well and it's nicely embossed on the side – it's just more aesthetically pleasing I suppose. It looks more hard wearing as well and it looks like you can obviously use it for something not just as the package. Some of my plants have just died through frost and stuff so I probably would use it – it's not so unattractive as shoving plastic bags over your plants when it's winter."*

The aesthetics of the pack used within the garden are evidently still important to Mary, which suggests that, to her, the garden is a relatively front stage environment.

Depending on the type of gardening practices it was fit into - a flower garden might be different to a vegetable garden in this respect.

When Dave, the 37-year-old was examining the two pack designs he was concerned with the material type:

*"For some reason whilst it's probably very well designed I have problems with it in the fact that one is kind of like slightly more organic for me – carboardy and I'd expect things in gardens to be carboardy. I actually wouldn't buy it because it's plastic. I know that by designing it the way you have with the vent at the bottom you want people to reuse it as a little greenhouse for seedlings and all that but I'm still not certain of it's ecological soundness, see I try to be an organic gardener".*

It seems the engrained doctrines regarding materials and the environment prevent this individual from valuing alternative approaches to sustainable design. His feelings towards plastic are firmly set and prevent him engaging with plastic objects in a positive way.

Throughout the interviews it has become clear he cares what image he portrays through his purchasing decisions, therefore his reaction to the plastic pot maybe more about the packs ideo function as a front stage projection of his ethical beliefs than the possible techno function of the design.

### ***Case study, design test 2***

A second design test was also carried out for products in the garden environment. This design focussed on adapting the plastic blister clam pack used to contain a variety of small garden and DIY objects (Fig 55).

This design exercise was to develop a much less prescriptive reusable opportunity requiring more creativity or interpretation from the consumer. This design offered more opportunities for the consumer to invent 'system' functions for it, rather than the previous design that had a clear 'proper' secondary function.

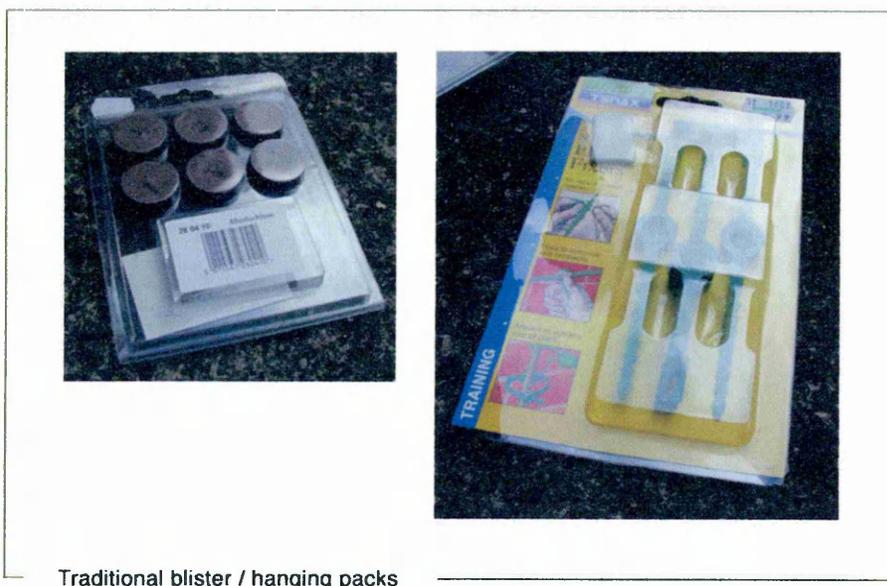


Figure 55: Typical blister packs for garden products

The new solution provided the opportunity for the individual packs to be linked together to form edging for borders in the garden (Fig 56).

By using changes in the colour and shape of the void area, it provides opportunities for the design to adapt to individuals needs, potentially providing a myriad of 'system' secondary functions.

This design had a less positive response from some of the interviewees. However David, who is a keen gardener had the following comments:

*“I would say that the idea of using it as an edging wouldn't necessarily appeal to me but what I do like about this is that I could perhaps put instructions in there. You could get a fair sized piece of paper in there for things like instructions and using it as a form of plant identification – that would appeal to me. I'd make use of it, but I wouldn't necessarily want to pay anymore for it.”*

David saw alternative secondary techno functions for the packaging, however other interviewees were less sure of the reuse potential in this second design - many focused on the material; vacuum formed PVC, and suggested its qualities were inappropriate for use in the garden:

*“I'm not quite sure what use I would find for something like that. I can see this here when you could use it as a garden edging, but I don't think I'd actually do that”.*



Figure 56: New blister pack design for garden products

Alyson found it difficult to see beyond the item as just packaging and thought that she probably wouldn't reuse the blister packs in the suggested, or any other way:

*"I think I probably wouldn't. I think I'd be just happy with the blister packaging and take out of it whatever it was and throw the packaging away. No I see those as just functional for putting the goods in and then that's it. I don't really see the same sort of after-use in that as I would the Miracle Grow one".*

When Dave was asked to look at the two pictures of styles of hanging blister packs he immediately described his attitude to plastic and the disposal of it:

*"I mean with the traditional blister we're all guilty of buying it but I must admit seeing that I recycle plastic now - I've got a box in the kitchen for all plastics that I empty at Sainsbury's once a week you actually do realise - Jesus Christ! The packaging that's actually supplied with stuff you buy these days".*

He explained that he didn't think he would reuse it for the purpose it has been presented as - garden edging, and then continued to express his annoyance at the plastic not being marked for recycling. The only preference the interviewee had between the two designs was based on which used the less plastic and how the instructions allowed him to dispose of the packaging in a 'green' way.

Mary had similar issues with the material qualities of the second design exercise:

*"Urm, I don't know whether I'd really want plastic for the garden, looking at the picture compared to the brick. I don't know I prefer more sort of natural sort of products in the garden. I don't think I'd use it. Yes, it just looks a bit too much like a sheet of plastic shoved in the ground. No, I'd rather have more natural like wood or terracotta that sort of stuff"*

However she had expressed no similar concerns with the plastic cloche in design exercise one. It seems that the form of this design just did not provide as much appeal as the previous one.

Although some interviewees struggled with the presentation of the concept of design two, it is difficult to predict whether other alternative uses for these objects might arise through the sort of intrinsically motivated creativity evident in David's approach. Consumers reusing objects because of a latent secondary techno function like David seem also to want to discover the reuse potential themselves in order to demonstrate

their ingenuity to others. Even when shown design one, research participants explained that they might not use the pack as a cloche, but it had other benefits over the cardboard pack.

The responses to the designs and the observations of packaging reuse above suggest that an over-prescriptive approach to designing secondary uses into products might be an impediment to reuse if applied to packaging. Shove relates specialised products to an increased range of activities undertaken in everyday life –“*ever more precisely differentiated goods and services*” (2001). So a design strategy that only fits packaging designs for already identified opportunities for reuse and specialised functions may be less effective than one that provides packs that have potential for lots of different (re)uses and which are open enough in their format to 'plug in' to a range of different practices.

Drawing from Ingram, Shove and Watson (2007) note, that objects can be 'scripted' through their design to increase the likelihood of their users doing particular things with them. Packaging with designed-in reuse potential is 'scripted' for reuse, but these scripts are always 'open'; they have to contend with the heavy weight of packaging's 'natural' function to be waste and like all scripts, they can be subverted. It is possibly the case that the easier they are to subvert, the more effective they would be in encouraging reuse.

From this study's long list of examples of reused packaging very few of the examples were inscripted. Only four; the Huggies Nappy/ toy box, the Nutella Jars/ glasses, tic-tac box and carrier 'Bags for Life' could be considered scripted 'proper' functions for reuse, out of a list of over 50, with the remaining 46 being self-devised/ 'system' function objects discovered by the consumer.

### **Conclusions**

Change is a basic characteristic of function, and function is complex and changes at a faster rate for packaging due to packaging's inherent transient nature.

The section reviewed Preston's ways of thinking about function and presented the Milliken's 'proper' function and Cummins' 'system' function as ways of understanding the shift from designed primary function through to discovered secondary functions.

Combining these two ideas with Schiffer's typology of functions: techno, socio and ideo provided a more appropriate ways of categorising functions. The section developed

the concept that design features or form elements affect the future functions of packaging and introduced the need to consider the context of the reuse alongside the design. Aesthetics are important in the front stage of the home, however different people view different parts of the home as front stage. For some, the garden is still front stage and material choices and aesthetics are important. Material type within different systems is key; a number of interviewees had significant problems with the plastic nature of the design concepts, particularly the second concept where the packaging was placed in the ground.

The design tests did help to clarify how consumers make decisions regarding the potential reuse of packaging. Participant's responses to the design proposals demonstrated that there is value in a design process that starts from an understanding of the practices into which the results are intended to fit. The designs tested cultural themes and demonstrated that consumers do see the value in certain prescribed designs for reuse, but also clearly pointed to the fact that packaging's different functions depend heavily on the context or 'system' it enters acknowledging that there is a space and time factor to the life of packaging within the home that has not yet been explored.

*"Shifts in commodity value can take place in multiple directions, and de and re-valorisation processes are contextual, subjective and unpredictable".*

(Gregson and Crewe 2003, 142)

Consumers who already reuse packaging to a large extent seem to be able to discover the potential reuse function for themselves and to interpret it to suit their own specific needs. A design strategy that fits packaging designs for already identified opportunities for reuse or specialised functions may be less effective than one that provides packs that have potential for lots of different (re)uses that can be interpreted to suit the individual's needs.

Open-ended designs that recognise the environments the systems may enter, using appropriate materials, and having suitable aesthetics and structural design features may be as effective at providing secondary reuse opportunities as those consciously designed to be reused.

This chapter has moved from a packaging object focus to one that recognises the object does not create opportunities for reuse in isolation. The environment the object exists within affects our attitudes regarding the object and our acceptance of certain aspects of the design.

The next chapter builds on the spatial aspects of this study looking at the whole journey of packaging and how opportunities for reuse can be designed into it.

## Chapter five. The context

This chapter builds on the themes described in the previous chapter regarding the packaging object and examines how design elements can provide different functions in different environments. It presents the context of reuse as being one of the three main factors affecting reuse behaviour and presents a theoretical scheme for the domestic waste processing system. This chapter presents the concept of the home as a spatial entity and of individuals' lives in it as a 'system', which together determine the usefulness of packaging, and hence whether it is reused.

Using Goffman's (1959) concept of the front stage, back stage of the home combined with evidence from this research a matrix is presented that explores this spatial and temporal nature of the home. Developing this further, the concept of the twilight zone is presented as a place where packaging objects 'rest' in the home environment for some time before reuse, or eventual disposal. A simple typology of twilight zones is presented with three possible forces that may affect decisions to consign objects to a twilight zone or remove it for reuse or disposal.

This chapter builds on the previous carrier bag case study to explain in more detail the way packaging is processed once entering the home, and through a case study for glass packaging it demonstrates how packaging designers might build reuse potential into commercial packaging design work.

### ***Processing of packaging within the home***

Clarke (1998: 73) writing about consumption studies, points out that the acquisition and appropriation of material culture is integral to the construction of social worlds and identities. Carrier (1995:16) also recognises the significance of commodities in industrial societies and within the home:

*"a household exists in part because its members appropriate the commodities that are circulated and consumed within it".*

Many examples of packaging reuse are presented in the appendices and all these examples of reuse entail packaging being 'captured' in a temporal and spatial process of sorting, categorising, storing, reusing and disposing of waste and they point to some of the cultural knowledge that influences this process.

The places specific types of packaging can occupy in this system will be explored below, but for now it is worth remarking that the processing system that can result in reuse can include significant periods of storage, as in the examples of collections of carrier bags saved for later (Fig 57 and 58).



Figure 57: carrier bag storage



Figure 58: carrier bag storage

In fact the packaging item itself can become the material object involved in the processing resulting in storage. A survey respondent explained how he used cardboard boxes:

*“I also use a box in the garage as a waste bin for oily rags, empty cans and other rubbish, then rather than empty it in the dustbin I just take the whole lot to the tip and find a new box”.*

Specific material objects are designed to help such processing such as carrier bag holders like the one pictured below (Fig 59)



Figure 59: Carrier bag storage/ dispenser

Douglas (1966) from her anthropological studies of human behaviour in relation to dirt and waste describes her way of thinking about the flow of objects within our lives and their relationship to us. She describes streams of objects that are designed to provide a known function and arrive at points within our lives where we carry out further assembly and make new meanings from them. Time and space is important to packaging reuse in allowing the user the opportunity to re-evaluate the functional properties of packaging.

The matrix in Fig 60 positions practices of packaging reuse in space and time. This scheme over-simplifies and is not static. Packaging objects move from one quadrant to another as they go into and out of storage for instance, however it does organise the range of reuse practices observed, presenting four characteristics of packaging reuse:

1. Short-term/ back stage: often a transient stage of storage for recycling, composting, or another secondary reuse. The techno function for ease of storage (in the case of plastic carrier bags etc), or material separation (in terms of mixed material packs) is an important functional element to consider in these cases.
2. Short-term/ front stage: 'proper' secondary function can be designed for in these circumstances. The immediate context can often be predicted and therefore reuse opportunities can be anticipated and relevant performance characteristics designed in. The example of the corrugated board nappy box is designed to be a temporary toy box where appropriate branding and graphics were important to instruct the secondary techno function and support the socio function. Even within this environment ideo function is still occasionally apparent, examples are the 'bag for life' plastic carrier bags or designer card bags that represent the owners values.
3. Long-term/ front stage: requires durable branding and graphics, and an appropriate material type that fit with the home décor and 'system'. This type of reuse performs a role of communicating the owner's ideas and social status and is hard to predict and design for. The socio function closely followed by ideo function is most relevant to this type.
4. Long-term/ back stage: attachment and sentiment along with the techno

function are forces keeping these objects within this environment. All three types of function could be relevant here, but techno function, followed by ideo function are likely to be more relevant than socio function in this back stage 'system'. The ideo function is difficult to design for due to the lack of predictability as to what items for what reason will enter this back stage twilight zone.

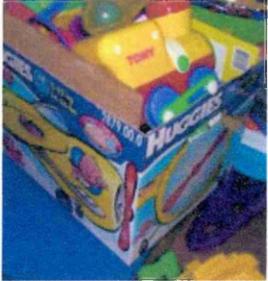
<p><b>Back stage</b></p>	 <p>Plastic bottle used as cloche in garden</p>	 <p>Biscuit tin used for storage in the shed</p>
<p><b>Front stage</b></p>	 <p>Cardboard nappy box used as toy box</p>	 <p>Glass wine bottle on display</p>
<p><b>Short term</b></p>		<p><b>Long term</b></p>

Figure 60: Matrix of domestic packaging in time and space

The cut down plastic bottle (top left) is used back stage for the newly designated 'system' function to become a cloche to protect plants. The transparency of material is important in this example, rather than any branding or surface design. The plastic biscuit tins (top right) with their bright colours and heavy branding have good 'form elements' (Schapiro 1953) for reuse such as reclosability and a large opening for their 'system' techno function of containers within this person's shed and could remain there

for many years. They do not however have the appropriate branding or aesthetics to move it into the front stage of the home, unless the system changes over time to receive different meaning from the objects.

The cardboard box (bottom left) designed with a 'proper' secondary reuse function of being a children's toy box is unlikely to remain for long in this front stage environment, once the children have grown up a little or the non-durable cardboard has become too tatty, it is likely to be disposed of. The blue wine bottle (bottom right) however has the form elements and qualities to remain in that front stage environment for a long time providing the system and the decorative style it fits with does not change.

Having established the basic spatial/ temporal scheme, it is appropriate to move on to examine some instances of packaging reuse in a little more detail in order to move towards the more complex and inflected spatial/ temporal scheme for packaging reuse.

### ***The home as a waste processing unit***

Building on, and critiquing, Douglas' notions of pollution and Thompson's discussion of value, Lucas's (2002) discussion of the processing of domestic waste describes households as systems or economies through which objects flow. In order to develop a spatial/ temporal scheme it is useful to follow Lucas and think about the home as a waste-processing unit with goods going in and waste coming out, processed at different times and in different places according to the systems and practices specific to a particular home. He describes households as systems that objects flow through, being ejected as waste when evaluated as useless, inessential or potentially dangerous.

Although Lucas does not discuss them at length, he also recognises that places exist where packaging is stored in limbo between regular use and disposal – the twilight zones. Twilight zones are significant to this study as evidence suggests they may play a very special role in interrupting the normal process of waste disposal within the domestic environment, see Fig 61. They create the potential for redirection and re-circuiting of packaging within the waste processing system. As long as an item is in a twilight zone, there is a possibility that it may be reused.

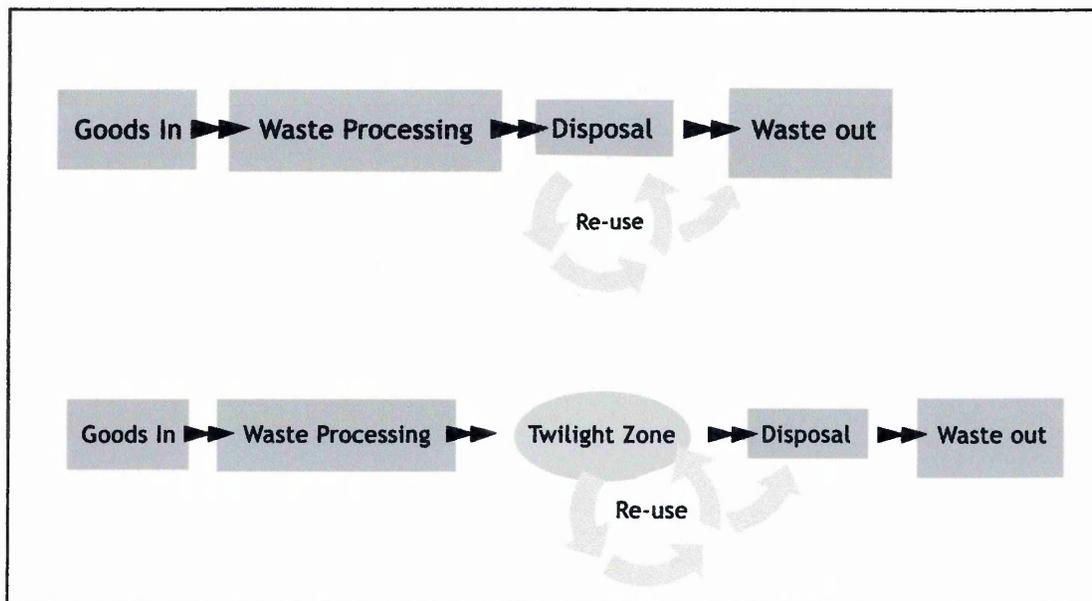


Figure 61: Diagrams to explain 'Twilight Zone'

This study has identified two sorts of twilight zones 'shrine' and 'rainy day' (Fisher and Shipton 2003) that interrupt the immediate processing of packaging as waste in the domestic environment. 'Shrines' are objects placed in the twilight zone due to the owner's emotional attachment, and 'rainy-day' are there due to their future usefulness. Although some packaging items enter the home as gifts, heirlooms or collected items this does not account for the majority of packaging passing through the home and being evaluated.

The scheme presented below (Fig 62), delineates the key moments and places that evaluations of packaging items take place, following their primary function of presenting, containing and delivering a product.

It identifies the factors that affect these evaluations such as their remaining primary function, potential secondary function, their desirability and value. Specific systems require different aesthetics and 'form elements', activating different sets of 'form qualities' (Schapiro 1953) – physical or symbolic features in any particular packaging object. As previously explained, these features; the material type, aesthetics may prevent or facilitate secondary function.

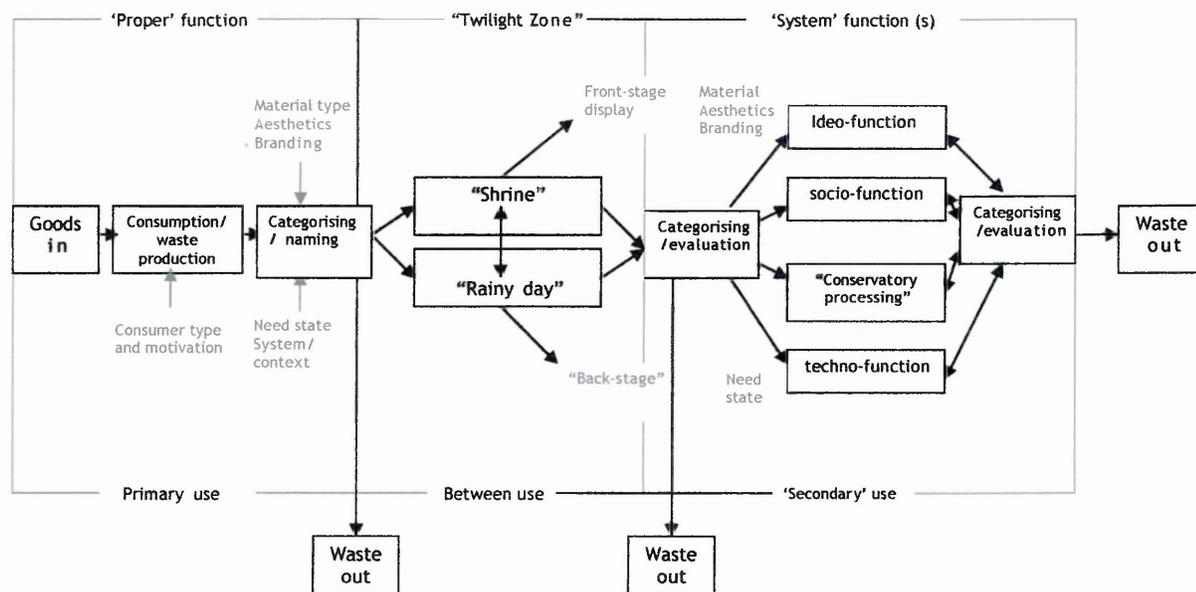


Figure 62: Diagram of the domestic processing flow of packaging.

Fig 62 (see appendix for larger version of diagram) presents the progress of packaging in the domestic environment as it moves through moments of evaluation and reuse, or disposal as waste. It identifies several moments when packaging is likely to be evaluated and categorised as waste, potentially reusable or suitable for immediate reuse. While it does not account for all possible examples of packaging reuse, it encapsulates the spatial, temporal, social and cultural features of the reuse practices observed. The middle section the twilight zone has an important role in allowing the transformation in value and function of packaging. The next section looks at this in more detail.

### ***In and out of the twilight zone***

This study’s ethnographic research provided an understanding of how the process of storage, reuse and disposal of packaging is incorporated into everyday activities. One survey respondent described his reuse of cardboard boxes for storage:

*“Medium sized cardboard boxes (e.g.: the type you get from supermarkets) for loft storage (of all those things you won’t throw away but never end up needing anyway!)”.*

The observation aspect of the research was particularly useful in identifying a number of different practices of packaging storage and reuse, taking place in different domestic sub-contexts. The various domestic spaces such as garden sheds, medicine cabinets, sewing boxes and food cupboards revealed different consumption practices along with the nether regions of rarely used drinks cabinets, wardrobes, shoe-cleaning kits, garden sheds, garages and dark, damp cellars.

This observation indicated that packaging which has outlived its intended primary function lives on in all these places, all these twilight zones. However the observation in itself does not help to determine the forces that lead to the various types of consumer behaviour that these twilight zones imply. Although it demonstrates that some packaging objects have a life span of five days, whilst others have a life span of 20 years, it does not indicate why. Some analysis of the nature of these twilight zones, and the likely forces that lead to the consumer behaviour that they represent is needed to unpack the complex determinants on this behaviour.

### ***Typology of twilight zones***

The fact that some packaging items end up in twilight zones implies that consumers form particular relationships with these items. To understand the reasons for this requires that we clarify the nature of these relationships as well as the nature of the packaging items that are categorised as worth putting into a twilight zone. As previously presented, a packaging item's physical characteristics or form elements are likely to be relevant to the attachment to them that is denoted by their consignment to a twilight zone. Likewise, the subjectivity, past experiences and values of particular consumers are likely to be relevant.

As we saw in the diagram above, reused packaging is deployed in particular ways in the domestic space – either front stage or back stage - and its lifespan in the home varies from a slightly delayed progress towards the bin to an extended stay in the home.

The data suggests that two types of twilight zone for packaging mirror the front stage and back stage environments of reuse, shrine and rainy day twilight zones, though the distinction between them is not always completely clear, and many collections of objects can be said to have characteristics of both types.

Shrines are collections of packaging items that have a relationship to the past life of the

person who has collected them. These objects have entered a twilight zone because they record past life experiences memories or events. The data suggests that shrines can be either conspicuously displayed being used to communicate to an audience, or may be stored in a hidden place where only the owner benefits from knowing they are there.

Fig 63 shows a collection of drinks bottles brought back from foreign holidays, and Fig 64 shows the previously discussed deliberate front stage display of a blue glass bottle. Both examples are likely to be 'shrines' as they are saved more for their socio or ideo function of display and links to the past than they are for their techno function.



Figure 63: Drinks bottles



Figure 64: Blue wine bottle

The data suggests that certain design factors do affect consumers' decisions whether to keep and place a piece of packaging into a shrine twilight zone. A participant described through a questionnaire the appeal of well-designed glass bottles, explaining that they "look attractive in the home". Suggesting that the evaluation can take place to some extent before the item is purchased.

Another female participant explained in an interview why she liked the packaging of a hair care product contained within a carton:

*"I suppose it does look a bit elegant doesn't it ["""] you could put that in your bathroom and it would look nice".*

This suggests that for this item it is only later in the home when considering disposal that the owner re-evaluates the function of the pack.

This is reinforced by the complementary evidence that branding, and aesthetics seem to have little impact on a decision to store a packaging item in a garden context such as a shed or greenhouse. When an item enters a shrine twilight zone, particularly if placed front stage in the home, form elements and aesthetics including branding, colour and material qualities are significant.

The adoption of different twilight zone practices in the front stage of individuals' lives as opposed to the back stage, is demonstrated by the importance given to the aesthetics of packaging entering a shrine twilight zone where objects are frequently displayed. Places where packaging items are kept primarily because of their contents or their potential techno function can be thought of as rainy day twilight zones. Such items are more likely to be stored out of sight, because they are likely to have less aesthetic appeal and to have been kept for their techno function.

As we saw in the examples above, particular practices bring particular determinants to the fore and work in different ways at the moments of categorisation.

*Joyce, a 63 year-old interviewee explained that she saves glass jars:*

*“ Pickle onions we reuse them for, not all of them, but I've probably got eight or nine in the garage”.*

She offered an aesthetic rationale for choosing which jars to keep and which to throw out

*“ I would prefer a square jar because a square jar looks nice on your windowsill with pickled onions in or something”.*

So, although she saves jars as part of the practice of onion pickling for their techno function and the jars are again kept in a rainy day twilight zone for their potential techno function, her use of '*prefer*' suggests that the aesthetics, or socio function affect her decision to consign the jars to the twilight zone, but are unlikely to prevent the glass jars being reused. In her calculation of the potential value of these jars, techno function outweighs ideo/ socio function, although both are important.

It is now useful to return back to the carrier bag case study and thinking about the place that the bag in Fig 65 might occupy in the processing diagram (Fig 62).



Figure 65: Carrier bag reused as equipment protection

This packaging item may have inhabited a rainy day twilight zone for some time before it found this use, or it may have been put to use soon after it was brought home. In either case, the aesthetic qualities of the bag had no bearing on its suitability for reuse, its new function in a garden shed out of sight means the branding was not likely to be relevant to its new function. The function and value of the bag is unlikely to change and therefore after the initial transformation of its secondary function it is likely to continue to occupy back stage settings for some considerable time.

Fig 66 is an example of an item that was originally kept for its contents, but which has been kept in a bathroom cabinet for so long that it is now only relevant for its packaging. The contents was skin cream for a long-dead rabbit, and it is tempting to speculate that the package continues to be valued because the tin is metal and the design has some period charm. It may be that whereas this item was originally part of a rainy day twilight zone, it has now transformed into a member of a shrine twilight zone dedicated among other things to the owner's memories of their defunct rabbit.



Figure 66: Tin containing rabbit cream

### ***Forces in and forces out; function – emotion – aesthetics***

The previous example demonstrates rather well the three forces that appear to determine the consignment of objects to twilight zones, and which may be relevant to the decisions that cause them to be taken from them for reuse or disposal. Of these three forces, function, emotion and aesthetics, function is likely to be relevant to both putting an object into, and taking it out of a rainy day twilight zone. The feelings evoked by a collection where objects are actively selected and removed from ordinary use (Belk 1995), providing memories of the past, and the sense of satisfaction in a completed collection of similar objects are highly relevant to shrine twilight zones. The aesthetic systems to which packaging objects relate, which may play on either function or emotion, is the third of these forces.

These three forces can be observed at work in the interview data. Participants rationalised their decisions to collect or save packaging items in terms that appear to appeal to all three forces, alone or in combination.

Interviewee Joan talked about the reasons she has kept a pink perfume box that she likes:

*“Here it is – now that’s a box I like, I’ve had that now for about two years. I think it had Marks and Spencer’s perfume in it originally”.*

Which may suggest that the values that attach to the Marks and Spencer brand has some part in her decision. When asked what she had kept in it since saving it she explained that she’d kept

*“Nothing – I’ve just kept the box because it is nice, I’ve kept it because I thought I might buy something and want a nice box.”*

Although this extract also seems to suggest that the box has, as Schiffer would call it, a 'techno function' and has entered a rainy-day twilight zone because it is functional and may one day be useful - she also seems to like the aesthetic qualities of the pink box. Here, these aesthetic or its ideo function qualities seem to overlap with its rainy-day or techno function, as she suggests that it is such a nice box she could use it as a part of a gift. So the emotion she expresses about the box being 'nice', her individual attachment to it, constitutes its potential future secondary function. It could be that this individual likes this box so much; her emotional attachment to it is so strong, that this causes her to keep it rather than to reuse it.

This and many other examples seem to support the point made by Kopytoff (1986:68):

*All commodities have social, technical, cultural and economic biographies, they mean different things to different people at different times and in different places, classified and reclassified into endlessly reconstructed cultural categories.*

Mary, the 21-year old interviewee describing her favourite packaging item also indicated a combination of motivations behind her decision to consign it to a twilight zone. She described the Jean Paul Gaultier perfume package (Fig 67) in detail and noted that she'd kept it for nearly three years because:

*"...it's more ornamental than anything else even though it's finished now so I put it away somewhere but I've still kept it. Before it was always out on display..."*

She continued to explain that it was a birthday present and that the reasons she'd saved it was emotional but also aesthetic:

*"Mainly because it was a nice piece of packaging - it's the dome, the one with the little women in it - the snow shaker".*



Figure 67: Jean Paul Gaultier 'Fragile' perfume bottle with snow shaker designed lid.

She was then asked to describe where this particular item was kept and what else was stored with it. She described the class of objects that occupy this twilight zone:

*"Quite a lot of photographs are in there that I haven't sorted out yet. Odds and ends – I went on a hen night last year and there are odds and ends from that hen night in there. Sorts of things that you're not necessarily going to use again, but they are sentimental things – probably a sentimental box".*

When asked when she might take the perfume packaging and dispose of it she explained that she thought it unlikely she would ever throw it away and explained:

*"It just seems too nice, it's probably cause I know it's expensive as well – It's probably the most expensive perfume I've ever been bought so I think that probably had something to do with it, but I just liked it so that will probably stay".*

In this case the gifted object once the contents had been used up has been actively selected and removed from its ordinary function (of being disposed of), because of its non-use value (Belk 1995), but although this object has no techno function anymore – it no longer contains or dispenses perfume, it still has an socio or ideo function of

originally front stage display, but now just connecting the owner to a previous time and person in the back stage.

In contrast to Scanlan's (2005) description of garbage being often an unwelcome shadow reminding us of our past, these packaging items are a welcome method of keeping alive the collective memories of societies and families with which otherwise would be forgotten. (Riggins 1994).

Aesthetics and emotion are the reasons why this perfume packaging has been saved – it has no possible further techno function as it cannot contain anything else or perform any other techno function. The collection it is part of seems to be a clear example of a 'shrine' in that there are no techno function reasons for any of the items entering this twilight zone. Aesthetics and form qualities and emotion alone have led to this piece of packaging being saved in a back stage collection which is unlikely to serve any other purpose or allow for any future reuse other than that of a connection to the past.

The decorative tin pictured in Fig 68 also provides a means for the owner to connect with the past. It was given to the owner (the author) after her Grandfather had passed away. The packaging item has many sentimental memories of childhood afternoons selecting boiled sweets and toffees from it, and the tin has entered both front stage and back stage twilight zones whilst in the author's possession, emerging from time to time with different reuse functions. Currently the item remains in a back stage shrine twilight zone, waiting for a reuse function, but due to its form elements and qualities and 'history' is never likely to be discarded.



Figure 68: Decorative tin.

The example above has a real history, but items can have "*imagined histories*" created by the owner too (Gregson and Crewe 2003: 147).

Imagined history making can be a reason for an object having a lifespan way beyond its primary use, allowing consumers to categorise an object as authentic and collectable. An item that might have started out its life being a transient object, but as a result of consumer intervention and meaning interpretation and creation has transformed into a durable object (Thompson 1979)

Postrel explains that the most common and influential meanings of authenticity include:

1. *Authenticity as purity*
2. *Authenticity as tradition*
3. *Authenticity as “aura”, showing the signs of history* (2003: 111)

She argues that rather than authenticity being objective it is personal or social, and what we find authentic can change after time (2003 :116).

Although graphics and branding can provide form qualities to support a socio or ideo function in a particular 'system', the owner's relationship and interactions with the object may evolve and 're-tune' with time alongside the evolving 'life history' (Schiffer, 1999) of the object. In some front stage cases such as the OXO tin pictured in Fig 69 this re-tuning is not only in the owner, but within the social group of the owner allowing the object to increase in value and even be re-categorised as 'antique' with many now being found for sale in antique sales and shops.



Figure 69: OXO tin.

This recategorisation has allowed objects like this to be removed from the back stage part of the twilight zone within the home and many now become part of a front stage conservatory process and put on display within a kitchen or dining area as part of a collection of similar objects.

The OXO cube tin's simple red, black and white graphics as well as carrying the product branding the graphics also prescribes its secondary reuse potential as a sandwich tin.

The tin sold in the 1940's was originally bought with OXO cubes in it, designed to be airtight it was functionally fit for the intended primary function of storage. The tin was stored in a kitchen cupboard or pantry and the cubes were gradually taken from the tin and used up over time. Once this 'proper' primary function was over it was reused for either the prescribed 'proper' secondary function as a sandwich box or reused for some other storage purpose. Due to the object at this time still being relatively new and the decoration being that of a commodity brand the tin was reused at this time mainly due to its functional attributes. This tin continued to be used as a sandwich tin for a few years until a superior product replaced it and made this tin functionally obsolescent. When the Tupperware sandwich box came onto the market in the 1950's, one was bought to replace this tin and provided a superior function. The tin was then re-evaluated and categorised as still worth keeping, but only as a back stage method of storing objects either in the kitchen pantry or more likely within a garden shed or garage. The 'system' techno function allowed the item to enter a back stage/ long-term twilight zone and this object remained in this garage or shed for a long period of time. Some years later when the original owner's son was clearing out the property, this item of packaging was rediscovered and evaluated based on the aesthetic values of a later, different society. The aesthetic and physical form elements providing the techno function were interpreted differently and have become form qualities creating new meaning for the new owner. The branding, material and design of the packaging now represents nostalgia and authenticity and provide a socio and ideo function that bring the tin out of the back stage twilight zone and into the front stage.

The material, aesthetics and branding could ensure this item entered a 'conservatory' twilight zone being kept and valued as part of a collection.

This OXO tin was bought at a UK Antiques Fair by the author, displayed on the stall amongst many other old metal tins and therefore none of the above history is actually known, however these objects have avoided disposal and have been recategorised as having value and therefore it can be suggested that the attachment is largely based around romantic and fantasized visions of lives and times of imagined others, rather than the authenticated excavations associated with reconstructions (Gregson and Crew 2003: 147). It does not matter what the actual history of this packaging item is, it

is the fact that the object allows biographies to be imagined that help this metal tin enter a twilight zone and another object with similar techno functions not.

The tins in Fig 71 are of varied designs, but all originate from the 1940's and 50's and all have form elements that communicate "aura" (Postrel 2003) 'authenticity' and 'originality'. The tin in Fig 70 is a relatively modern tin designed to look old and create feelings of nostalgia. The tins in Fig 71 have been taken one step further than front stage in the home and have been put on display like museum exhibits in a public bar, only one stage removed from collections in such places as the Museum of Brands, Packaging and Advertising, London.



Figure 70: Thorntons tin



Figure 71: Assorted tins

James a 34-year-old male interviewee described the reasons why he collects old glass bottles (Fig 72). He described how his collection includes Victorian glass bottles that cost about £2.00 from antiques centres, but the type he really likes cost about £3.50. The increases in cost are due to their rarity, produced in thinner glass so fewer survive when being recovered from old sites. He explained how the aesthetics interest him and his collection of ten is on his kitchen windowsill. He likes them in that position as the light comes through and they look nice as ornaments. His intrigue and interest lies in their authentic design as a packaging system with a glass ball keeping the original carbonated drink contents fizzy.



Figure 72: Glass fizzy drinks bottle.

When asked if he would be as interested in a reproduction of these Victorian bottles he explained why he likes the originals because they give clear evidence of the authenticity of the objects. Their “aura” are all-important:

*“I like the impurities in them – they’re knobby and not pristine. My favourite ones are those with the names on – like Skipton etc. Embossed names that I’m linked with.”*

He explained that he would buy a modern bottle if it was interestingly made, but he would not put it on display. He described old ceramic bottles that have a ceramic stopper on metal wire as *“like the modern Grolsh bottle - really nice”*.

He said he’d like to buy one of those and put it on display, but he would never put a new ‘Grolsh’ bottle out. The modern bottle simply would not provide the appropriate socio and ideo function for his ‘system’ secondary function of display in the front stage of his house.

Conservatory processes or collecting behaviour is evident as the way that packaging enters the twilight zone either normally but not exclusively in the front stage of the home. Although this delays the demise of the packaging it is difficult to design for, as it is idiosyncratic (people can collect anything). However design can incorporate collectable qualities into objects either through the shape where a number of the same object can create something of greater value or graphics and branding can create a series that need to be collected.

The ‘K cider’ matte black bottle (Fig 73) was part of a series of designs introduced in

the UK in the 1990's. Other versions included an 'ultraviolet' bottle and a silver design. These were widely collected by the student population of that era.



Figure 73: 'K' Cider bottle

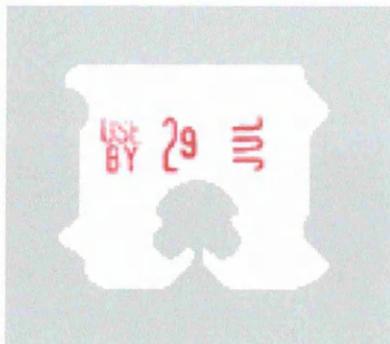


Figure 74: bread tags

The K Cider bottle example might have been designed with collectability in mind, however it is less likely to be the case with the bread tags (Fig 74), originally colour coded and used to keep bread bags closed, these were collected by children in the UK throughout the 1970's and 80's to be put on bicycle wheel spokes.

In many of the examples it is apparent that people who consign items to a twilight zone do so without recognising such practice. Dave the 37-year old interviewee who owns the collected items Coke bottles and other objects from his tour of India explained in the first semi-structured interview how much he liked the minimalist bathroom picture and minimalist interiors. He described what he liked about it:

*"yes, I like it, again it has - most objects in that display have a purpose, no unnecessary objects or decoration".*

Although from this it seems Dave prefers interiors having only techno function objects, his own house interior has numerous displays or 'conservatory' twilight zones containing sentimental objects and those that project his taste and style with only socio or ideo functions.

He provided evidence of other types of twilight zones; demonstrating a rainy-day type of twilight zone. Looking through a shoe cleaning kit he found some old tins and tubes of leather dye and the following exchange took place:

*"When did you last use this leather Dye?"*

*"A very long time ago probably – (laughs) it's probably all dried out. Is that Leather Dye again? – Suede Dye. Oh God! Oh Dear –What a hoarder".*

In this example, as with the rabbit cream, the contents were probably useless and the value of the outer packaging value may have been all that kept the item in the collection. However unless the packaging has nostalgic emotional attachment through the aesthetics or potential functions, it is unlikely that the packaging will be separated from the dried contents and reused in any way. These items seem like candidates for disposal, as they have no techno, socio or ideo function given that there seems to be no aesthetic value in the objects, no emotional attachment to them and no functional rationale for potential secondary reuse. It may just be laziness or a mistake that this packaging remains, this impression is confirmed by the negative way in which the owner refers to the fact that he has kept his shoe dyes. Once these and similar objects are discovered in the twilight zone they are likely to be re-categorised as functionless waste and ejected from the system before secondary use can begin.

To explore how design might encourage attachment and the realisation of secondary functions, elements of this study were incorporated into commercial design practice. The following section provides more detail of this incorporation into a particular design project.

### ***Rockware Glass – bottle designs***

Building on the positive findings into consumer's attitudes to glass from the research conducted by Glasspac in 1999 and 2001, a piece of video ethnography was commissioned by Rockware Glass (Naked Eye, 2006).

This was a series of 5 video pieces lasting approximately 10 minutes each. The videos provided clear evidence of the role that glass plays in domestic scene setting for both private indulgent occasions, and shared events such as dinner parties etc. Participants talked about objects on display around the home, many of which were glass, and how they have connections to those who bought the item for them.

Following this research, Rockware Glass commissioned Design Futures (the design team managed by the author) to work on a design project. The project was to provide increased value, brand exposure and point of difference to their product range. The design team focussed on ways to design consumer interaction and personalisation into glass packaging, extending their potential life spans.

The brief was to design concepts specifically for the traditional whiskey market and the more contemporary Vodka market. These designs have formed part of the innovation work presented at Rockware Glass's Fresh Thinking Day 2006, an annual event that

brings different elements of the packaging industry together to think about innovation opportunities involving packaging.

Three of the concepts created for Rockware Glass explored how additional functionality can be designed into packaging. They had the following working titles:

1. Spirit-level
2. Goldilocks bottle
3. Patination hand prints

Taking each one in turn the three designs can be described in terms of how they intended to provide durability and secondary uses within the proposed domestic packaging process.

#### 1. Spirit-level bottle.

This concept (Fig 75) was designed for the whiskey market providing a play on the attachment of men to their sheds. As described by Thorburn (2002) culturally in the UK the shed, whether in the garden or at the allotment, is the place where men can feel free from worries, sharing this environment with power tools, gardening equipment and perhaps the occasional neighbour or fellow allotment owner.

This design was a playful poke at this cultural stereotype combining the requirements of a primary function of packaging to contain, store and dispense whiskey with a secondary function of a spirit-level contained within the glass base of the bottle.

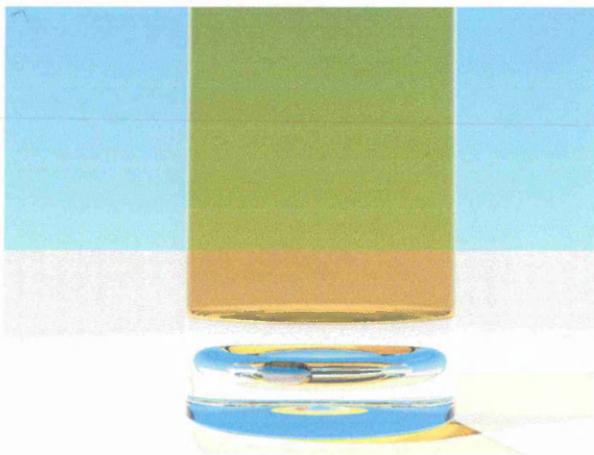


Figure 75: Spirit-level glass bottle design. Image courtesy of Design Futures and Rockware Glass.

This design is of particular interest because it was intended to have a secondary function within a back stage environment, the shed or garage where aesthetics and branding are less important than the practical function of objects.

The bottle material and spirit level design combine to provide durability to the product and provide opportunities for a secondary use due to its techno function and possibly enough consumer attachment to have further uses as a container for something else. It can be predicted that this bottle would remain within the shed environment for some considerable time.

## 2. Goldilocks bottle

Accepting that objects can have a direct connection with the past and allow us to keep alive the memories of societies and families, a bottle concept that provides evidence of experiences and social occasions was created (see Fig 76)

This bottle was designed to have a chalkboard matte black coating to it, with a corner window revealing the level of product remaining in the bottle. It is based on the presumption that whiskey is usually consumed at various occasions over a period of time rather than being consumed in one sitting. The concept develops the idea that times of consumption can be chalked onto the bottle to signify the level of the whiskey or to register the occasion as a memory aid of happy times. The bottle evolves with age and is an interactive part of the consumption process.

It can be predicted that this bottle could develop a secondary techno function in the front stage of the home as a novelty message board in a teenager's bedroom, or in the back stage as a method of making notes in a shed or garage. The ways this bottle may be processed from its primary use through to ultimate disposal are many, and again, it can be realistically predicted that this design will have an extended life of some kind within the domestic waste processing flow.

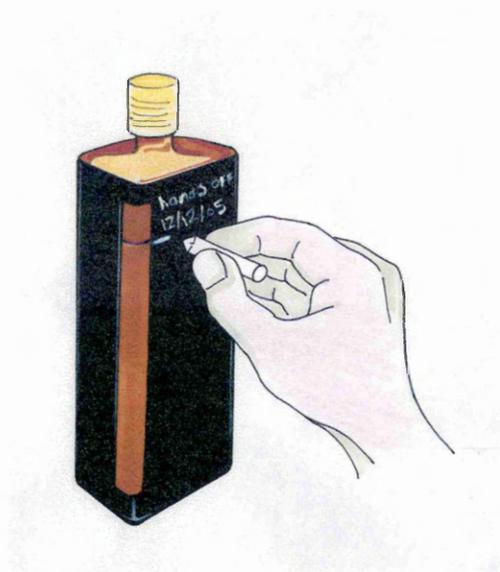


Figure 76: Goldilocks bottle. Image courtesy of Design Futures and Rockware Glass.

### 3. Patination handprints

This concept (Fig 77) has a soft outer coating to the bottle that once activated when taken home would mould to the owners handprint and become personalised.

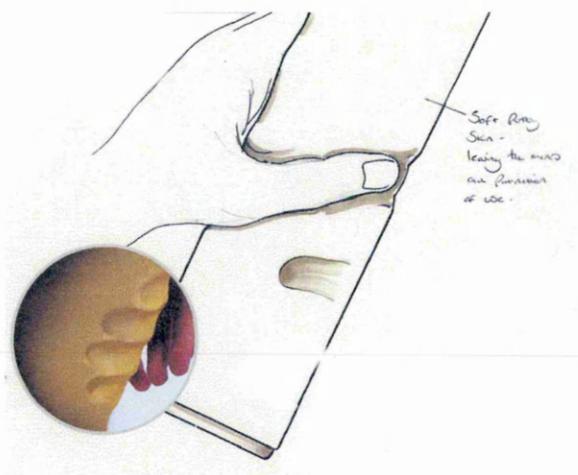


Figure 77 Patination bottle. Image courtesy of Design Futures and Rockware Glass.

The material gradually returns back to its original form allowing for other handprints and personalisation. The idea is the bottle interacts with the consumer, changes with time and that no bottle will be the same. Again this bottle is intended to remain with the owner for some time and could develop consumer attachment in the back stage or front stage of the home.

These three examples demonstrate the attempts to incorporate some of the thinking from this study into commercial design practice. The concepts try to anticipate the possible 'systems' these packaging items may enter within the home and the opportunities they present for design for consumer interaction and reuse. However these systems are difficult to predict, not least because individuals respond to different influences and therefore seemingly predictable systems can change.

### ***Changing systems***

In the front stage of our lives the socio and ideo function as well as the techno function are vital if a secondary reuse or a conservatory process is to occur. This can be demonstrated through a colleague's son who goes to school with his PE kit in a supermarket reusable carrier bag like the one pictured in Fig 47.

The bag is designed as something to be proud of and has the form elements of branding and graphics to communicate the owner's environmental beliefs and behaviour. Although it is not possible to be sure what happens to the proper socio function of the graphics on the bag in the context of a UK secondary school as the school child is not prepared to say, it seems likely that as the original context or system has changed and the performance of this bag is now at odds with how the user wishes to portray himself. The other school children in this new system may not recognise the socio or ideo function of the bag, they interpret it in another way resulting in it no longer having appropriate form qualities and the desired secondary socio or ideo function. Instead it has reverted back to only providing the 'proper' techno function with the socio function becoming a problem and expiring due to a change in the 'system'. Within the matrix, this bag would fit in the front stage, long-term quadrant, but the aesthetics and branding are proving unsuitable to sustain this secondary use within the changing 'system'. If the item is to be reused within the front stage of the home even if it is due to its techno function the branding and graphics may as in the case of the PE kit bag dissuade this secondary use if inappropriate for that 'system'. If the item was to be reused in the back stage of the home, the function is likely to be more stable and less reliant on changing fashions, performances and 'systems'.

If a packaging item is to be reused because of its techno function outside or in the garden shed it is unlikely that the branding displayed on the item that might contribute to a socio function will be considered. However, the ideo function may still be relevant in the back stage part of our lives depending on the individual example. The reuse of

the object may still represent something important ideologically to the individual even if it is not visible to others.

### **Summary**

This chapter has drawn on data from the research that addresses the spatial and 'system' issues that affect the changing functions of packaging items throughout their life. It presents the home as a processing unit with key moments of evaluation where assessments regarding items potential functions are made.

A four section matrix was presented that looked at the front stage/ back stage spatial arenas for reuse and then added the time factor to see what the four characteristics of packaging reuse were. These four types of reuse within the matrix in Fig 60, were described as:

1. Short-term/ back stage: The techno function is the most important functional element to consider in these cases. This type of reuse is only likely to be briefly part of a 'twilight zone' in the form of a rainy-day item.
2. Short-term/ front stage: 'proper' secondary function can be designed for in these circumstances. The immediate context can often be predicted and therefore reuse opportunities can be anticipated and relevant performance characteristics designed in. Even within this environment ideo function is still occasionally apparent.
3. Long-term/ front stage: requires durable branding and graphics, and an appropriate material type that fit with the home décor and 'system'. This type of reuse performs a role of communicating the owner's ideas and social status and is hard to predict and design for. The socio function closely followed by ideo function is most relevant. Techno function can be important but not when the object is part of a conservatory process, or a shrine twilight zone.
4. Long-term/ back stage: attachment and sentiment along with the techno function are forces keeping these objects within this environment. All three types of function could be relevant here, but techno function, followed by ideo function are likely to be more relevant than socio function in this back stage 'system'. This is difficult to design for due to the lack of predictability as to what items for what function will enter this back stage twilight zone.

Packaging design case studies, both old and new were used to demonstrate how value transforms as objects are processed and pass through different stages or real or imagined biographical journeys.

Aesthetics displaying authenticity and age appeal to our motivations to collect, with time allowing a previously commodity product or packaging item to become recategorised as 'authentic', which in itself adds a perceived value to the object. If a consumer connects with the history and the origins of a product or packaging item it is harder for them to dispose of the object. (Strasser 1999)

This chapter introduced the concept of twilight zones and described its place within the packaging processing flow chart. Twilight zones are significant because they provide the time for the object to be re-evaluated and the opportunity for the packaging item to re-emerge into a new 'system'. They may be of two different types – 'shrines' and 'rainy-day' twilight zones and three forces affect consumers' decisions to consign packaging items to these zones, or to remove them for reuse or disposal. These forces - function, emotion and aesthetics – are crucial for an object to enter the twilight zone and then in determining how they are removed.

Form elements, or the physical design of the packaging item are fine to provide back stage rainy-day techno function reuse, but when the form elements become qualities after interpretation and meaning creation by the user, objects are likely to enter long-term shrine twilight zones due to their socio or ideo functions. It is the form qualities that help create attachment, extended ownership and opportunities beyond an item's primary function.

To understand how 'systems' are created and how consumers can create attachment and interact with packaging items it is important now to think now about the third element required for reuse - the user.

The next chapter combines the key literature and the observations made within the research to explore how different types of consumers behave with objects and can be encouraged through design to take different meanings from objects and create new functions.

## Chapter six: Consumer Motivations

### *Introduction*

This chapter examines the third and final of the three elements affecting packaging reuse. It uses the literature concerning consumer types from such as Campbell (1992), Wagner (1997) and Reisman (1950) and combines it with the relevant research findings from this study to present a simple typology of consumers to aid the effective design for reuse acknowledging the consumer characteristics reviewed in the literature and motivations involved.

The chapter presents a scheme for understanding the effect of consumer types and their motivations on packaging reuse.

There are many ways that consumers are described and categorised by non government organisation's, retailer associations and market research companies in terms of their depth of 'greenness', or involvement in sustainable consumption. The surveys from which much of this data comes are recognised as being flawed in many cases, with the numerical sales data of sustainable products and services not matching the consumer research statistics. It is recognised by retailers and researchers alike that there is a huge gap between consumer motivations and behaviour (Wagner 1997), with many fewer consumers actually buying and using sustainable products and services than say they do.

The established categorisations of the 'greenness' of consumers (reviewed by Wagner 1997:23) is even less relevant in this study as much of the reuse activity observed is not even recognised as such by the users, with many reusing packaging due to other motivational factors than the 'environment'. Many examples of reuse result from decisions based on personal beliefs, values and historical influences individuals bring to the decision making process.

Design literature such as Alehop! presents new ways of thinking about the design of objects to encourage consumer involvement in an active and participative way. Alehop suggest that the 'Alehop' designer is mindful of the creative element in each individual and through design aims to increase their participation still further. The philosophy is to create objects designed for the user to finish and reinterpret (Padros, 2003:161).

However if the user is to participate in the interpretation and finishing off of designs, it is worth considering if consumers are motivated and able to engage in this behaviour. It is clear from this study's early research that consumers view objects differently from each other and are influenced by different parts of society at different times in their lives.

This study's surveys asked participants how they had learnt how to reuse, and many explained they remembered the reuse of glass bottles for milk or fizzy drinks, or had watched and learnt from others within their peer group. When asked if there were any types of packaging they wished were more reusable, examples ranged from metal tins through to cardboard washing powder boxes:

*"Tins – we use lots of cat food and other tins (at least 5 per day) – takes up lots of room in the bin".* (34-year-old female respondent)

*"Soap powder boxes – generally any bulky or expensive looking containers"* (31-year-old female respondent)

### **Models for understanding consumers**

Models for understanding consumer behaviour come from different literature sources such as Campbell (1992) Wagner (1997) Reisman (1950) and Strasser (1999).

Strasser reviews the social history and changing patterns of consumption and disposal witnessed in the US, whilst Wagner (1997) presents a qualitative cognitive approach, providing insights into how consumers can be motivated to behave in a 'green' manner. Campbell (1992:56) describes different types of consumers in terms of their desire for the new and their acceptance of replacing goods, ultimately affecting their disposal. His three categories are:

Pristinians – those that fear contamination and will only crave the fresh and untouched.

Technophiles – those who crave new technology.

Neophiles – "those that crave the novel, the strange, or even bizarre"

These categories are relevant to this study, as to reuse is to accept the second hand nature of objects, the already used item that may have been contaminated. An understanding of the acceptance of second hand goods, and the possible relationship between consumers liking of authenticity and acceptance of second hand was examined through the research questionnaires and semi-structured interviews.

Participants in the questionnaire exercise were asked if they bought second hand goods and if so, when and what. Interview participants were asked to imagine the next time they are asked to a fancy dress party, how they would construct an outfit. As well as providing insights as to how creative the participants were likely to be, it also provided some idea regarding their attitude to buying a new costume or constructing something out of old clothes and items.

Alyson a 47-year-old participant did not mention her reuse activities but expressed some interest in creating things from second-hand goods. Dave also gave some examples of using second-hand goods, but in contrast to Alyson was proud of her inventiveness and recognised the amount of reuse he carried out. Participants were also asked what the latest electrical goods were that they bought, and what mobile phone they had in order to build a picture of the extent that they were motivated by new technology. Dave and Alyson both showed little knowledge or interest in keeping up with the latest technology. Alyson described her mobile phone:

*"I don't upgrade – I've had it for I don't know 3 or 4 years. I'm not a trendy mobile phone user. I have it for the convenience of having it and what I've got suits me".*

Alyson seemed to show little concern to the image she projected through the material goods that she owns. She also explained that she had recently chosen a new *Skoda* car, perhaps also indicating her lack of interest in owning traditionally prestige brands or goods for front stage display.

A factor that could contribute to consumers' attitudes to consumption and disposal was identified as the way individuals view their social world and their role and responsibilities within it. Riesman's (1950) examination of American society is in parts still relevant today, although some of the issues raised when it was originally written and published in the 1950's such as the emergence of television are now out of line with today's issues. However many of the points raised about human behaviour traits still seem to hold true, his concerns that made the book so popular in the 1950's are similar to those of the 21<sup>st</sup> century – the social divide between the rich and the poor, greed, dissatisfaction with the breakdown of society and the issue between micro and macro issues of living.

Riesman describes different social characters and the similarities and differences between them. He describes the social character as the part of the character that is shaped by others and is the product of experience of this group.

Riesman splits consumers into three different categories, he stresses that all of these are only characteristics and people are to a more or less degree one or more of these types, however they are useful to review and understand in order to reflect on their relevance to the consumer type involved in packaging reuse. Riesman's three different mindsets are described as sustenance/ tradition-directed, other-directed and inner-directed (1950:15).

Tradition-directed types are described as having traditional values and tend to be bound by community, duty and status. They are influenced by a small number of individuals they have contact with – they are not so much expected to be a certain type of person, but to behave in a certain type of way. Shame and the good opinion of their small community is the motivator to behave in the accepted way.

Riesman describes inner-directed types as those who 'do their own thing'; self reliant but will have group concerns. They have their direction implanted in early life by elders and directed towards generalized distinct goals (1950:15). They are influenced by early teachings but can receive signals from external sources – inner feelings of guilt keep them on track, behaving in a certain way. Both tradition and inner-directed consumer types are likely to be stable in their attitudes and behaviour as most of what they do has been taught by a small close community, or self-taught. Their influences are likely to be from a small field unlike those described by Riesman as 'other-directed'.

Other-directed people are concerned with what others think, and are conspicuous consumers of icons. They are more likely to be influenced by signals from a wider world and political events, and then personalize them. They are likely to be aware of green issues and relate them to themselves and their own behaviour. Failure to conform to peer group or social pressure is more important to other-directed people. There is room for some choice and personalization of life – much more than the strict tradition-directed people, but other-directed types are likely to suffer from anxiety in the face of so much information, choices and influence.

Other-directed individuals are likely to reuse and display items in a front stage context (Goffman 1959), using objects as indicators of the 'self' and presenting their personalities through the goods they conspicuously display within the different environments within the home. Conspicuous reuse could be the result of wanting to

display status through a brand such as the reuse of a 'designer' carrier bag. The bag having the techno function to hold more items, but a strong socio function of displaying the owner's purchasing habits and ideo function displaying their potential wealth or chosen status. If inner-directed individuals reuse anything it would only be things that had a techno function for the benefit of themselves, rather than others. They are likely to have either learnt their reuse techniques from their childhood, or others within their social group and if reusing a carrier bag the motivations for doing so are likely to be economic or due to the bag's techno function as a bin liner or poop-a-scoop bag. Tradition and inner-directed types are likely to behave at a micro-level when being sustainable, but not always because they are conscious of it being ethical or sustainable behaviour. In contrast other-directed types are likely to be more ethically aware of macro-level sustainability issues and behaviour. However this reliance on instruction and external direction may replace individual creativity and may make the other-directed individual less stable in their behaviour patterns. All three types may engage in packaging reuse, although it is likely that the inner-directed and other-directed will reuse more packaging but for quite different reasons.

Some individuals see 'greenness' in itself as something to present and be proud of, whilst others see it as something of an embarrassment.

Two participants in this study's emailed survey listed over 10 examples of reuse (the average was 5), and seemed very proud of their 'green' behaviour. Mike a 50-year-old provided many creative examples of reuse and seemed very proud of what he was doing.

*"The obvious reuse for me is the plastic trays and cartons which contain mushrooms, ice cream etc. In my abode they have three potential rather mundane end uses. ["""] Sorry to ramble on, but some of it may be of use".*

In contrast, two of the other survey participants actively disavowed their reuse activity showing signs of embarrassment when exposing their inventive, thrift craft behaviour.

*"I make things out of cereal packets. Templates for when I'm sewing etc. Strange but true. Please don't share this with people".*

*“I have also been known to use tissue boxes to keep things in (but please don’t tell anyone) it drives Wayne (husband) mad”.*

From the research two main factors emerged that might affect the level and type of reuse, the first being their level of creativity or ability to see the potential for reuse in an object, the second was their level of consciousness of green and ethical issues. The two factors are quite separate with many research participants reusing for a variety of reasons other than being ‘green’. These seemed to be highly creative, but inner-directed being influenced by their own needs. Others were reusing packaging because they believed it was the right thing to do for the environment, and were taking their influence from external sources such as the media and government instructions. Some were not only taking their influences from a broad range of external sources, but also wanted to project their image externally through this behaviour, proudly telling others about it.

On a simple matrix (Fig 78) to plot levels of creativity and ethical consciousness, Riesman’s consumer categories can be placed as follows:

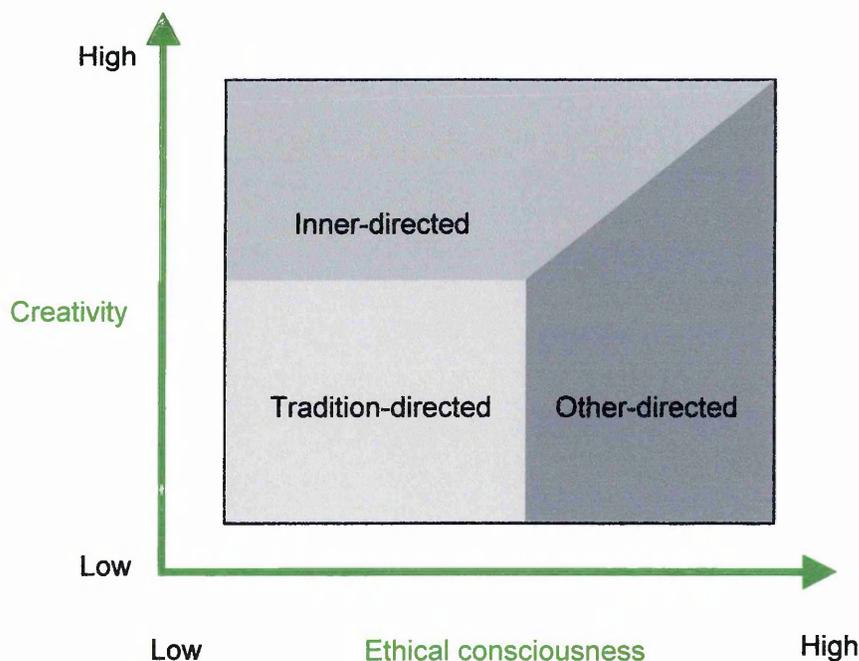


Figure 78: Matrix using Riesman’s consumer types

Reisman's categories are useful to understand the influences that might affect reuse behaviour within a society, but Wagner (1997; 188) helps to develop this picture of the consumer further by drawing on his own research and that of anthropologists and psychologists and providing a description of four different types of practical thinking when making green purchasing decisions:

*Pragmatism:* He describes this as an acceptance of the complexities of green shopping without trying to solve them in their entirety. The pragmatist would look for a better solution rather than aiming always for the best solution. Many participants in this study reused because it was the practical thing to do or the secondary function opportunity was obvious.

*Naivety:* Wagner describes these consumers as believing certain information but not really understanding it. Green branding and instruction have an impact on this group with them believing on-pack messages. This was evident when Dave the 35-year-old participant discussed the pack symbols. He continued later in the interview to explain that because he does not know what the symbols mean he chucks them all in the plastic recycling bin and lets someone else sort it out.

*Cynicism:* Those whose shopping behaviour is negatively affected "by views such as knowing too much about green shopping and its effectiveness" (Wagner: 188). Wagner explains that once consumers who were originally naive realised the complexity of green shopping, confusion seemed to be resolved in two ways over time, either by pragmatism or by cynicism. This could account for the statement made by Dave and his 'giving-up' once he realised he did not understand what to do with plastic packaging.

*Ignorance:* Wagner describes this as cutting short any attempt at being practical in thinking or formulating a solution to a green problem. He cites the main reason as low motivation.

Using Wagner's categories and descriptions it can be predicted that the pragmatist is likely to make a practical assessment regarding the secondary techno functions the packaging object holds. The naive consumer wants to do what they think is the right thing, but is likely to be less able to make creative decisions without instructions to follow. However these directed solutions may not fit with the individual's 'system' and therefore the reuse may only be short-term. Dave is a good example of this type of

consumer, buying more sustainable products, following the instructions rigidly, and then getting frustrated when he runs out of instructions.

Instruction may play into the hands of the cynics or those in the ignorant categories who would respond better to a 'stealth' approach where they are unaware they are being persuaded to reuse and behave in a more 'green' manner.

Wagner's four types of green consumers are now plotted on the ethical consciousness/creativity matrix (Fig 79).

The pragmatist type may range in ethical consciousness, but are likely to rely on creative solutions to problems or needs that they face rather than the naïve type who is likely to follow instruction. The pragmatist group will probably remain quite stable in their consumption behaviour in contrast to those within the naïve or cynic categories who due to frustration and feelings of confusion may over time give up and move towards the ignorant category, becoming disillusioned and increasingly choosing to ignore further instruction or develop creative solutions.

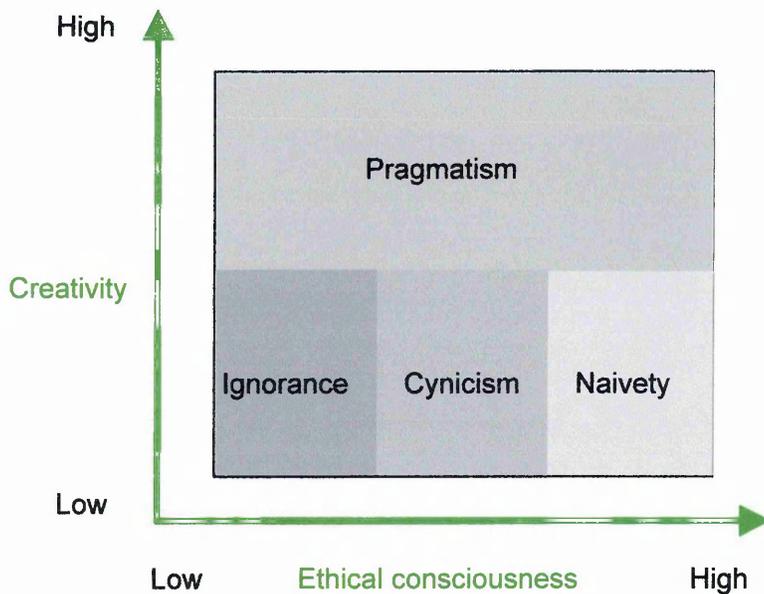


Figure 79: Matrix to show Wagner's four types of consumers.

A questionnaire respondent who could be described as having low interest in sustainability and waste issues provided a number of practical examples of packaging

reuse for techno function reasons such as cutting a cardboard box down and using it to create stencils for decorating a room (Fig 80).



Figure 80: Cardboard stencil

She wasn't involved in reuse to prevent packaging waste, she was reusing packaging for very practical techno function reasons and therefore she might fit into the pragmatist category.

Other participants showed little interested in sustainability or waste issues but were reusing a good deal of packaging. They did not see this as sustainable behaviour, their motivations were based on their needs. Alyson reuses carrier bags in both a front stage and back stage way because they serve a functional purpose. She also composts much of her waste, but only because it provides something for her, she explained her motivations for composting:

*"I suppose it's because it's providing something for me – which is a really bad attitude – I know I'm getting something out of it".*

These different ways of understanding and recognising consumer types and behaviour provided by Wagner, Campbell and Riesman provide the basis for the interpretation of the consumer aspect of this study's data. This study goes beyond these classifications relating them to the other factors discovered in the research and adapting them to provide a deeper understanding of the active role of the consumer in packaging reuse, and a scheme to understand consumer's decision making.

### ***The scheme***

Building on the relevant literature and using evidence from this research, the matrix (Fig 81) proposes four types of consumer. It is not attempting to encompass all types of consumer reuse behaviour, but it does allow for a clearer analysis of the interviewees and other participants observed against a fictional proposition for packaging reuse. The second matrix below (Fig 82) shows the relationship between Riesman and Wagner's categories and those developed in this study.

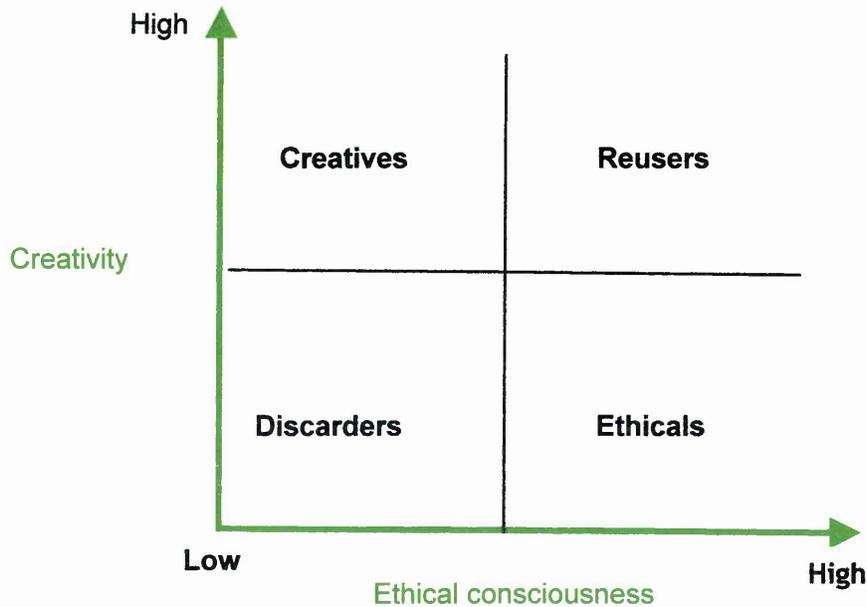


Figure 81: Matrix of consumer types involved in reuse

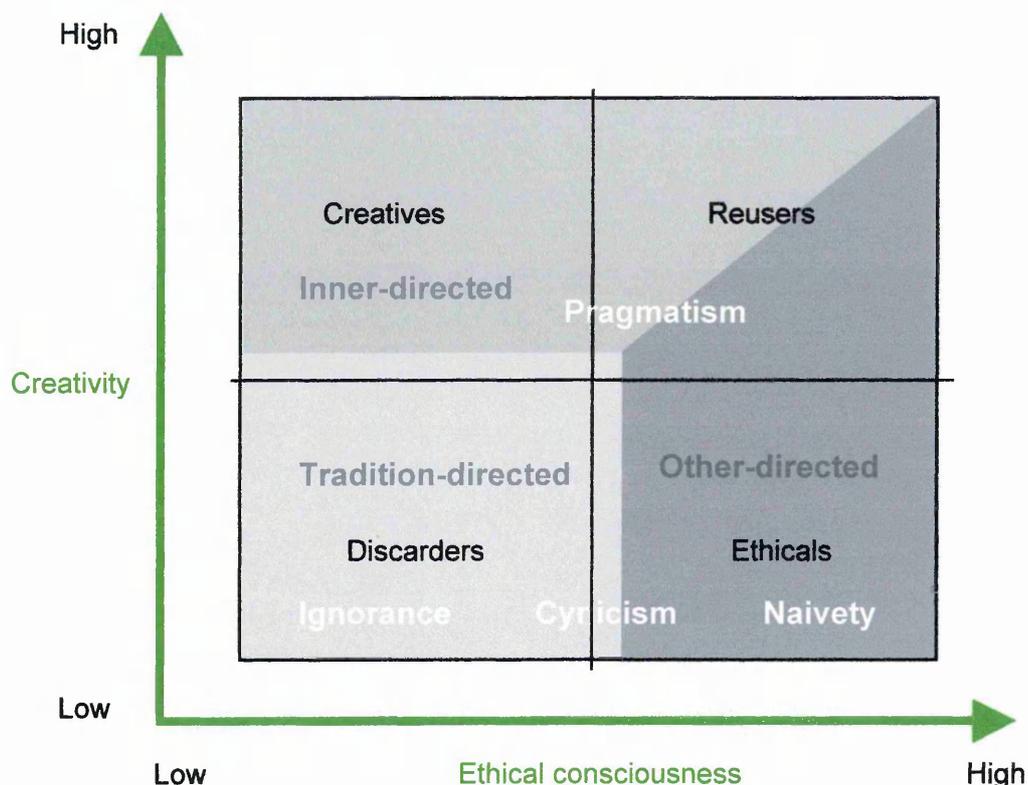


Figure 82: Matrix combining Riesman’s, Wagner’s and this study’s consumer types

Each one of these types will be taken now in turn to look at whether this method of categorisation is useful.

*‘Discarders’* – these are the consumers who are self assured and unaffected by the environmental campaigns, pressure groups community belonging.

Using Riesman’s descriptions they may be tradition-directed and suffer from a level of ignorance and simply have low motivation through lack of peer pressure and desire to be creative with objects. It may also be that these individuals do not have the time, energy or domestic space to consider ethical issues.

*‘Ethicals’* as placed on the matrix are other-directed and may be bound by the social responsibility to behave in a ‘green’ manner influenced by the media, government policy and environmental campaigns. Without the creative drive these people may follow rules and instruction to the letter lacking the ability to create new and interesting opportunities to suit their own needs. Interviewees who seemed to fit this description

followed instructions to recycle and use environmentally designed products with ease, however showed signs of frustration when faced with choices and less clear direction. 'Creatives' include those who have been previously described as a 'Bricoleur'<sup>7</sup>, someone who enjoys the challenge of creating things from nothing, and is involved in odd-job work, making do with whatever objects are at hand (Levi-Strauss 1966). They do this for the satisfaction of the result their work has provided. They are pleased the process has resulted in a reduction in consumption and prevented further waste, but this is often a secondary reward to the creative satisfaction they receive. They are usually 'Pragmatists' having the knowledge to do the appropriate thing with the packaging object rather than blindly following instruction and therefore are likely to engage in interaction with objects to create novel new uses. The process of discovering value in second hand goods for 'Creatives' is important and it may be that many existing campaigns fail to recognise the 'creative' desire in many to find their own solutions to the problem. 'Creatives' are mainly inner-directed, but the motivation to create new solutions to old problems is often to share the idea within a social context. The final type, the 'reuser' is someone who sees the value in packaging before and after its primary use is over. They have stronger ethical motivations than the 'creatives' but also some ability to develop and create the reuse opportunity. These individuals are likely to show traits of all of Riesman's character types being motivated by inner values, but also aware of wider issues and their role within a wider society.

David, a 63-year-old male interviewee seemed to be a good example of the 'reuser' described above. He has little economic need now to reuse products and packaging other than his desire to solve problems himself without resorting to purchasing a tool or further item for the job. He has ethical beliefs about waste prevention possibly originating from his childhood war-time/ post-war teachings of 'waste not, want not'. He described his reuse of old CD's in the garden environment:

*"I started to use them probably 5 or 6 years ago and everyone up our allotment now uses CD's for scaring birds and this sort of thing if you saw another gardener using it would just take off."*

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<sup>7</sup> The 'Bricoleur' is adept at performing a large number of diverse tasks; but unlike the engineer, he does not subordinate each of them to the availability of raw materials and tools conceived and produced for the purpose of the project. His universe of instruments is closed and the rules of his game are always to make do with 'whatever is at hand'.... The set of the 'bricoleur's' means cannot therefore be defined in terms of a project. (Levi-Strauss 1966:17)

David seems to be other-directed in his approach to green issues, and likes to share his ideas and ingenious practices with others. This could be a result of some of the community focussed teachings and instructions he was exposed to when younger. The research participants also pointed to other ways that we learn about 'green' practices, Out of the seventeen returned questionnaires, seven stated they had never been taught to reuse packaging, and another seven had learnt reuse/ recycling behaviour from their childhood either through remembering returning glass fizzy pop bottles, putting glass milk bottles for collection, or through seeing examples on television programmes such as the long running UK Children's television programme *Blue Peter*.

Participants explained how they had learnt to reuse from their peer group or parents:

*"I wasn't taught, but observed people making use of products – I never stopped learning/ absorbing new information".* (60-year-old Male)

This seems to fit with Wagner's proposition that consumers learn successfully through a combination of ways including seeing good examples of green behaviour, learning around actual behaviour, and through pragmatism (1997:189).

Consumers can change in their behaviour and be influenced by experiences throughout their lives. Dave seemed to be a good example of a 'Reuser', discussing at length his ethical beliefs and behaviour. Although this individual was displaying his interest and beliefs in 'green' behaviour on closer examination of interview transcripts he seemed to show a high level of 'naivety', relying heavily on instructions and labelling on packaging and seemed confused by what instructions were asking him to do:

*"I'm not knowledgeable enough ["""] any sort of products have symbols on them similar to little icons and I think basically what does it say?"*

He seemed confused and anxious at all the choices he had to make in the face of the stories from the media regarding what he should do to prevent waste and reduce consumption – on reflection he seemed to be more of an 'ethical' type.

As well as experience, consumers operate at different places of the matrix depending on other factors such as context, and values. Rogers (2005) notes that whilst people were educated during and after World War Two to become less wasteful, in the '50s people had to be educated *into* the disposable ethic.

Strasser also makes a valid point that some ethnic groups have probably valued saving and reusing things more than others, she provides the Scots as an example of a group that have a reputation doing this. She explains that groups develop distinctive cultural practices for using waste materials”.

*“the young, for whom the new is normal, have more readily adopted the ideals of cleanliness and convenience that underlie “disposability”. (1999:9)*

Other research participants also expressed reasons for their ‘green’ behaviour and attitudes to waste. A 39-year old Male discussed his reasons for being so conscious of wasting water as his previous experience as a member of a sailing crew on board yachts where water is rationed and therefore precious. A 32-year-old female questionnaire respondent explained that she had learnt about recycling and reuse whilst living in Switzerland where their attitudes and ways of dealing with waste are much stricter.

Alyson the 47-year-old female initially seemed to be a ‘discarder’ explaining that she recycled little and did not give much consideration to the disposal of her household waste. Again on further reading of the interview transcripts she described why she carries out some ‘sustainable’ practices and explained her pragmatic motivations for composting. Although not reuse, it helps to demonstrate her pragmatic reasons for engaging in waste prevention:

*“I do feel quite good about it actually yeah, but it’s my one little bit that I do – I’m rubbish on everything else but – I suppose it’s because it’s providing something for me – which is a really bad attitude I know it is but I get something out of it. So I put all the waste in there and I get really good compost out the bottom of it”.*

Her motivations are inner/ tradition-directed; she reuses things because they suit her lifestyle, not because they fit with other’s ideas of how she would behave. She explained that she had first learnt about composting from her ex-husband, taking influence from her immediate community.

Many respondents to the emailed survey and questionnaires listed reuse activity relating to their school children and craft activity. Kathryn aged 33 with 2 school-aged children provided examples of collecting for reuse (Fig 83). Again, her motivations were

pragmatic and based on a need for those materials rather than a specifically strong ethical motivation.



Figure 83: Empty yoghurt pots cleaned and saved to take to school.

Similarly Isabel aged 32 with 2 nursery-aged children provided many examples of packaging reuse without instruction (Fig 84). She was adapting objects and seeing opportunities for them that fit with her lifestyle.



Figure 84: A range of reused packaging to store bird food and plant seeds

The two categories from Riesman and Wagner can now be placed together on a matrix, along with the types developed from this study (Fig 85). Some of the participants in this research are placed on this matrix to see the spread of motivations for reuse.

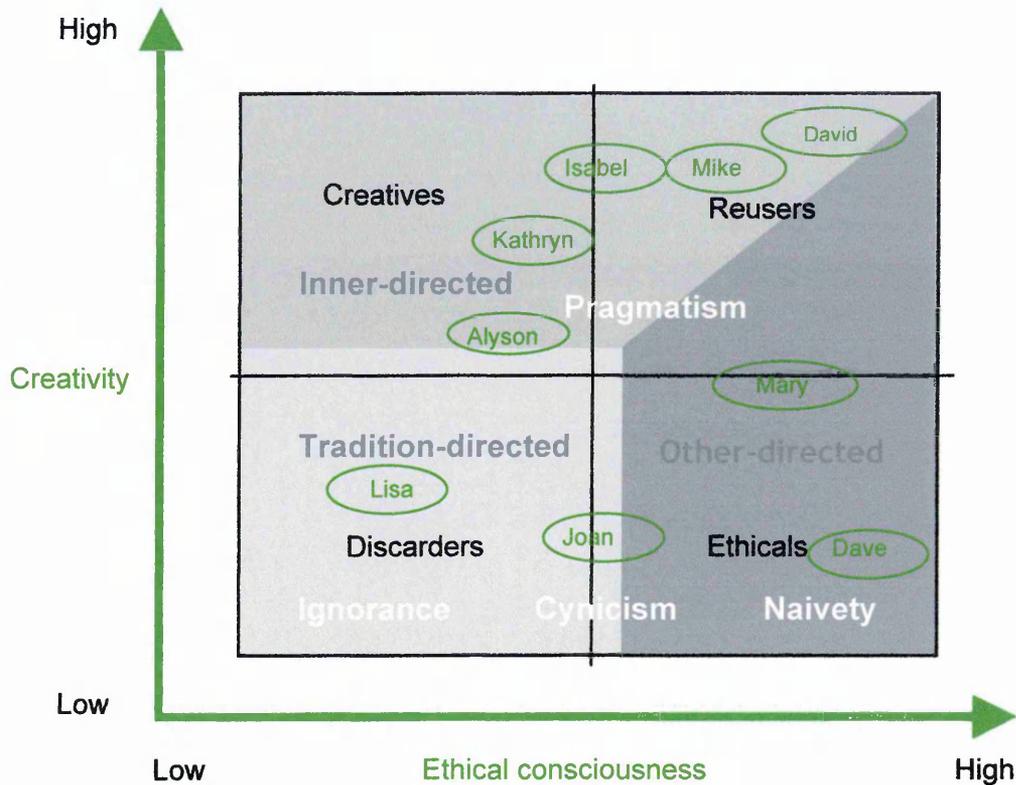


Figure 85: Matrix plotting research participants

These positions are not stable and those placed to the right hand side of the matrix are likely to be affected more by media coverage and increasing government interventions than those to the left hand side.

With increasing media coverage of impending global warming, social pressures may encourage those with other-directed characteristics to conspicuously reuse and display more 'green' behaviour. It may be as predicted by Whiteley that in the near future:

*"buying dozens of marginally useful, soon to be forgotten plastic electrical appliances may soon become a socially embarrassing thing to do among certain social strata". (1993).*

As in Wartime, the embarrassment will lie with those wastefully consuming, and peer pressure will be a motivating factor to reuse and make do.

Scanlan (2005) explains that the term 'wasters' is used to describe those that do not wish to conform to society. It may in the future take on another meaning and become a

derogatory word for those displaying wasteful behaviour in a society of growing awareness of the environment and global warming, and where the fashion might shift from conspicuous consumption to that of conspicuous reuse and reduced consumption and disposal.

### **Conclusions**

This chapter has presented the third element involved in packaging reuse – the consumer.

It has touched on the ethical motivations consumers have to reuse, but acknowledges that most packaging reuse is not recognised by many consumers as ‘green’ behaviour. Most carry out reuse intuitively and their motivations are personal to the individual. Many reuse for pragmatic reasons to gain from the benefits it provides at a micro-level. Some are proud of their reuse, as it is a display of their creative ingenuity; others are embarrassed by its connotations of thrift and making do rather than buying new.

The chapter builds on the consumer types described by Campbell, Riesman and Wagner, and presents four types of consumer and how and why each might reuse packaging.

The most likely types to reuse are those who have high creative tendencies and are motivated by ethical issues. Those consumers who feature high in both areas ‘reusers’ are likely to reuse for inner-directed reasons, but may also engage in some front stage reuse behaviour, if only to demonstrate to their peer group their inventiveness.

‘Reusers’ will be influenced and learn from a variety of sources including the media and other people, reuse practice is often developed by Bricoleurs or ‘Creatives’ and spread through word of mouth and instruction within social groups such as allotment holders, mothers groups or families.

The less creative the individual, the more likely they are to rely on instructions to reuse, whereas consumers who were in the creative part of the matrix were reusing packaging without instruction and therefore may respond well to open-ended designs that allow the consumer the opportunity to finish off the design in an individual way.

The consumer can become a designer, adapting objects and seeing opportunities for packaging that works for them. Individuals interpret and create uses for objects that fit with their values and environment. Instructive ‘proper’ design for reuse cannot take into account the individual’s home and therefore it may only ever be reused in the short-

term unless it enters a twilight zone with the opportunity to emerge and be re-evaluated as useful in a more appropriate system. However instructive and well-designed conspicuous 'sustainable' solutions do provide those with an other-directed character the opportunity to consume and dispose in a more sustainable way.

Therefore different approaches to design are likely to be relevant for different consumer types, open-ended designs are likely to suit the more creative consumers who will develop 'system' secondary functions, in contrast packaging with 'proper' conspicuous designs for reuse will appeal to those who wish to follow instruction and display their 'green' behaviour. There is no one universal solution to create reusable packaging that suits all consumer types, but there is a need to recognise the different types of consumers and how design can encourage reuse.

## Chapter seven: Thesis conclusions

This chapter provides a review of the study and outlines the contribution to knowledge it provides. It reviews the aims and objectives of the study and why the chosen methodology provided previously undiscovered insights and understanding of consumer interaction with packaging and reuse.

It reviews the key themes in turn and explains the connections between the themes.

When trying to understand the different groups interested in the subject of packaging reuse, it became clear that the subject crossed into many different areas of interest. It crossed into the domains of diverse interest groups such as the packaging industry, packaging designers, environmental campaigners and those from wider academic disciplines all of whom until recently have had little or no connection.

This study is 'of it's time' due to the relative infancy of multi-party associations such as the Faraday Packaging Partnership, HEFCE Food Innovation Project and CIC<sup>8</sup> network that promote the dissemination of research between academia, industry and designers. The author is privileged to have worked within the packaging industry and still be an active member of the industry bodies, and fortunate as a researcher to also have a practising design role, working within the framework of an academic institution. Having this hybrid background allows me to bring insights and ways of thinking about problems that may otherwise have been missed using a traditional design or research approach.

Previous to this study the main emphasis of packaging research and development has been on the delivery of packaging and product to point of purchase. The focus of effort has been to sell the product and ensure it is delivered safely within the home. Once the product is removed, previous studies have considered packaging as little more than waste. Any design effort focussing on the post-use stage was to ensure the pack could be disposed of or recycled as efficiently as possible. Even understanding and incorporating design elements for this disposal/ recycling stage has until recent years been neglected.

Since the disposal of packaging has come into focus, recycling and light weighting of packaging has overshadowed the other approaches to waste minimisation, and the packaging industry, sustainable design networks and government funding bodies such

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<sup>8</sup> Higher Education Funding Council for England and the Centre of Industrial Collaboration, funded by Yorkshire Forward, the regional funding agency for the Yorkshire region.

as INCPEN, IAPRI and WRAP have focussed only on waste reduction initiatives that promise quantifiable solutions within a short time frame, rather than longer term studies to understand the complex problem, and provide solutions that recognise the consumer's role in waste reduction.

This constant emphasis on light weighting and even more so on recycling has had the effect on the consumer of eclipsing all other approaches to packaging waste management, as evident in much of the ethnographic research findings in this study. In the interviews, and surveys, the terms recycling and reuse were constantly interchanged, with recycling being the dominant verb used alongside the adjectives 'green' and 'environmental' behaviour.

Consumer reuse has been happening since the introduction of packaging, but where reuse of packaging has been recognised by packaging designers or industry in the past, it has either involved prescriptive designs that instruct the consumer how to reuse the object for a specific use, or systems that only allow for closed-loop reuse within a supply chain. The minimal success of these designs is down to the lack of understanding of what consumers actually do with packaging within their homes. To not understand the process packaging goes through post-purchase and still expect to create appropriate designs is equivalent to not knowing anything about the packaging supply chain pre-purchase. Without the knowledge of the way the product will be packed, transported and presented in store, it would be unrealistic to expect to design appropriate packaging.

This study considers the role of packaging in a different way. Many items of durable packaging can be considered in similar ways to other products, having a life beyond their original purchase, performing differently at different stages of their life. Like other objects, they can change in function subtly or dramatically due to spatial, temporal or ownership factors. This way of considering packaging is new and therefore there is no literature directly relating to the subject. The literature most relevant to this study is not from the industry or packaging designers, but from a diverse range of wider academic disciplines, which recognise that consumers relate to material culture in different ways depending on the environmental context and times of their lives. In comparison to the wider literature, the industry and most of the design literature allows the consumer only a passive role, following instructions and design implications imposed on them from those that 'know best'. Unlike this study, the literature from these sources rarely

considers the consumer as responsible or intelligent enough to make their own choices and understand the consequences of their actions.

The packaging industry focuses on the physical properties of packaging with little emphasis placed on the aspects of consumer use, interaction or disposal unless they offer an obvious marketing advantage. The Industry should and does engage in research to further our understanding of what packaging can be, however much of this is directed towards new 'smart' packaging materials and solutions to increase the life of the packaging contents. In many cases the desire to develop packs that provide increased product shelf life and novelty dispensing etc. are developed without the appropriate consumer research and with little evidence of a need for these developments beyond those of the supply chain and retailer.

The design literature focuses on other cultures and how they regard unfamiliar packaging items, making new objects from found or used packaging and materials. Many good examples of design for reuse in the UK go unpublished and undiscovered due to their quiriness and originality. Manufacturers or retailers find it hard to position or quantify the benefits of these designs and their secondary uses and therefore many never reach manufacture.

Although academic networks and government-funded schemes are helping to bring together academics, designers and industry to share ideas and development opportunities, this is still in its infancy. Studies like this highlight and work with the miss matched agendas of the industry, retailers and manufacturers and the work of academics involved in theoretical and practical research.

Many consumers are unaware that they engage in packaging reuse and see the activity as just part of everyday life. The behaviour witnessed is largely intuitive and fits with the individual's environment and social scheme, whether a simple plastic carrier bag used as a bin liner or a bag turned into a turban to provide protection from a rain shower.

Understanding existing consumer behaviour in the home and motivations to reuse could only be uncovered by entering the environment where the activity occurred. The ethnographic research methods as described were used throughout the study and resulted

in the observation and recording of many different types of reuse within the home. As most people have personal experience of packaging use and disposal, most were very willing to share their ideas and examples of techniques to process, reuse and dispose of packaging.

This research supports that of Gregson and Crewe into second hand clothes and goods, that the motivations to reuse are micro level need and desire, rather than a macro level politicized practice (2003; 198). Packaging reuse occurs within the home because either the user can see the inherent usefulness of the object within their domestic environment, or the item helps to create self-identity within that person's particular system of selfhood. Therefore this study has purposefully not made recommendations for awareness campaigns, slogans or logos promoting reuse, like many other studies examining aspects of waste reduction (Falcon 2006).

Throughout the surveys, questionnaires and interviews it became apparent that many people have clear and distinct ways of categorising and interacting with objects. Object factors such as material type, branding, aesthetics and form and function emerged as causal factors. Human factors such as different types of consumer motivations also emerged as being significant in affecting reuse behaviour.

The design enquiry part of this study was used to review the themes using a combination of new design work created by the author and the use of selected work either created in the design consultancy, or work created externally that had a fit with this study.

### ***Interpretation of results and the connections between them***

There are three main factors involved in the reuse of packaging: the object, the consumer and the context or system they both exist within.

The packaging object has form elements (Schapiro 1953) that provide the interface between the object and the consumer, allowing for making of meaning, interaction and judgements regarding function. These *form elements* once interpreted by the consumer start to become *form qualities* that can shift and alter depending on the system the interpretation is happening within. The system is affected by both temporal and spatial factors, and ultimately cultural influences.

Revisiting the diagram of the domestic processing of packaging (Fig 62), Fig 86 explains pictorially the way the form elements of the packaging object are decoded by

the user and interpreted into form qualities. The context, time and system affects this by the user.

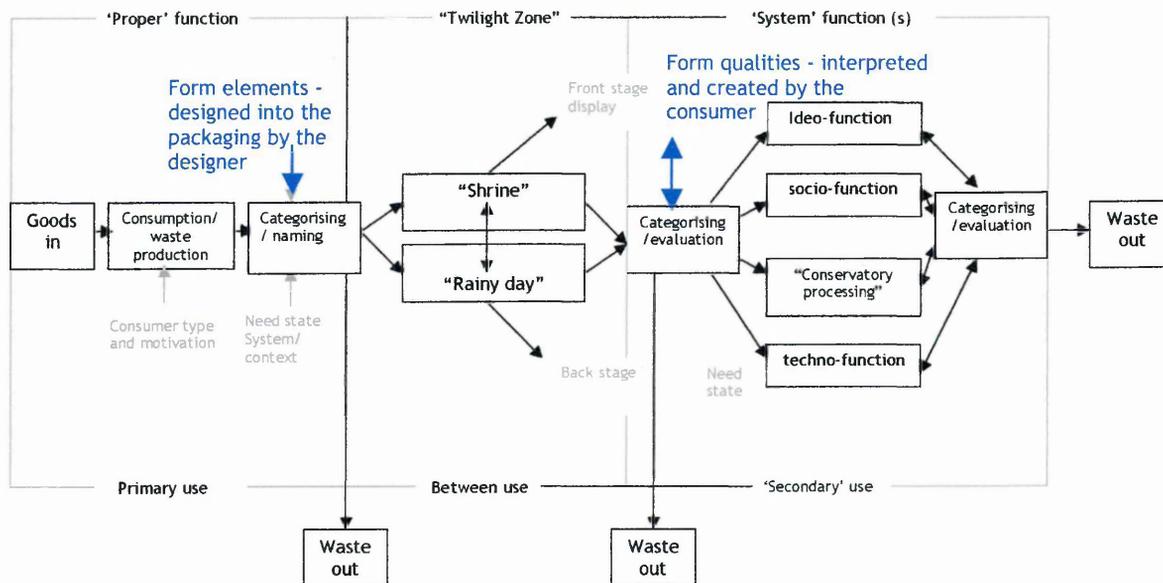


Figure 86: Packaging processing diagram with form elements and qualities

These form elements help consumers make clear instinctive distinctions between packaging that was merely functional compared to those items that also had aesthetic appeal. The material type often affects this distinction.

### **Material type**

As reviewed in chapter 4, many references were made to types of material with a clear distinction being made between items that were made from plastic rather than those made from more 'natural' materials.

The ability to understand the origin of the material or production process helps consumers to relate to the objects and increase the objects perceived value. Packaging made from wood, metal and glass are valued higher than the more 'synthetic' plastic packaging objects, and the former materials are linked with durable objects and plastic materials with lower valued, non-durable objects.

Within these higher valued categories of material, further categorisation and evaluation was evident depending on the design and aesthetics of the packaging items.

### ***Design factors***

The design factors that help consumers make the distinction between merely functional or desirable go beyond the material type. Surface design, shape, branding, texture and the colour of the object affect our categorisation.

Preventing obsolescence of desirability (Packard 1960) required an understanding of the role of graphics, branding and material type as a method of self-presentation and communication beyond that of a pre-purchase marketing tool. The importance of pack aesthetics in providing meaning and a method of self-presentation (socio or ideo function) differs depending on the context or environment the object enters. As demonstrated in chapter 4 and 5, even packaging objects that seem to only provide a physical or techno function secondary role can be prevented from reaching their potential if manufactured in an inappropriate material, colour or carrying the wrong branding for the front stage context of this reuse. Only in the very back stage parts of our homes can packaging reuse be linked only to the item's techno function relying only on physical shape, material properties and engineered qualities. This study provides evidence of many examples of packaging reuse for a variety of functional reasons that go beyond the physical functionality. Empty objects found on display in people's homes providing decoration or a sentimental link to a previous time or experience were still carrying out a type of function. Therefore it was important to gain a greater understanding of what these types of function are and how they work.

### ***Functions and their transient nature***

Chapter 4 developed Millikan's 'proper' function, and Cummins' 'system' function as ways to understand the pre-destined and the subverted functional paths of packaging. These combined with Schiffer's three categories of 'techno', 'socio' and 'ideo' function provided a useful way to distinguish between the types of secondary function observed throughout the study.

The research provided evidence that in order for packaging to be subverted from its intended path, certain form elements such as wide openings, re-sealable closures or removable branding, need to be present to create further techno functions. For secondary socio or ideo functions to be possible such as home décor, self-presentation

or 'conservatory' collections, the appropriate aesthetics need to be present. This enables new functions to emerge unlikely to have been imagined when the packaging was designed for its primary use. These socio and ideo functions are difficult to anticipate as fashions can be designed for, but personal factors cannot. The design factors shift in importance as time goes by and as objects move into different environments, therefore the idea that the home as a kind processing unit (Lucas 2000) where packaging enters 'goods in' and leaves 'waste out' (Fig 62) was important to capture.

### ***Time and space***

Chapter 5 mapped out the spatial order in which packaging is processed within the home, presenting key moments when categorisation and re-evaluation occur. These key moments can be predicted to some extent using two sets of interlocking factors:

1. *The form qualities of the packaging; shape, material, branding, providing the techno, socio or ideo function opportunities.*
2. *The context or 'system' the packaging enters.*

Aesthetic and functional attributes can be designed into an item of packaging, however the context the item enters is much harder to predict. Secondary functions can be designed into packaging, as 'proper' functions, but unless the system of use supports and values these encoded secondary function an item may never reach its reuse potential. Designs such as the 'Wobo' or 'Emium' bottle as reviewed in the design literature section in chapter 2, have the required techno function for creating structures, but if the home does not require anymore structures or the style does not fit with the socio or ideo function and then the item will fail to have a secondary function. This was demonstrated through the Miracle Grow design case. This design addressed an already commonplace reuse function for plastic bottles, and was designed to provide a 'proper' secondary function as a plastic cloche. Although most of the interviewees instantly recognised the intended secondary function of this packaging item, many appreciating it as much for unanticipated benefits (e.g. slug protection and extended storage) as that of the secondary function of a cloche. The general response was to recognise the opportunities, but some were inhibited by their perception of the "ethics" of different materials.

'System' functions are secondary functions that are more fluid and created by the individual to support a need or desire to fit with that particular time and space and as such these are personal and are hard to predict. The second design case was also made from plastic for the garden but this time aimed to provide a 'system' function and be 'finished-off' by the user. The reaction clearly demonstrated the difficulties in predicting system functions and designing for them. Those interviewees that did appreciate the design did so for functional reasons that had not been anticipated or designed for.

## Chapter eight: Discussion

This study proposes that many consumers who reuse objects because of a latent secondary techno function - want to discover the reuse potential themselves.

Attempts to over-prescribe or design for socio or ideo secondary functions to enter a 'shrine' or 'conservatory' twilight zone are also likely to be unsuccessful.

If packaging is to appeal to the 'conservatory' function of reuse or enter a 'shrine' twilight zone it is particularly difficult to predict the 'system' that will activate these secondary functions and the required aesthetics the object may need within this system. It is hard to predict what brands, colours and designs will be found attractive over different periods of time and fit the front stage requirements of an individual's lives. Individuals often value items of originality and interest because they wish to display their individual taste and ability to appreciate these 'prestige' objects (Gregson and Crewe 2003). The ownership of objects signals identity – because you have something different or the same as somebody else, so if somebody wants to be seen as individual and different the object needs to be different. If front stage 'system' socio function reuse is to present or provide an identity of individuality, it does so because others do not have the object. Therefore if instructions for reuse are provided or the reuse becomes a 'proper' front stage socio function, the point of reusing the item to a great extent has been lost.

*“Exclusive associations of objects with an individual is fundamental if material artefacts are to communicate something about the person, her or his social location and personal qualities.”* (Dittmar 1992: 9)

For this reason, to design in closed 'proper' secondary functions to all packaging would be to ignore some of the key motivations for reuse activity: invention, creativity and the curation of self identity.

There is no such thing as absolute rubbish or waste as it exists in the eye of the beholder. One person's empty glass jar in the bin - is another person's washed recycling waste - is another person's jars saved for pickling onions – is another person's bath crystal container - it depends on the system the item is within. To design a jar to be reused just for pickling onions would be too prescriptive, as many people have no interest in this secondary use.

However to design a jar with a removable label, a plain lid and an interesting modular shape may cause the item to be evaluated or categorised as having reuse potential and subsequently enter a twilight zone.

Twilight zones provide a significant role in creating the time and space for re-evaluation, attachment and creative expression. The twilight zone has a front stage and back stage spatial dimension, and a short-term/ long-term time aspect. If packaging enters a twilight zone because of its recognised potential techno function entering as a 'rainy day' item or because of its socio or ideo function performing the role of a 'shrine' object, it provides the object with the time and space to be re-categorised and for attachments to grow to suit new evolving 'systems'.

A packaging item can lie dormant in a twilight zone awaiting rediscovery. Many items pass through a biographical journey, transforming in function and value a number of times. The longer an item remains within the home, the more attachment we have with it. So therefore as long as the graphics and branding support the techno socio or ideo functions the item needs to have within the environment it may enter, and while ever the item can still physically perform the required techno function the packaging item is unlikely to be removed for disposal.

However ensuring the graphics and branding support the required types of function is no easy task and there seems to be two important considerations for designers to encourage packaging reuse. One is to design packaging with appropriate form elements removable or low visibility branding so the item can perform a techno or socio function without the aesthetics getting in the way. This seems particularly relevant on items of low perceived material quality such as plastic carrier bags and plastic food containers featured in chapter 5.

The other way is to use material, provide aesthetics and encode functional qualities that 'buy' time by encouraging the owner to categorise the item as having some value and to consign it to a 'twilight zone'. Higher value items made from a perceived higher quality material such as glass, wood and metal can do this. In the case of the OXO tin, the material qualities and design originally supported the proper secondary techno function of reuse and then gradually over time the commodity branding gained iconic and historical status.

The old branded tin became valuable over time due to its acquired ideo function of display

and home décor whilst still having the material values to provide a feeling of quality and value. Designs such as the Rockware glass bottles may encourage a greater lifespan through personalisation, nostalgia and capture of memories.

### ***What is designing when designing for reuse?***

Design for reuse requires the solution not to fit so well that it excludes the object being useful for other problems. It may be that over-designing specific solutions creates over packaging, whereas under-designed, generic solutions provides multi-functional reusable objects. If the packaging design is too specific it will design other uses out. Although designers cannot do much when designing for system function, small changes can be significant. The essence is to design in opportunities for shifts in value, for re-categorisation and for changes in function.

The table (Fig 87) provides some guidance to design for these opportunities.

<b>Form element</b>	<b>'Proper' secondary functions</b>	<b>'System' secondary functions</b>
material	Materials appropriate for the secondary function, but less synthetic is better.	Metal, glass, wood and cartonboard.
shape	Appropriate for the prescribed function. Wide openings and cleanable.	Modular, wide openings, resealable, easy to clean, Interesting and unique.
colour	Appropriate for likely environment and function.	Clear. Distinctive/ collectable. Muted natural colours.
branding	Peelable/ removable.	Peelable/ removable. Prestige brands.

Figure 87: Table of form elements to provide opportunities for design for reuse.

### ***Further questions and recommendations resulting from this study***

The question as to whether consumers buy objects because of their packaging reuse potential has been raised within this study. Some do as in the case of the instructive 'proper' function designed into the Huggies nappy toy box, and the glass jam jars bought for their secondary use as storage containers. These products may have been chosen over a competitor's product due to the added secondary use value. Pre-purchase visioning of secondary uses is sometimes part of the decision-making process when buying products in highly reusable packaging such as glass jars and tins. However this study has found that most packaging items are only recategorised as having secondary functions after a period of time within the home. Therefore it is unlikely that many of the secondary uses would have been anticipated at the point of purchase.

Building on the findings of this research further quantitative research could be conducted that would provide data into the effect of design and material on the time and spatial aspects of the processing flow of packaging. Packaging with technology such as RFID incorporated into the structure would provide data highlighting which items stay within the home, where the processing occurs, and which items are merely categorised as immediate waste. Building on this thesis, the domestic packaging process flow diagram would be the basis to map out packaging item's journeys within the home. This would provide quantitative data to complement this study and further help packaging designers; the packaging industry and retailers understand the potential of reuse as a serious solution to the domestic packaging waste problem.

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## Appendix 1. visual inventory of packaging reuse

### Spontaneous reuse – ‘System’ function



#### 1. Jigsaw cardboard shoe box

Primary function: Shoe box

Secondary function: Storage box



#### 2. B&Q mixed cement plastic bucket

Primary function: DIY material container

Secondary function: Refilled container



#### 3. Foxes biscuit metal tin

Primary function: Biscuit tin

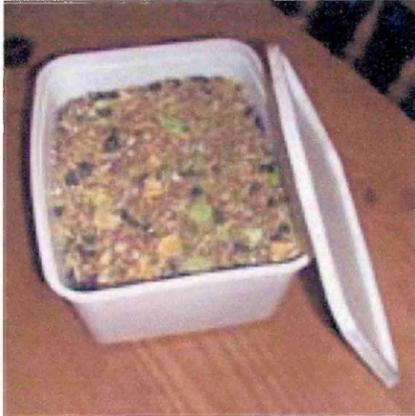
Secondary function: First aid kit container



**4. Thorntons toffee metal tin**

Primary function: Toffee tin

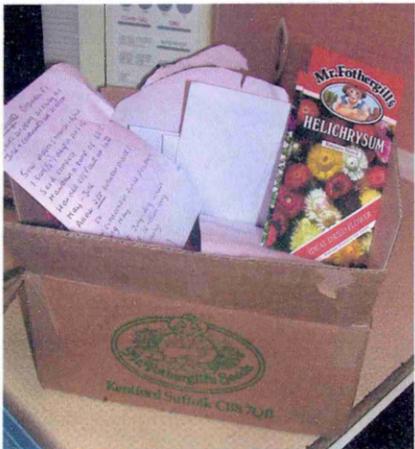
Secondary function: DIY bits tin



**5. Ice-cream plastic tub**

Primary function: Ice-cream tub

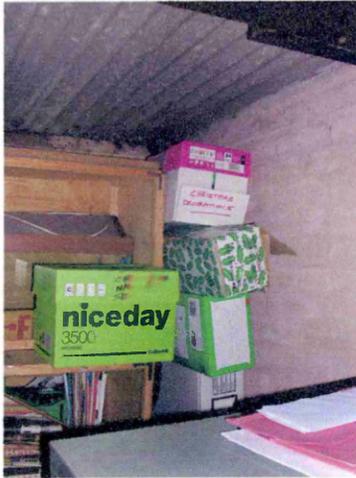
Secondary function: Pet food storage



**6. Seed cardboard outer box**

Primary function: Cardboard transit pack

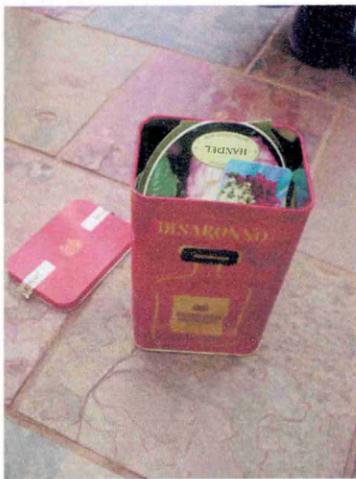
Secondary function: Seed storage box



### 7. Cardboard boxes

Primary function: Cardboard transit packs

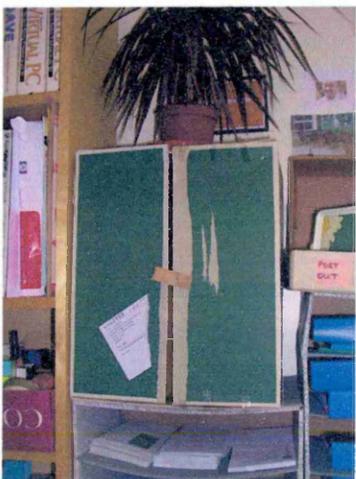
Secondary function: Various storage



### 8. Duty free spirits metal tin

Primary function: Duty free spirits packaging

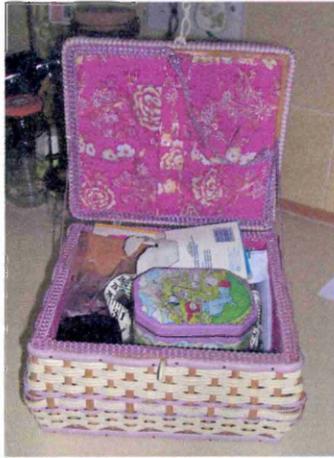
Secondary function: Seed packet container



### 9. Large cardboard box

Primary function: Cardboard transit pack

Secondary function: Stationary cupboard



**9. Decorative metal sweet tin**

Primary function: Decorative sweet tin

Secondary function: Container for needles



**10. Large glass jar**

Primary function: Glass food container

Secondary function: DIY bits container



**11. Plastic drinks bottle**

Primary function: Plastic drinks bottle

Secondary function: Part of an xmas angel



**12. Paper drinks cup**

Primary function: Paper drinks cup

Secondary function: Pen holder



**13. Hexagonal glass jar**

Primary function: Glass jam jar

Secondary function: Cotton bud holder



**14. Blue glass wine bottle**

Primary function: Wine bottle

Secondary function: Decorative display



**15. Glass coffee jar**

Primary function: Coffee jar

Secondary function: Paint brush storage



**16. Blue glass wine bottle (2)**

Primary function: Wine bottle

Secondary function: Decorative display



**17. Large plastic water bottle**

Primary function: Large drinks bottle

Secondary function: Cloche



**18. Carte D'or plastic ice-cream container**

Primary function: Ice-cream container

Secondary function: Toy storage



**19. Plastic trays**

Primary function: product trays/ packaging

Secondary function: fruit and veg trays



**20. Plastic biscuit box**

Primary function: Biscuit box

Secondary function: Storage in shed



**21. Wooden packing case**

Primary function: Outer transit packaging

Secondary function: Storage in garage



**22. Plastic drinks bottle**

Primary function: Plastic drinks bottle

Secondary function: Cloche for seedlings



**23. Large concentrate plastic drinks container**

Primary function: drinks container

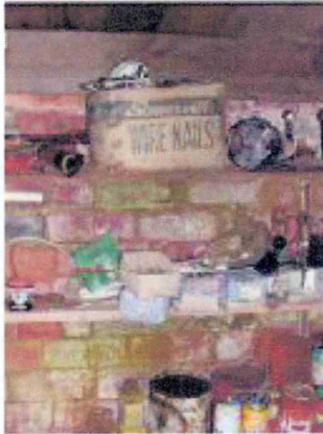
Secondary function: Water butt



**24. Plastic pasta sauce container**

Primary function: Pasta sauce container

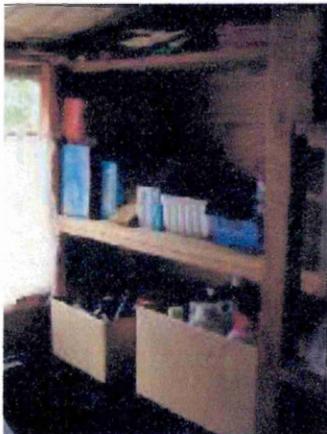
Secondary function: Freezer food container



**25. Cardboard box**

Primary function: Box for wire nails

Secondary function: Storage in shed



**26. Cardboard boxes**

Primary function: Boxes for transit packaging

Secondary function: General storage in shed



**27. PC world carrier bag**

Primary function: Carrier bag

Secondary function: Garden equipment protection



**28. Various metal tins**

Primary function: Tins for sweets etc.

Secondary function: Decorative display in pub



**28. Plastic 2-litre milk bottle**

Primary function: Milk container

Secondary function: Garden scoop



**29. Net bag for washing powder capsules**

Primary function: Washing clothes system

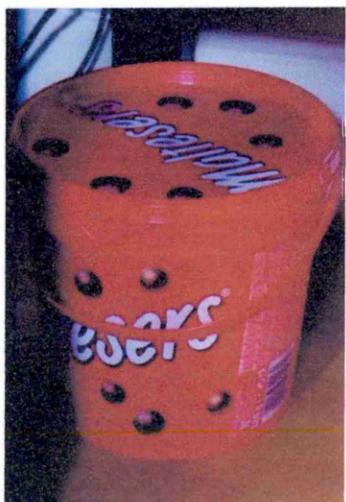
Secondary function: Container for jigsaw pieces.



**30. Various glass jars**

Primary function: Containing jams and pickles

Secondary function: Containing and displaying spices and herbs



**31. Maltesers plastic tub**

Primary function: Containing Maltesers

Secondary function: Containing toy pieces



**32. Wine bottle**

Primary function: Wine bottle

Secondary function: Candle holder



**33. Plastic toiletries jar**

Primary function: Toiletries packaging

Secondary function: Containing various odds and ends.



**34. Metal tin**

Primary function: Sweet tin

Secondary function: Various storage



**35. Plastic bin**

Primary function: Dog food container

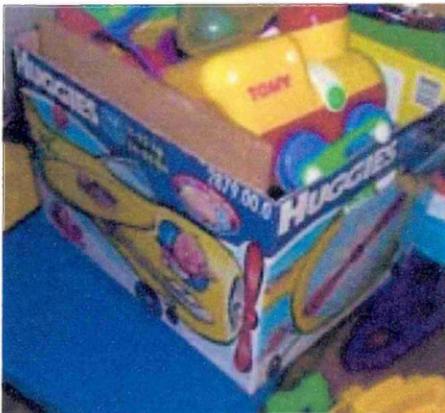
Secondary function: Laundry basket

*Designed for reuse – 'Proper' secondary function*



1. Primary function: AVEDA toiletries refillable containers

Secondary function: Refilled toiletries containers



2. Huggies cardboard box

Primary function: Nappy packaging

Secondary function: Toy box



**3. Nutella jar**

**Primary function: Jar containing spread**

**Secondary function: Glass beaker**



**4. Tic Tac container**

**Primary function: Tic Tac container**

**Secondary function: Breakfast cereal container/ dispenser**

## **Appendix 2: List of packaging reuse**

Designer shoe box for photo storage  
Ready-mix cement bucket for further DIY use  
Metal biscuit tin as a first aid box  
Metal toffee tin for DIY bits storage  
Ice-cream plastic container for pet food storage  
Duty free metal tin as a seed packet container  
Decorative metal tin for sewing needle storage  
Large glass jar for DIY part storage  
Glass jars for cotton wool ear bud storage  
Coffee jars for paint brush soaking storage  
Blue wine bottles for decorative display  
Large plastic water bottle as a cloche  
Ice-cream containers for small toy part storage  
Plastic trays for fruit and veg storage  
Plastic biscuit box as storage  
Wooden packing case as storage  
Plastic drinks bottle as cloche  
Large concentrate drink container as water butt  
Pasta sauce containers for freezing food  
Cardboard boxes as storage  
Carrier bags for garden equipment protection  
Metal tins for decoration in pubs  
Plastic 2-litre milk carton as a garden scoop  
Washing tablet net bags for toy storage  
Glass jam jars for herbs and spices storage  
Malteser plastic tub for various storage  
Wine bottles as candle holders  
Kilner jars for various storage  
Toilet roll middles for plant support  
Carrier bags as dog poo bags  
Carrier bags as bin liners  
Carrier bags used again as bags  
Coke bottles as display

Glass jars to hold bath crystals

Cereal packets for stencils

Postal bags/ Jiffy bags

Pot Noodle containers for plant pots

Yoghurt pots for craft activity

Take away carton for freezing food

Plastic film pots for buttons and seed storage

Coffee cups as plant pots

Large plastic milk bottles made into a watering can

Polystyrene cups broken down and made into plant pot drainage filler

Pizza boxes as seed trays

Plastic carrier bags for weed collection, handing storage etc.

Ice cream tubs for plant pots

Plastic pots as saucers

Inverted plastic bottles used as bird scarers

Metal round tin for storage

Large plastic dog food container as a laundry basket

Large cardboard box as a stationary cupboard

Plastic water bottles made into a Christmas fairy

Paper cups as pencil holders

### Appendix 3: Example emailed survey reponses

The question:

*Dear all,*

*For my part-time course I'm doing – I'm looking at packaging and its potential secondary uses.*

*I'd really like to know what types of packaging you keep and use for some other purpose instead of throwing it away.*

*Perhaps you reuse some packaging items as storage containers, in the garden or some other use.*

*It doesn't matter how stupid or small a use you put it to, all information will be useful and anonymous.*

*Please reply by e-mail if you have any experiences at all.*

*Many thanks for you time,*

*Janet.*

Responses:

Participant 1 – Male

Used for Beth's nursery – toilet roll card tubes, cereal boxes, yoghurt pots.

General – carrier bags as bin liners.

Participant 2 – Female

Supermarket carrier bags for rubbish, the plastic bags you put your veg in at the Greengrocers for poop a scoop bags (you did say all uses!) and our local Chinese take-away uses plastic trays with lids I reuse as freezer containers. I can't think of anything else.

Participant 3 – Female

I normally just throw my packaging away, but my Mum saves tins from biscuits or various items like that and keeps buttons, sewing items, shoe polish, screwdrivers and nails. (different of course).

Participant 4 – Female

Off the top of my head – take away cartons – I use food in fridge (half tins of beans etc.) Gifts which come in boxes with a lid – use for letters, bills, bits and bobs etc.

I'll look around the house tonight for other ideas.

#### Participant 5 – Male

I do keep quite a lot of boxes in my loft just in case we move. These are generally for such things as cut glass, dinner service, any other fragile things, Hi-Fi, video etc.

Other boxes tend to get used in the garage for storage of car parts during my restoration projects – these are generally the bigger, sturdier, corrugated ones. I also use a box in the garage as a waste bin for oily rags, empty cans and other rubbish, then rather than empty it in the dustbin I just take the whole lot to the tip and find a new box.

Lighter weight boxes (e.g. Cornflake boxes) get used by the children to make models.

The rest get thrown away in normal domestic waste.

#### Participant 6 – Male

Polystyrene chips are used to provide drainage in pots and to save in the use of peat/ compost. Toilet rolls and coffee cups are used as plant pots. The toilet tubes are biodegradable and are planted as well.

Ice-cream containers are used for picking and storage of fruit, fruit pulp etc. in the freezer.

Also used to store packs of seed and other perishables (mice proof).

Shredded or strips of newspaper is used as compost material.

Large black or solid coloured plastic bags are used as weed suppression/ mulch between rows of vegetables.

Redundant CD's suspended by string and large clear plastic bottles filled with water are effective bird scarers. They save the use of nets that can and do trap birds.

Large plastic bottles (2 litre) with the bottom cut off, offer protection from the weather and birds (act as mini cloches).

**Participant 7 – Female**

I make things out of cereal packets – templates for when I'm sewing etc – strange but true. Please don't share this with people, I'm regretting sending it already.

Apart from that – I try to get rid of it asap, but my husband does make me put plastic in plastic bags and paper in paper bags etc. He's very PC.

**Participant 8 – Female**

Please don't laugh, but here goes:

Coffee jars/ pot noodle type containers: keep for painting.

Large coffee jars: store the cat's dried food in.

Bowl type containers (e.g.: Christmas pudding/ microwave deserts containers): used as wash bowls for Jessica.

Pampers large cardboard boxes: store baby clothes in.

Metal biscuit box: reuse as biscuit and cake tins.

It may sound very Blue Peter ish, but nursery always ask you for yogurt pots, washing up bottles and toilet rolls as well as the Walkers crisp packets for the books offer.

**Participant 9 – Female**

Vitalite (margarine) tubs for painting and decorating, sandwich boxes and freezing food.

Jam jars (store screws and nails etc), also for vases.

Newspaper – rabbit hutches.

**Participant 10 – Male**

Small plastic boxes used as storage containers for prototype/ electrical circuits.

Shoe boxes for general storage.

Polystyrene packaging as plant pot drainage filler.

**Participant 11 – Female**

It seems to be a universal bloke-thing for men to hoard:

Coffee jars/ jam jars and the square style Clover margarine tubs to use in the garage for screws/ nails etc.

I would use a nice bath decanter and top it up with cheaper stuff that doesn't look as nice in it's own bottle (cheapskate).

A LOT of older women seem obsessed with Vitalite margarine containers too! Primarily as sandwich boxes – but they crop up in the most unusual circumstances.

#### Participant 12 – Male

Glass jars eventually get filled with herbs and spices as with most folks.

I used to cut the bases of large drinks bottles for use as disposable small plant pots when decorating.

#### Participant 13 – Male

Match boxes and film pots for small items.

Cornflake packets for rubbish containers.

Margarine/ butter tubs for freezing chillies and curries.

Shoe boxes for paperwork and acetate shell cartons for jelly moulds (we have in the past!).

#### Participant 14 – Male

Ice-cream tubs for plant pots.

Pizza boxes for seed trays.

Store carrier bags for bin liners.

Newspaper for cat litter tray liners.

Wine bottles for money banks, candleholders, seedling containers.

#### Participant 15 – Male

The obvious reuse for me is the plastic trays and cartons, which contain mushrooms, ice-cream etc. In my abode they have three – no four potential rather mundane end uses:

1. Storage boxes for small toys, seeds, fruit for freezing etc.
2. seed trays where some depth is required.

3. Saucers under plants to contain excess water – sometimes they can be painted or otherwise disguised.
4. As saucers/ containers for oasis when flower arranging.
5. Containers for small pots of paint etc. during the painting process.
6. Plastic milk bottles cut off make good small cloches for tender young plants.
7. As above but with the neck in the ground makes a focused watering system either bulk or drip feed.
8. Inverted bottles placed upon sticks in the garden make good bird and small animal deterrents (the pigeons have not attacked my greens). It is apparently due to the low frequency wind noise, the rattling and flashes of light.
9. Bottles can also be filled with sand, attached to a line and used as plumb lines.
10. Cartons of all sizes make good toys, houses, garages, hidey-holes etc.
11. Polystyrene can be broken up and put into the bottom of pots as drainage crocks – much lighter than terracotta.
12. Going silly – the big thin slabs of polystyrene used as padding in television transit cartons etc. can be fixed to compost heaps as insulation.

#### Participant 16 – Female

I tend to keep boxes if they are rigid enough. I have one for my living room that used to be a shoe box to keep loose bits and bobs e.g. Diary, pens, nail clippers etc. and another show box for Chlow that was covered in Pooh Bear design that she keeps some craft items in. I have also been known to use tissue boxes to keep things in (but don't tell anyone) it drives Wayne mad!

#### Participant 17 – Male

Empty plastic milk containers can be cut in half and used for plant pots or seed trays.

#### Participant 18 – Male

1. Medium sized cardboard boxes (e.g.: the type you get from supermarkets) for loft storage (of all those things you won't throw away but never end up needing anyway!).

2. Plastic containers used to store fresh soup (in either 500gram or 1 Kg amounts) which we use for painting i.e. we pour the paint out of tins into these containers as it's easy to hold while painting.
3. Supermarket plastic bags get used for a variety of things, mainly for bagging up rubbish to put in the bin, collecting weeds from the garden, or for protecting items, which are being put in the loft.
4. Trays that you get ready-made foods in (e.g. lasagne etc) sometimes get used for planting seeds before they get put in the garden.

## Appendix 4: Example questionnaires responses

## Packaging Reuse 15/08/2001 - General Questionnaire

Name Eileen AndersonAge 57

## Definitions:

**Packaging** - anything that contains, dispenses and protects a product, enabling the product to be transported, displayed and sold to the consumer.

**Reuse** - the act of using something for a second time for the same or a different purpose.

1. Do you currently reuse any items of packaging?

Supermarket carrier bags I use as pedal bin liners  
"egg boxes" to carry home free range eggs for a friend  
Flight tray type food trays to mix paint etc for art work  
Small screw top pop bottles for fresh water in first aid at work  
milk bottle back to milkman

2. Do you buy any second hand products? i.e.: clothes, antiques etc. Yes/~~No~~

If yes, please give details. occasionally something is perfect for me in a charity shop i.e. M&S hardly used trousers skit etc

3. If possible, list three items of packaging that you consider to have value - worth more than just its primary use of containing something, and explain why.

Ferraro Roche clear box to keep items in can see whats in them!  
Jewellery - ring - necklace box often leather - lovely lining and when item is put with other jewellery - box is not needed again  
Disinger dress bag with zip - hat box with cord handle

4. List any items of packaging where you wish the packaging was reusable. This maybe because of the amount of it you throw away, or the material it's made from etc etc.

Cat/dog food tin - steel not aluminium  
Soap powder small box which could be kept in cupboard near washer and filled from a much larger box stored elsewhere

5. Can you remember a time when you were taught or forced for some reason to reuse packaging or products? No

If yes, how did you cope/ did you mind?

7. What examples of packaging do you like, consider to be well designed and why?

 SUK roll on deodorant feels nice - small for packing - for going away  
open end glasses case which stands upright in handbag easy access by pressing a little button when you don't use them all the time

Thank you for completing the questionnaire, your help is most appreciated.

Janet

Packaging Reuse 15/08/2001 - General Questionnaire

Name ALISON MUGGER Age 31

Definitions:

Packaging - anything that contains, dispenses and protects a product, enabling the product to be transported, displayed and sold to the consumer.

Reuse - the act of using something for a second time for the same or a different purpose.

1. Do you currently reuse any items of packaging?

MARGARINE TUBS AS GENERAL CONTAINERS  
PASTA SAUCE TUBS  
CARRIER BAGS AS BIN LINERS

2. Do you buy any second hand products? i.e. clothes, antiques etc. Yes No

If yes, please give details. CLOTHES / SHOES / BIKES

3. If possible, list three items of packaging that you consider to have value - worth more than just its primary use of containing something, and explain why.

△ THESE ITEMS AS THEY OFFER A FURTHER BENEFIT &/OR COST AVOIDANCE

4. List any items of packaging where you wish the packaging was reusable. This maybe because of the amount of it you throw away, or the material it's made from etc etc.

PLASTIC MILK BOTTLES / MINERAL WATER BOTTLES / PLASTIC BAGS  
SOAP POWDER BOXES - Generally any bulky or expensive looking containers.

5. Can you remember a time when you were taught or forced for some reason to reuse packaging or products?

GLASS MILK BOTTLES NEW ZEALAND - ENFORCED RECYCLING  
GLASS POP BOTTLES

TIN FOIL

If yes, how did you cope/ did you mind?

NOT A PROBLEM - THOUGHT IT WAS A GOOD IDEA LEADING BIT FOR ENVIRONMENT.

& SAYING MONEY!

7. What examples of packaging do you like, consider to be well designed and why?

PET RECYCLABLE BOTTLES AS FOUND IN AUSTRALIA / NEW ZEALAND AS WERE PRACTICAL + REUSEABLE

BIG (? 2kg) MARGARINE TUBS - GOOD BISCUIT BOXES / CANNES  
SOME DRINK BOTTLES ES K CIDER -> USE AS VASES WINE BOTTLES  
-> CANDLESTICKS.

Janet

Packaging Reuse 15/08/2001 - General Questionnaire

Name Jo Stevenson Age 31

Definitions:

*Packaging* - anything that contains, dispenses and protects a product, enabling the product to be transported, displayed and sold to the consumer.

*Reuse* - the act of using something for a second time for the same or a different purpose.

1. Do you currently reuse any items of packaging?

yes - boxes, decorative ones for storing letters + bits + bobs  
carrier bags from Super market  
tea packets - re-used

2. Do you buy any second hand products? i.e. clothes, antiques etc. Yes/No

If yes, please give details. occasionally - books

3. If possible, list three items of packaging that you consider to have value - worth more than just its primary use of containing something, and explain why.

boxes (two) which can be used to store other food - i.e.  
pot. that can be put in the freezer or fridge

4. List any items of packaging where you wish the packaging was reusable. This maybe because of the amount of it you throw away, or the material it's made from etc etc.

of the amount powder boxes, washing up liquid, detergent  
washing

5. Can you remember a time when you were taught or forced for some reason to reuse packaging or products? carrier bags, cereal boxes

If yes, how did you cope/ did you mind?

didn't mind - but I don't like it when items get so crinkly +  
they look knackered!

7. What examples of packaging do you like, consider to be well designed and why?

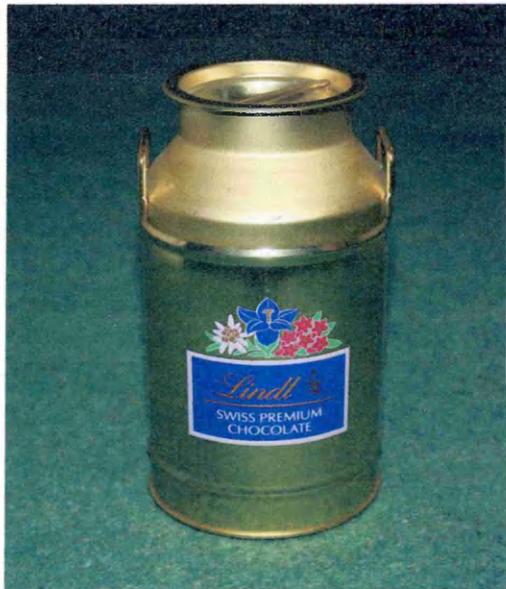
packs with clever openings, re-sealable bags for rice etc -

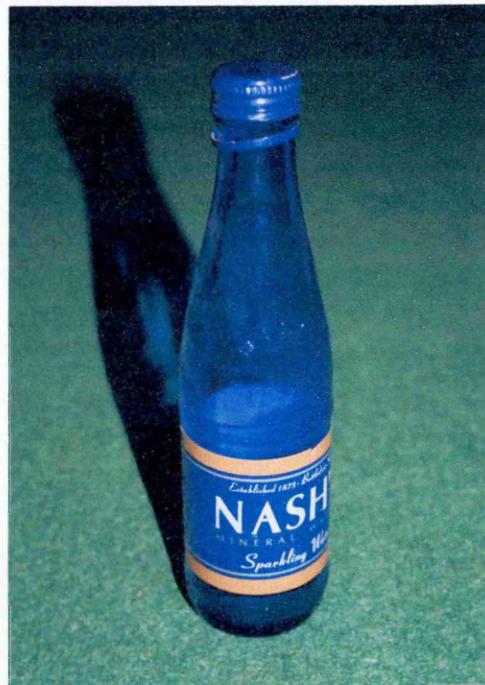
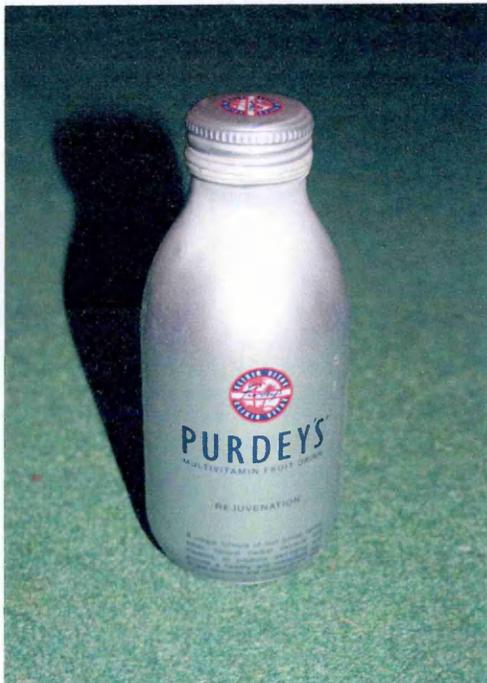
Thank you for completing the questionnaire, your help is most appreciated.

Janet ~ no p. sbrem.

### Appendix 5: packaging placement items

Used for the placement exercise.







## Appendix 6: Featured interview transcripts

### *Interview A1, Alyson Richmond, interviewed 04/11/01*

Alyson is a 43-year-old technologist working for Boots the Chemist. She lives in Nottingham, has two children and is divorced.

I Please list any packaging that you reuse.

P I'm no good at reuse at all.

Say – margarine tubs, toilet rolls are given to the hamper.

Jars – I sometimes reuse for - I don't know, putting paint brushes in – various things I use glass jars for.

I'm really not good on reuse.

I Anything in the garden?

P Yes, perhaps yoghurt pots for putting seeds in, plants and things like that – I don't know give me some pointers.

I What about when you're decorating?

P Yes – I tend to use jars to put paint brushes in to clean them out – urm – I'm really really bad at reusing things.

I Why's that?

P I don't know, I'm just really not good on environmental things - recycling and things like that.

Things like jars and that, because it's a glass product – I think I should reuse it in some way rather than chuck it out.

I Why though?

P I don't know – I think because it seems more substantial and you feel it's not a disposable thing. I know it can be broken down and reused and recycled, but I'm not even good on that – I'm absolutely crap.

I had a phase when I used to take all my wine bottles to the Co-Op. I think things that look more substantial you think you should reuse.

Like say margarine tubs and things like that where you can use them to store things in.

I Do you buy or use any second hand goods? Have you in the past and why?

P Not so much now – I used to be a real charity shop visitor – I would go religiously to charity shops and buy clothes, but nothing else.

I Why did you do it then?

P I don't know - I think about this – I just used to love going round charity shops and getting second hand clothes – I'd get a real buzz out of it – getting things cheap and for months and months and months know I just haven't done it. I hardly ever venture into a charity shop now – I don't actually know why I've changed. Maybe I don't need to as much – you know I can go out and afford things. Maybe I've grown out of all that student thing – I don't know, I used to really enjoy going to charity shops - I used to pick things up for the kids.

I Is there anything else you can think of?

P I think I've changed a lot cause I would buy second hand furniture – the whole house was furnished in second hand furniture – old, nice, pieces of furniture – I've still got some around like an old wooden chest of drawers.

I So when did you change then?

P In the last – I don't know – probably when IKEA came along – in the last 5 or 6 years – I don't know.

I think I go in cycles – like wanting things to be old and retro – the cool thing to do and now I'm more into going to buy new – still not spending loads of money. I still don't go out and spend a lot of money but you can buy new things at a cheaper price now – I don't think you could before – so I've gone more into that sort of thing. Mind you, my bedroom is still full of older things and I don't think I'd change that.

But I've stopped – at sometime it would have been the only thing I would have done for something in the house - I would have gone out around second hand shops – but I don't as much now.

But I could imagine it going back the other way.

I What if IKEA shut?

P Yes (laughter) – I think you just change in the way that you want to do things - I don't know. You have different ideas about how you want to furnish your house – but that's the two things I would say – furniture and clothing. Cars, yes. I always have done until recently.

I What changed?

P My Mum offered me the money.

I She's kind isn't she.

P Yes, she's a real trouper really – giving me the money to get a car – I just thought it's too good an offer not to take. – and that's the first time I've ever had a new car.

I So the reason why you bought second hand was need really?

P Yes, I've never had the funds to go and buy new. I suppose every time we bought second hand we bought slightly newer – and things like the kid's bikes I'd still look for second hand. You know for expensive items I'd always look for second hand – I'm still open to second hand.

I Are you glad you bought your new car?

P Oh yes – I do like it – it's under warranty – it's not costing me anything – you just feel more secure.

I Can you think of products/ things you associate with wood?

P Furniture in the house. Things in the garden, fences and all that. Frames and picture frames. Trees, boxes and things that you might keep things in.

I Can you think of products/ things you associate with plastic?

P Lots and lots of things.

Beakers and plates and things for kids. Sandwich boxes – jars and bottles. Plastic cutlery – a lot more than wood. Everything to do with children.

I Can you think of products/ things you associate with glass?

P Glasses to drink out of. Again – bottles, jars, vases, windows. Glass in a picture frame.

I Can you think of products/ things you associate with metal?

P Cars, fridges and things like that. Household items. Gates.

I Can you think of products/ things you associate with paper?

P Paper bags, even paper bags aren't used that often – more often plastic.

I Can you think of any packaging that you like/ dislike?

P I really like the chewing gum packet – Is it Orbit ? Have you seen it?

It clicks shut like a cigarette packet – it clicks shut – yes, it's very clever – just a simple tuck in end – it just clicks shut every time you shut it.

Things like that – things that have a really nice click to them. Can't think of anymore, urmm...

I No, that's fine. You're kind of answering something there – it's often about the feel?

P Yes, things where I like the feel of it – like the tactile nature, like a soft touch bottle – things like that – a nice tactile feel.

I'm trying to think of something in particular – colours of packs. I've just bought a Deep Red perfume – it's a real rich, deep, red colour.

I What red glass?

P Yes – it's that lovely rich colour – very simple - I like simple. It's very simple – very smooth lines.

I Did you buy it for yourself?

P Yes I kept trying it in Boots and I really like the perfume so I bought it – but the packaging is really nice as well – it's very simple. But it is things like that – if it's got a nice snap to it and clicks. A screw cap when it has a nice click when it's closed and you feel like I don't know there's something up market about it – it's like compacts that click shut.

Urm – I can't think of any actual items of packaging.

I Please hold and look at the following items of packaging and let me know your thoughts.

Skittles carton

P Oh that's very clever!

I Have you seen that one?

P No I haven't - no that's - I like that. Yes - closure that clicks shut. Urm - I don't know if it says mint to me, but the pack itself - the construction - I like that. Is that how it comes?

I It comes with a wrap.

P So it's - yes I like that - yes definitely. The colour looks a bit faded - you know when you've had something in the sun and it's lost a certain colour out of it.

I Oh yes, I suppose so - do you think it's a good thing?

P I don't know - it just looks to me like it's a bit faded. When you see posters in windows which have been there for years. There's something about it that looks a bit like that. Perhaps a little bit old fashioned - quite nice old fashioned.

#### Plastic milk bottle

P I like the little one. Yes it's particularly this one is it?

I Yes

P Rather than the big ones? I just think this is so cute.

I Why do you like that one and not the big one?

P The big one is just useful - it holds the milk and it's perfect for putting in the fridge, but there's just something cute about the little one. Rather than - it's a pint isn't it?

I Yes, but it doesn't look like a pint does it?

P No - I never buy it cause I never buy milk in such small quantities. I buy it in the supermarket, but I buy 4 pints - urm. It doesn't look like a pint - but I think it's cute - it's sweet.

#### Marmite Jar

P I love it - I don't know. I don't think I've ever thought about the Marmite jar - it just is. That is the Marmite jar and that's what it is. You don't even have to look at the label on it - you know it's Marmite. It says Marmite - it jumps off the shelf as Marmite.

I So therefore you've never really considered it before? If you just try and pretend you've never seen it before?

P Again, it's a retro sort of design on it – I think. I guess Marmite has been around for years – probably a very similar design to what it's always been. Yes, I would imagine – I suppose when something like that works then you just continue with it.

I Strange though isn't it – you know the black glass?

P Yes, it's the colour of the product so I don't know whether it has to be dark glass for the product – I'm not sure. As you use it down the jar it still looks like the Marmite jar - if it was clear it would look disgusting.  
It's just a Marmite jar.

#### Wooden cheese box

P The little wooden box - again it's like traditional – it's almost what you'd expect to find cheese in. It says something about tradition and quality – there's something special about it. It's nice.

I I think it looks quite an expensive way to pack a commodity product.

P Yes, that's true – it's more gifty. If you were going to buy just a chunk of Camembert – this sort of thing tends to be gifty.

I Have you ever bought one of these?

P Er, probably in France I think – because it's what they tend to come in in the supermarkets. You don't see it so much in England. I don't think – but most of them come in this type of pack or probably in a cardboard replica of them I think, but yes it is more gifty – I think you'd buy it as a gift.

I Do you think you would throw it away if you bought it?

P Yes, I think so – urm – I'm not sure what you'd keep in it.  
You wouldn't want to keep your jewellery in it or anything else like that. I might keep nails or screws in it. I think I probably would just throw that one away.

#### Tic Tack Box

P Again great for dispensing, but when you've done with it they're over packaged for what they are. It's plastic, but yes I guess the amount they produce – it's probably cost effective to do it. Probably a bit over-packaged I would think – quite nice.

### Lancome Cream Jar

P That says you're buying something expensive.

Urm – I mean when people are buying something of that kind of value then you expect something a bit more quality.

It's a nice little jar. It's not deceptive. It's not – you're probably getting in there what you'd expect. Quite sweet – it feels quality.

I Yes, it's got a soft feel to it.

P It's like what I was saying earlier it's positive. It's got a nice soft feel to it and the shape of it is nice. That kind of dinky looking... Is it for eye cream or something?

I think it's nice that.

### Glass Jar

P Urm – it's just like a commodity product – you expect to find things in glass jars. It's got the name embossed into the top – urm – it's a basic glass jar.

It doesn't do much does it? I could live with the product in a plastic jar or whatever – it wouldn't worry me if it was glass, plastic or in a pouch – whatever if you want to buy that product then you'd buy it because of what the product is not necessarily because of what the jar is.

I What was the last electrical product you bought?

P A power washer – you know, for the garden.

I Where do you normally buy your food shopping, and what brands do you buy?

P Mostly ASDA these days – I'm not a brand shopper particularly – I buy whatever appeals and is right for price.

In fact I'll normally go for the cheaper brands – there's not much I particularly buy - top brands over and above own-brand. I tend to go for the own brand if they've got an option.

I Do you prefer Tesco or ASDA?

P I always shop at ASDA at the moment, as it's convenient. I've got no problem with ASDA – that's why I tend to do it.

I Do you like any particular brands/ makes of clothes?

P Urn – I'm a bit of a bargain shopper Janet. I like Gap – urm – I like quality clothes – but I'm not into paying loads of money for them. I do like designer things. I don't go out though and buy designer clothes as such unless they're bargains – no.

I Who does your decorating at home – who decides the colour etc?

P Me – I bounce it off the kids and they say they like that. I get my ideas from nosing at other peoples houses. Umm – mainly going around you know looking at other peoples house – urm – going round stores like IKEA.

I That's a brand you like IKEA.

P Yes, just going around and looking. I'm quite nosey about what other people do and what's in stores – watching things on television – even if it's just programs on television and you see room settings – you think like that. I just pick up ideas as I go along really.

I Describe your ideal home.

P Big, old – it wouldn't be a new property – it would be an old property with character. Urm – ideally it would be quite big with a fair amount of land around it.

I Because you like gardening?

P It's not that I particularly like gardening – I like the space around me. I like to feel like my home is mine and no one is looking over me – urm nooks and crannies and things. Interesting features in the house – old features in the house. It's not that I like everything to be old – I suppose a house where you could have modern influences in the older house, but it looks. A bit of a mixture of both – I think.

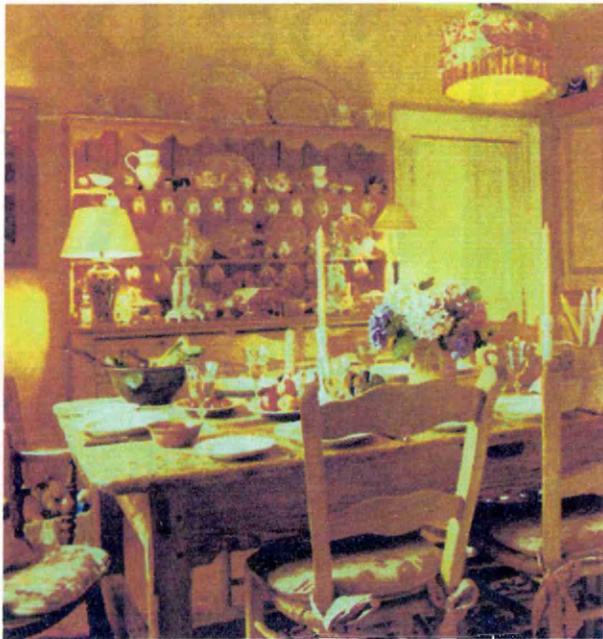
I Please describe your thoughts regarding the images of different kitchens/ bathrooms etc.



**A**

**P**

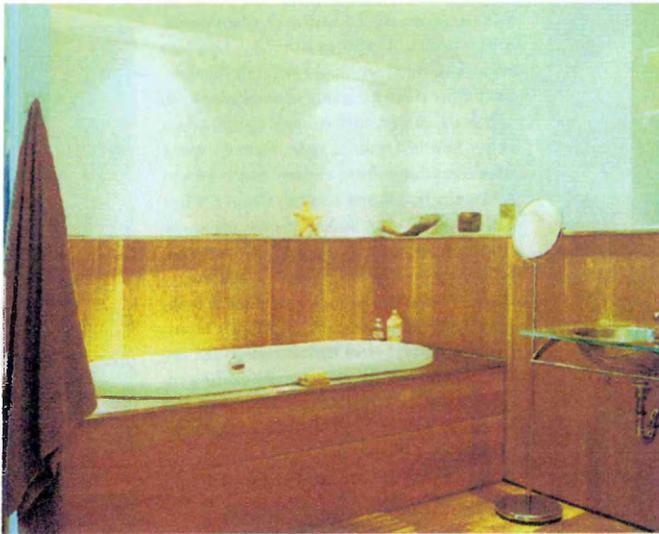
A bit too modern – I'm practical in things. I like the size of it and everything – it's lovely in that way – the central podium thing. I like the steel and aluminium elements in it. It's very nice – but I'm not sure I'd like it.



**B**

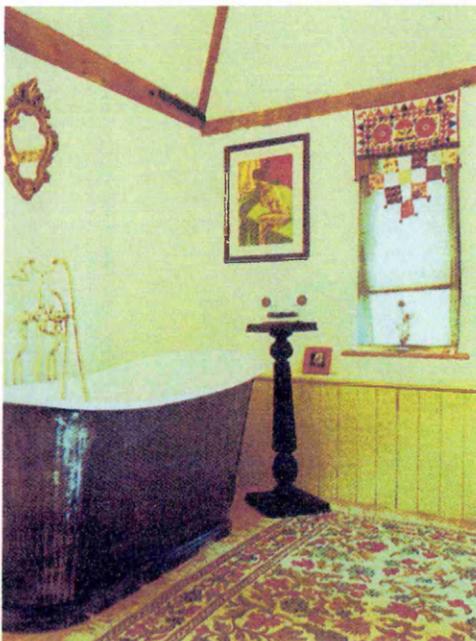
**P**

That's too country – too fussy – yes, I'd go more for an a than b. I don't like that it's too fussy and countryfide.



C

P No – that's far too ostentatious, no that's not for me at all. No, I'm much more practical than that.



D

P That's nice, but a little too clinical – urm too plain.  
I don't know – it's just different. It's unusual – I like unusual – things that everyone else doesn't have. But it's a bit too plain – but that as a basis to do something else with – I like that yes.

I What make of car is it?

P It's a Skoda – a Skoda Fabia.

I How often do you change you car?

P Every three years – something like that.

I Do you have a mobile phone? If so, what make is it and how do you upgrade?

P Yes, Cellnet.

I don't upgrade – I've had it for I don't know 3 or 4 years. I'm not a trendy mobile phone user. I have it for the convenience of having it and what I've got suits me.

I Have you ever bought a fake or counterfeit item?

P I don't think I have – as in designer type things?

No I wouldn't – in fact I don't like that.

If I'm going to buy a brand then I like it to be genuine, albeit it a bargain. I can buy it – not fake. I can't think of anything that I've knowingly bought as a fake. I'm not into designer names enough to buy fake.

I If and when you are asked to a fancy dress party, how do you go about getting your outfit?

P I hate fancy dress parties, so I'd go as minimalist as possible. But if it was an invite for me or my friends – I'd probably go round charity shops looking for things.

Or make things – buy some material and make stuff or having said that Zoe just went to a Halloween one and I bought an outfit from Woollies for a bargain price.

I Was that just cause it was cheap?

P I wouldn't go out and spend a lot of money on an outfit.

I You wouldn't just think of hiring one?

P No, not unless it was some real big deal – only if I had to go to town on it. But I'm not into fancy dress enough to do much like that.

I Do you do any gardening? If so, how do you go about designing the layout/ planting?

P Yes, I potter. See I'm not very – I might think internally within the house – I think quite long and hard before I do things. In the garden I tend to be a bit more hit and miss. Urm – I tend to think about things in my mind and maybe draw things out a bit. If it's planting I'm a bit hit and miss and I just stick things in wherever I think it will fit in and then move it if it doesn't work. I'm absolutely terrible on plants – I shove them in and if they work they work and if they don't then they don't.

I Can you describe what you think the word reuse means?

P Something that you can use again for either the same application or for something else.

I Can you describe what you think the word recycling means?

P Something that you use again for a different application – use the same thing again for something else. It can be taken back to its base material and reused in that way to make something else.

I What hobbies do you have?

P Absolutely naff really – pottering about the garden?

I like doing things in the house, interior design – decorating.

Urm – I used to do things like knitting and sewing but I don't anymore. I've always been creative rather than academic.

### ***Interview A2, Alyson Richmond, interviewed 10.9.02***

I Please study the following two pictures of styles of Miracle Grow Packaging.

P I do use this and the only one I've ever bought is like that (the carton), but I like that (the other one).

I Do you know why?

P I've never actually seen that one in the shop; the only one I've seen is the one in the carton. Just cause it's good for keeping it in and re-using it and the snails won't eat the carton like they will the carton.

I like that one because it looks substantial, you can take the top off and use it and put the top back on. Whereas that is a bag inside a carton – it just looks more substantial and it's obviously got a bit of an additional use for cultivating your plants hasn't it.

Which one do you prefer?

I If there was a difference in cost when you buy them?

P I probably wouldn't pay substantially more – if there was sort of 50p in it something like that I might do. It depends how big it is.

I They're both the same amount of contents.

P So it's something that's going to last for months – I keep things like that in the green house and the snails just eat the packaging. Where as something like that would last a lot longer. I wouldn't pay like twice the price or anything like that, but if it was a small amount. They do tend to get a bit tatty and fall apart, so yes; I'd probably go for that I think.

I Why do you prefer that one?

P No I see those as just functional for putting the goods in and then that's it. I don't really see the same sort of after-use in that as I would the Miracle Grow one.

I Would you pay more for the preferred style of packaging?

P No.

I Please study the following two pictures of styles of hanging blister packs.  
Which one do you prefer?

P How does this one work then?

I They're designed so they kind of slot together.

P Oh right! – Oh so you can use them for other things afterwards?

I'm not quite sure what use I would find for something like that. I can see this here when you could use it as a garden edging, but I don't think I'd actually do that.

I Not even if they were different textures or...

P I'm not sure actually.. I mean as they stand there they just look like packaging. I think I probably wouldn't. I think I'd be just happy with the blister packaging and take out of it whatever it was and throw the packaging away.

I Please put these items of packaging in a line in the order that you like them.



I Why did you put the churn first?

P I don't know really, there's just something appealing about the material. Metal – there's something a bit quirky about it – a milk churn for chocolate.

It just appeals to me – it's a bit different. I like the chunky cap on that it makes it look quite premium I think with that cap on it.

This one this traditional Camembert packaging it just says it really its' nice in the wood packaging.

The little jar is cute appeal I think.

This one I like the colour of the bottle and the label is simple with the colour match cap, it's simple but it looks nice.

This one the carton (Thorntons Fudge) it's quite nice with this shaped bit on the front with the image on there. Simple but it looks quite effective. That is quite a traditional sort of holiday type sort of bottle but it's cute (The olive oil). That I think the colour of the bottle makes that with the Tango black bottle with the orange and the shape of it is nice.

The Fresh one – I'm not quite sure why I like that one, but I like that one.

I You still put it quite far down?

P Yes, perhaps it should have gone a bit further up actually cause it's a nice shape of bottle – it's a bit different. It's simple I think that's the other thing, but it works.

And then when I get down to these, they're just kind of functional packs.

I and you put this down at the bottom – the film cassette pot?

P I just think that's a functional item that ....

I Would you throw that away if you had it?

P No – I wouldn't – well it depends sometimes I do, but I do use it sometimes for putting bits and bobs in you know seeds things like that – so it is quite useful item is that cause it's got the lid on that has a good seal to it. From an aesthetics point of view it does nothing for me, but it's useful in that way.

I Please put the items in a line in the order you think they are in value.

P I don't think they'd be much different.

I Could you talk me through the life of your groceries/ kitchen goods - from when you bring the food into the house, unpacking it, using it and throwing it away?

P Well they come back in carrier bags into the kitchen and I put them away in a cupboard and the freezer, the fridge or wherever they belong.

They would then sit there until they get eaten.

Any normal perishables like cheese, milk, eggs, cooked meats and so on go in the fridge.

Then there's the frozen items that go in the freezer.

The anything else like washing powder or washing liquid and fabric softener – all that kind of thing will go in the cupboard under the sink.

Tins of things like baked beans and all that kind of thing – jams, peanut butter etc will go in the other cupboard.

Bread will sit in the kitchen and get used to some extent and then go in the freezer. So bread gets frozen.

Toilet rolls will go upstairs, shampoos anything like that will go in the bathroom.

Carrier bags - from IKEA I've got my little carrier bag storage thing – I shove them in that. If it's clothes shopping with posh carrier bags I put them in a different place. I'm quite sad with carrier bags – I keep the nice carrier bags. So the normal flimsy supermarket carrier bags I put them in the IKEA carrier bag storage thing where you just pull them out and you can use them for cleaning out the rabbits or whatever. The flimsy one's I'll reuse for whatever and the nice carrier bags I'll keep in a different basket and they get used for when you want a carrier bag to go out with or whatever I keep those.

Use the food – the packaging goes in the bin.

I all of it?

P Yes, I'm absolutely rubbish on recycling in that respect.

Wine bottles I've started to recycle now and that's another thing – wine goes in the fridge.

Wine bottles I do actually keep now and put them out for collection.

I Where do you keep them when they're empty?

P I put them in out – I've got a bottle rack out the back and I put them in there and then every fortnight they pick them up. I do actually do that then, but that's how they go out and they get picked up by the council. I have started doing that, but I have to say other glass I don't – and I don't know why I don't. I chuck it all in the bin. Which is really really bad, but I think mainly because if we had more segregated waste removal I'd probably think more about it, like my Mum does have two separate bins she has a recycling bin and an ordinary bin and she religiously washes out all her recyclable stuff and puts it in the recycling bin, but that's plastic and glass and stuff goes in all together, whereas I'm afraid I just chuck it all in the bin.

I So your carrier bags....

P Carrier bags I do use yes. The cheapy bags get used just for anything where I need a carrier bag – If I want to put some rubbish into it or I want to clean the animals out or Zoë needs to take something into school or whatever. Then the rubbish will go into my bin.

I Is it used as a bin liner then?

P I don't tend to in that way but I will use it if I'm emptying a bin like in that corner, a bin in the bathroom, there's a bin in my bedroom and I tip it into a carrier bag and put it all into the bin – so I tend to use it in that sort of way, but I don't use it as a bin liner as such.

Cause I have a little compost bin – all the fruit a veg stuff goes into the compost bin. In the kitchen I have a little bin which confuses the kids' friends cause I find all sorts of things in there. So there's a big bin which is just normal rubbish and there's a little bin in front of it which is for fruit a vegetable waste and then that goes into the compost bin in the garden. Now I could use my carrier bags for that.

I When did you start composting?

P Years ago – I can't remember, 5 or 6 years ago?

I put anything in that's not rubbish, so it's like vegetable peelings anything like that's vegetable. Egg cartons, eggshells, that sort of thing goes in the compost thing and also grass clippings and stuff like that goes in.

I What about newspapers?

P No, I don't put them in, to be honest I don't have many. I have the Evening post and the Radio Times but they go in the bin.

I and yet they collect those?

I They do, you're right.

I think I don't have like masses so I don't think about it. I have a Radio Times every week and I just chuck it in the bin. I have a free paper every week and I just chuck that in the bin. I don't have like a paper everyday. So I don't tend to think about it, but there's probably loads of stuff that goes through this house that could all be recycled in that way.

I What made you start composting?

P It was Kevin that started it to be honest with you. Well he started with a compost bin and I don't know what he used to put in it, cause it was me who started the little bin and that was when I went to a friends once and she'd got a little bin and I thought what a really good idea, cause all the stuff that you'd usually put in the bin you just put it into the little bin there in the kitchen. It's there easy to use and you do get really good compost out of it. It's surprising how much it builds up just from that bit of waste going through all the time. I have used it – and the other thing was that the council gave out – well not gave out – sold cheap compost bins so we got one of those for the garden.

I So where abouts is your compost bin located within the garden?

P It's just outside the back of the house.

I and what do you feel like when you put your stuff in there?

P I do feel quite good about it actually yeah, but it's my one little bit that I do – I'm rubbish on everything else but – I suppose it's because it's providing something for me – which is a really bad attitude I know it is but I get something out of it. So I put all the waste in there and I get really good compost out the bottom of it.

I so you can see you get something out of it?

P Yes, I should see that in other ways.

I No, there's no criticism there – I find it quite interesting how you segregate the stuff that goes in the compost bin and how you put the other stuff that doesn't go in the compost bin.....

P Yes anything else that's vegetation will go in the compost bin. But if I didn't have a little bin in the kitchen I wouldn't do it I don't think – I wouldn't go out to the compost bin everytime with little bit and pieces so I have to have the bin in the kitchen – it's just easier – I just chuck in straight in there and then it goes out. It's easy to do.

I Could you talk me through the same process with toiletries/ bathroom goods?

P The get put in a box up on the shelf or in the cupboard in the bathroom or if it's something for using straight away it will go out round the bath.

I Okay, and do you have a bin in the bathroom?

P Yes, things get used and then they go in the bin and then they go out just into the ordinary bin, and I don't segregate that.

I Do you have a bathroom/ medicine cabinet?

P No.  
Medicines and those sorts of things are in baskets up in the top shelf in the kitchen. Don't ask me why they're in there but they just always end up in there. My medicine box is just an absolute tip – you're quite welcome to look at it.

I Would it be possible for me to have a look at it?

Photos taken

I Do you have a sewing box/ kit?

Would it be possible for me to have a look at it?

Photos taken

I Do you have a shoe polishing/ cleaning kit?

Would it be possible for me to have a look at it?

Photos taken

I Do you have a garden shed?

P Yes – it's an absolute tip. From my point of view the garden shed houses like the lawn mower and the hedge trimmers and push bike and things like that.

It just stores big things?

it's full of junk but it's all Kevin's stuff that he's got to come and sort out.

I Would it be possible for me to have a look at it?

The interview ends with a look into the garden shed, where photographs are taken.

**Interview J1, Joan Barnett, interviewed 15.12.01**

Joan is 63-years-old and retired.

She lives in Mansfield, Nottinghamshire is married and has two children and four grandchildren.

I Please list any packaging that you reuse.

P That I reuse – packaging – you're not talking about bags? – are you talking about bags?

I Yes, bags

P Carrier bags – we always use our carrier bags to line our bins – urm.....

I When you think of packaging it can be anything that you buy something in. Margarine tubs, cardboard boxes - you know anything.

P Sometimes, yeah, I might reuse tubs like a margarine tub. Only to store something perhaps in the fridge. Urm, but nothing else really – not really no.

I Anything in the garden at all – anything to store things in at all?

P No. Actually – a plastic basin that I always get a pudding in from the shop, I'd reuse that.

In fact I do reuse them, cause a lot of them have got lids on. I also had my tea bags in a very nice Yorkshire Tea tin. It was an offer that was on and now I use that tin all the time - I take the tea bags out of the cardboard boxes to put them in the tin which is lovely, yes, I reuse that.

I use – it might sound silly, but I use sometimes little make-up pots, I keep them to put cream in to take away.

I To take on holiday?

P Yes, if I want to take little bits away, little bits of cream rather than big pots of cream. Sometimes I've had samples given to me of Clinique for example – Clinique little sample pots. Then I'll put the cream in them to go away – I reuse them – and I will reuse little plastic pots – well again to put cream in.

I So you actually reuse loads.

P Yes, one was a mouth wash – a little sample travel mouth wash that I'd finished using but I kept the bottle and I put toner in it and took it away.  
Quite a few little bottles – and I'd put shampoo in if I was going away for a week.

I Please describe your thoughts regarding the images of the different kitchens and bathrooms etc.

Picture a

P Yes, I like the whole thing – the size is fantastic. Yes, there's nothing I don't like about that really. Is that dark wood?

I Yes it is.

P I possibly wouldn't go for dark wood, that's the only thing.

I Do you like the wooden floor?

P Yes and I like the freezer. These are becoming very new, very American. But then you do need the house to put them in don't you.

Picture b

P I like it, but its not for me – its too busy. I'm a bit countrified.

Picture c

P Urm, I don't like that. I don't like the bath panel – no don't like that.  
I don't like the wood. Is that wood round the bottom?

I It is, yes.

P No I don't like that – it's a bit – its not comfortable looking.

Picture d

P I think this is terrible. I don't like this one – no.

I What don't you like about it?

P What don't I like?

I don't like the bath, because I'm thinking about the disabled, so I don't like the bath, that seems terribly high to me. I don't like that thing there whatever it is there.

I The wooden table thing?

P Yes, and I don't like the blind and I don't like the carpet.

I What is it you don't like about D then, is it just too cold and bare?

P Yes, probably bare.

I But, do you like the wood?

P I like the wood very much, in fact I had a whole hall full of wood panels they were lovely in London. Perhaps if I saw it in the room I might like it even more, but I'm not keen on the bath panel. I think maybe that's what's putting me off.

I Do you buy or use any second hand goods?

Have you in the past?

P Buy second hand?

Are you talking about clothes or products?

I Anything – absolutely anything, but clothes come into it.

P Yes sometimes I'll bring clothes home from the shop sometimes if there is something I fancy cause I work at the shop – the hospice shop, and I bring home some clothes for the girls sometimes if there is something there. Odds and sods, urm.. second hand products other than that – no – I don't think so.

I Have you bought second hand cars or anything like that?

P Oh yes years ago, I'm talking a long long many many years ago. We don't now now.

I What about anything electrical?

P Urm no, I've never bought anything second hand like cookers. I had a three piece suite once second hand, but that was when we first moved into our house and we were skint, but other than that no.

I So apart from clothes you don't use anything else. You did in the past, but the only reason was you needed to.

P We were skint yes.

I Did you ever look in the papers?

P No, very rarely – it's not my scene.

I Can you think of products/ things you associate with wood?

P Well the first thing obviously is furniture. What's coming into my mind is fruit bowls I don't know why. Fruit bowls and - this is just what is coming into my mind – wooden massage things that I was looking at the other day.

I Oh those Bodyshop things?

P Yes, you've got it – yes cause I was considering buying one.

Urm.. and boxes – other than that nothing than that comes to mind.

I Can you think of products/ things you associate with plastic?

P Lots of things in plastic. Plastic bags, plastic containers, Tupperware, urm – plastic sheeting what decorators use. This is all what's coming to mind.

I But lots of things?

P Yes, lots of things are plastic aren't they.

I Can you think of products/ things you associate with glass?

P Ooh, yes I think of crystal straight away.

Yes, straight away glass – I love glass. I've got a passion for glass. Anything that's glass I can think of – eating, drinking, looking at – yes.

I Can you think of products/ things you associate with metal?

P Cars - that's what's coming into my head – metal cars. Ummm cookers, then ovens and fridges - are they metal?

I Yes they are, well the biggest part of them is.

P Yes, and machinery probably and tools – that's all.

I Can you think of products/ things you associate with paper?

P Paper, oh books, wallpaper, nothing else, newspapers and paper bags. Paper chains and cards.

I Can you discuss the items of packaging you have bought in?

P I bought something the other day and I've got something I kept that I like.

I Have you got them to hand, could you talk me through them?

(Interviewee shouts to her Grand-daughter to bring the packaging downstairs)

P (speaking to Grand-daughter) You know in my bedroom, the one I bought the other day was – go in my bedroom. You know in the little cupboard in the bottom where I keep my hospice thing there's a pink box in there...

I like this, this is the tin. I like that –I don't know why.

I Try and describe why you like it.

P Perhaps it's because it reminds me of my childhood probably – it's the sort of thing that my Grandmother would have. Urm I'm fed up with a lot of modern stuff.

I Yes, cause its quite nostalgic in design?

P Its probably why, although I've got nothing to do with Yorkshire family wise, but I quite like the tin and I just thought it was very nice.

I it looks quality too.

P Yes, it came with tea in it – I bought it – I suppose it was an offer I don't know. I thought it was lovely and I've kept it ever since. I told you I like the Kleenex – have you seen the new Kleenex boxes?

I No, I haven't.

P They're hologram – it's a hologram, yes that – I like that, it took my fancy.  
Let me get the other one I really like. (leaves the room to get another pack sample)

This is another one – I love this – it's another packaging (Marks and Spencer's floral perfume box).

I like that because that reminds me of fresh and cleanliness and that's what it is anyhow its perfume.

Here it – now that's a box that I like – I've had that now for about two years.

I And what did it have in it originally?

P I think it had Floriantina in it (an M&S perfume).

I Is that perfume then that you particularly like?

P Yes, oh no that had talcum powder in it – Victoria bought it for me – I like the box, I like that yes.

I So what have you kept in it?

P Nothing - I've just kept the box, because it's nice yes.

I But you could use that for other things couldn't you?

P Oh yes, I kept it because I thought urm, I might buy someone something and I'd want a nice box and that's it. But you couldn't with them could you? (pointing to a branded perfume boxes).

I Why do you particularly like this one – the Pantene scalp treatment carton?

P The product made me buy it, but why do I like it – I think because it looks expensive – it looks like Christian Dior.

I Cause I thought it was either a skin care product or perfume or something, but it's actually only a hair and scalp treatment.

P Which is nice actually – it's new. But yes, I suppose it does look a bit elegant doesn't it, but out of the box its nothing is it (opens the box), although on the other hand it's still quite nice.

You could put that in your bathroom couldn't you and it would look nice.

I What about this little one here? (small gift carton with rope)

P That one – why do I like it? I like it because it's like a little bag. Again I think the packaging of it is lovely – always has been – but then I think Marks and Spencers takes some beating.

I So would you keep any of these ones (the floral branded cartons)?

P Er no, cause this is the second one I've had of these and I threw the first one away. No I'd throw the boxes away probably.  
I might keep that one (Pantene box) I might keep the product in there.

I Yes, whereas a lot of people might throw the carton away – you'd prefer to keep the product in it – thanks, that's great.

P Load of old nonsense isn't it (laughs)

I No, not at all.

I Please hold and look at the following items of packaging and let me know your thoughts.

Skittles carton

P I haven't seen this one before – I might have seen it today down Mansfield.  
Yes, that's nice.

Plastic Milk Bottle

P I buy Cravendale milk.

I Do you buy bigger amounts?

P I buy bigger amounts because I buy Cravendale and it lasts for three weeks.  
Have you not had it?

I Why is it so nice?

P Because it's put through a filter so many times.

I Is it pasteurised?

P I'm surprised you haven't had it.

I Is it more expensive?

P Yes – It's again it's the packaging – is nicer than.

I Oh, I see it's opaque isn't it.

If you compared it to the full size equivalent - forgetting what's inside it which style of packaging do you prefer?

P The Cravendale probably, again as it looks fresher – again it's a psychological thing isn't it really. Yes it looks fresh – that (pointing to the other normal pack) looks like any ordinary old milk thing.

I It's interesting that it's opaque and you can't see the milk.

P Mm.. beautiful, beautiful milk.

#### Marmite Jar

P No, I don't like that.

I Do you like marmite though?

P I don't mind.

I But you don't like the packaging?

P Not really its never altered has it I don't think.

I don't dislike it but I mean it's not – I don't suppose you could put Marmite in anything else – you don't expect to find it in anything else.

I What do you think about the glass?

P I like the shape – it's probably the colour that's better for Marmite, because Marmite is blacky/ brown isn't it and probably when you're half way through it would look awful, chatty and gungy on top couldn't it eh?

Yes – probably a good thing there.

#### Tin Box

P No for pencils, no I wouldn't buy it.

But then I wouldn't be looking for me – I'd be looking for my Grand children, so I'd be looking to buy something sillier probably.

I What about that compared to a plastic pencil case or something?

P Er – I don't know, what are you saying - would I prefer?

I I mean when you look at it – just the concept of the pencil tin, would you prefer, do you like the feel of the metal?

P No it doesn't do anything for me at all.

I quite like tin things, but no, my first thought would be no I wouldn't buy it.

I If you were buying it for someone else would you buy a tin that was highly decorative. Is it the fact that it's a bit old and plain?

P Yes, it's the fact that it's plain, because my mind is going to children you see and as I see that it's just plain. I'd buy it if it was decorated.

#### Wooden Cheese Box

P Oh I like that – yes I like that.

I Do you buy those at all?

P No, I don't buy them. I don't buy a box of Camembert because Pete doesn't like it, but yes I like that.

I Yes, why do you think you like it?

P Because it looks countrified and fresh and - doesn't it? Again it's a psychological thing. I mean put it in a cardboard box and I probably wouldn't look at it.

I I think it's quite unusual to have a circular thing in wood.

P Yes it's nice – I like that. That's nice.

I If you had that – would you keep it at all?

P Well I'm a hoarder, so yes I probably would.

Yes, I'd probably keep that and put any nonsense in it.

### Tic Tack Box

P Well I think they're silly.

I've always thought they were silly – because the sweets inside are too tiny – they're little tiny things.

It's something I never buy – I have bought but I wouldn't - it doesn't appeal to me.

Urm – I think they're very clever, clever little things, but looking at it now and you talking about reusing and recycling I've never thought – but perhaps I'd use that to put some tablets in – to take on holiday you know if I'm going away.

### Lancome Cream Jar

P I like that – yes I like that.

Well again going back to glass you see now is this glass?

I The base is glass and the top is plastic.

P Now you see I'm a great lover of Lalique glass – which is frosted like that and I like anything like that – and that's straight away – that's why I like it you see.

I The size as well is nice isn't it?

P Yes, I think the size as well is nice – yes, I like that. Yes that's a nice one.

### Foil Crisp Packet

P I quite like them actually. Do I like this one?

Yes it's quite nice yes – but I can really take it or leave them.

Again psychologically you think they remain fresher because you think.

I I know, can you remember when they were all plastic?

P That's right, yes. So again, you think a bit of quality don't you.

But yes, that's alright, but I can take or leave that.

### Glass Jam Jar

P Laughter – it's alright, it's a glass jam jar.

I Do you reuse glass jars at all?

P Yes, pickled onions we reuse them for.

I So if you bought something in a jar would you reuse it afterwards?

P Yes, but not all of them, but yes, in fact I've probably got eight or nine in the garage.

I What do you do with the ones you don't reuse?

P Just throw them away, yes, cause I have so many.

Probably if I didn't have so many, but I do have you know Bisto jars and Oxo, you know the gravy granules – things like that.

I Is it more the one's like that - screw top that you would reuse for pickling as opposed to the coffee jars and things like that?

P Any sort, there's no preference – none at all.

But I would keep a square jar more than I would a round jar. I would prefer a square jar because I think a square jar looks nice on your windowsill with pickled onions in it or something.

I What about the olive oil jars – what do you think about those, cause they're quite highly decorative glasses aren't they?

P You mean the bottles, yes some of them are lovely bottles aren't they – they are nice, but I don't reuse them no. But they're always in very nice bottles aren't they – the Italian olive oil – the very good stuff. Yes, in nice shaped ones they've got nice long necks – yes they are very nice. But I mean a jar is a jar isn't it.

I What was the last electrical product you bought?

P An iron – Moulinex I think.

I Where do you normally buy your food shopping, and what brands do you normally buy?

P Safeways and Morrisons.

I Are you particularly loyal to one or is it just where you are or what takes you're fancy?

P What takes my fancy – my favourite is Safeway, but Morrison's value wise is good.

I Why do you like Safeways?

P Because I think the quality of their stuff is quite nice, probably because the shop is totally different as well, I know it's more expensive, but then Safeways have some brilliant offers on. On a Wednesday everyone's Safeways seeing what the new offers are.

I Really?

P Yes, don't you ever get a Safeways leaflet – have you send one of them?

I Well no – I'm in Nottingham, I don't think we've got a Safeways nearby. Do you buy own brand?

P Sometimes yes.

I Are there certain brands that you always buy?

P Urm Heinz spaghetti – don't like any other.  
Are you talking about tins or anything?

I Anything.

P No – tea – I don't like own brand tea, I usually go for a known brand, and there's not a lot of biscuits – I only like McVities or whatever. I'm not keen on their own brand.

I Do you like any particular brands/ makes of clothes?

P Yes, well I go to Evans, Etams and Marks.

I And you don't go anywhere else.

P Not really no.

And Harvey, because of the quality and the size as well, they do a bigger size. But the quality as well is lovely, but that's not to say I wouldn't go to a cheap shop if I could get them to fit me.

I and you've already said charity shop stuff.

P If there's something comes in the shop and it's big enough I'll try that and buy that.

I Who does your decorating at home - who decides the colour etc?

P Me – yes.

I Is that because Pete is not bothered or because you're definitely bothered – you know what you want?

P Yes, I probably know what I want – yes, Pete's not really bothered, but there again he could be bothered if I really went wacky and you know.

I And do you do the decorating or do you get someone in to do it?

P I always do the decorating – always, but not anymore no.

I have a Daughter that does it all for me – done the whole house for me. She done all this.

I Excellent that's nice.

I Describe your ideal home.

P I would live in Florida – it would look like one of those houses on Miami Vice.

I Would it – would it be all white?

P No it wouldn't be all white, but it would be very light colours – I don't like dark colours.

I Would it be old or new?

P It would be new.

The insides – luxurious – very light, lots of cushions and maybe with lots of flowers – fresh flowers. But not a great deal of furniture – not like I've got it now.

But it's what you see on TV, it's what you see in books isn't it – you think oh that's lovely – I'd love to live in a house like that. But that's all I can say, I'd live in Florida. Very Miami Vice with Don Johnson outside (laughter).

Or another place or more I can think of – Savanna – you know those houses they have in Savanna – the deep south – like the American Civil War – like an old house with the big pillars.

I They're all wood aren't they?

P Some of them are yes, but I like some of the houses in America.

I If you have a car, what make is it?

P A Citroen Picasso.

I How often do you change you car?

P Every three years.

I Is that just because it's coming up for its MOT?

P Yes, cause I don't want to clean the inside out.

I Do you have a mobile phone? If so, what make is it and how often do you upgrade?

P Yes, Motorola.

I How often do you upgrade?

P (Laughter) – never – I've had this one for about three years.

It does the job for me, but I'm afraid it blows everyone else's mind.

I Have you ever bought a fake/ counterfeit item?

P Yes, well I've been to Thailand, so that says it all – bags, shirts, Pete's wearing a jumper actually – a Lacost jumper bought in Thailand.

Perfume which is a load of crap.

I I know it's awful isn't it – it never smells like it should do.

P I know but we've all done it haven't we.

I But do you like the idea of having something that's a label?

P Well yes of course – yes yes.

I If and when you are asked to a fancy dress party, how do you go about getting your outfit?

P Oh it was years ago when we went. Urm, I think Pete hired and I just improvised – yes.

I If you were asked to go to one next weekend, how would you approach it?

P I don't know, I'd probably hire one. I might improvise, I might go to a charity shop and see what's around. I might improvise. Yes, I'd probably find something.

I What about when you kids were asked to do things for plays and stuff or the Grandkids – and how did you do that – was that improvising and cobbling bits together?

P Yes, because Julie (Daughter) was a good dressmaker and between us we'd always find bits and pieces and make them – yes, Halloween outfits and yes – we'd never really buy anything from the shop.

I Do you do any gardening? If so, how do you go about designing the layout/ planting?

P No – sort of, but I don't like it.

I So what about doing any designing or layout of the garden?

P I haven't got a clue – absolutely hopeless. I mean I had to have someone in that was just plain out there and a fellow came in and designed that for us. We've got a little path if you have a look up there and it's still horrible and that.

I No it's not – it's nice.

P It should be flat, but they wanted a lot of money to flatten it – an awful lot so this guy came in....

- I What hobbies do you have?
- P Hobbies? Probably the hospice work down there.  
Urm – at the moment, not anymore, but I did do craft work.  
I done it all, I done decoupage – that was the last one – I went to night school for a couple of years – I enjoyed that. I done oil painting – I enjoyed that.
- I Again though night school?
- P Yes, I liked that.  
That's as far as the craftwork goes I haven't done anymore. I mean years ago I done all the aerobics and all that nonsense, but no nothing else.
- I What about the charity stuff?
- P I work in the shop once a week and then I work down the hospice as and when they need me in the tea bar.
- I Can you describe what you think the word reuse means?
- P Well to use it again you know when you can use it again.
- I Can you describe what you think the word recycling means?
- P Now to me recycling is going somewhere and being chewed down and made into something else - is this right?
- I Yes, like it's being taken back to it's original...
- P Like we take our newspapers up to the bins and they've recycled aren't they, but we use our plastic bags in our bin which is reuse.

***Interview M2, David Price, interviewed 08/09/02***

David is a 62-year-old retired man.

He lives in Nottingham, is married with three children.

- I Please study the two following pictures of styles of Miracle Grow Packaging  
Which one do you prefer?

P The one with the reusable retail container would be an immediate seller to the gardener, because you take the bag out of there and everything apart from the scoop is thrown away. With the idea shown – even if you weren't shown I would say – I would pick that up straight away. The beauty about the first one I would pick up as a gardener is the fact that it's got a sealable top and forget the secondary use – the prime use is that in these bags, once you've opened the bag – they go solid. In that – they wouldn't go solid.  
The fact that you could use it as a miniature cloche is very appealing – right.

I Would you pay more for the preferred style of packaging?

P Yes, definitely as long as it wasn't extravagant.

I Yes – you pay pence more?

P Erm, I'd probably pay 20 pence more – I'd recognise that was more durable immediately you've got a secondary use and the people that were going to buy that anyway you'd still have the mass market buying these, cause they don't know what else to buy. But you'd buy that as much for that purpose as the plant food.

If you sold the idea to Kem Pack – I'd definitely buy it cause I tend to buy Kem Pack.

I Please study the following two pictures of styles of hanging blister packs.  
Which one do you prefer?

P Ok, I can see the reasoning – where you're going. It's whether I'd buy into that reason. Urm, I think people would buy it – the first thing about traditional blister hanging packs is the obvious one, is that people regard those things as over packaged and very difficult to get access to it. Again, a lot of people at the moment aren't that into secondary use with this type of packaging they're quite happy to throw in the bin.

I would say that the idea of using it as edging or a paving wouldn't necessarily appeal to me but what I do like about it is that I could perhaps put instructions in there. If that is resealable I would use it for different reasons, but those reasons I'd identify myself.

- I Would you perhaps be more likely to use that in your allotment than here in this garden?
- P Well in my allotment I wouldn't use that – now here someone might be tempted to, but what I would use that for depending on obviously the size – but looking at the size there, you could get a fair sized piece of paper in there and things like instructions for well even when I've sown something and using it as a form of plant identification. Cause you can't get much information on a label you know the little typical labels and even in a smaller size you could get a piece of paper in there – that would appeal to me.
- I And I guess you could put seeds in there.
- P Seed packets in there – yes exactly.
- I Why do you prefer the preferred style of packaging?
- P Not so readily tempted as the Miracle Grow. That hit me straight away, but if I saw someone using these, it's almost like an idea I'd read about of using CD's as bird scarers and suspending them above plants instead of using nets which trap birds. I started to use that probably 5 or 6 years ago using disks and everyone up our allotment now uses CD's now for scaring birds and this is the sort of thing that if you saw another gardener using it would take off.
- I Do you think as there aren't any instructions in this saying you could do this with them – do you think you'd make that.
- P Yes, it's like anything these days - Barbara (Dave's wife) never throws away a brown paper bag cause she knows I'll save seeds in it. Where as if it's a white paper I could still save seeds in it but she wouldn't save them – it's just brown bags there's an association and it's like this – it's like if I hadn't seen that idea, my first idea is yes it would have been handy for storing instructions in. I get plant labels - they tend to break , they either snap or get lost – whatever and if you've got something visible as that - it's attractive. It's uniform and as you say you could put plant seeds packets in. You could put your writing in as well. No, I'd make use of it but I wouldn't want to pay anymore for it.
- I Please put these items of packaging in a line in the order that you like them.

P I've got to ignore the contents?

I Yes.

P In order it's from the glass – I like glass, because to me glass I'll use it in the bottle bank. In other words it's recoverable – to me it's easily recoverable, secondary you can use them for other things - so there's a storage reuse application. Then the one I dislike the most tend to be aerosols you use the contents and that's it – the whole lots gone – with no secondary use to it. As Barbara will tell you I'm absolutely terrible for making use of other things – so quite naturally I tend to look towards that. All our bottles tend to go to the bottle bank, all our papers go to the paper bank and things such as that.

I Why did you choose two glasses in that order?

P Primarily because the blue one is an odd glass and it's probably not so easy. It's more attractive for its marketing purposes, but it's less attractive for its recovery purposes.

I And what about the other two?

P Well I'd probably put the little round one the other way round if I thought about it more functionally. But I put it there in the first place because to me there is no secondary use to it, but it's immediately saying what it is – it's small and it could still be recovered, but I wouldn't reuse it and I'd be hard pushed to use the little glass one. Something that size I'd probably use the film canister. I use film canisters now to store seeds cause they are brilliant for it – they're airtight and they're also dark which seeds like.

The churn, if you noticed I opened it to have a look. You could use it but it's decorative. I'd probably use that for displaying something else – not holding water, but just for displaying – like a dried flower or something.

The box and the little tub are both there because if you wanted to you could put things in them – the others I wouldn't even try to put things in – I would use them and I'd discard them. The reason why the Buxton is there is that the very least is I'd put some water in it again.

I Please put the items in a line in the order you think they are in value.

P What it cost to produce?

I Well what you thin their value is as items.

P Well, I think this would be the most expensive – and I think these two would be the next.

I think what colours of course - your natural inclination is to think that certain material cost more. You might find that the little bottle costs more to produce than the other two standard bottles cause it's got a collar.

I Could you talk me through the life of your groceries/ kitchen goods – from when you bring the food into the house, unpacking it, using it and throwing it away.

P Ok – the first thing we do when we come back with shopping erm it's obviously stored - dairy products go in the refridgerator. Frozen foods go in the deep freeze – solids go in the tin cupboard. Solids go into – we've got about three or four cupboards one for jars and one for small packaged items.

They tend to be put away within 10-15 minutes of us coming in the house and we'll do it and then we'll have a cup of tea - so everything is put away.

It's usage then - I don't prepare the meals so it's a bit difficult for me, but basically the food stops in those positions until we actually use them for meals. If the package or the container is – I'll give you a classic – say if it's like a pickle jar or something like that or a beetroot jar , when they're used they are washed. Jam jars are washed and also we buy a brand of sweet pepper sauce for pasta – and they are washed and they're saved for our own pickling and jam making purposes and we have a cupboard for those.

I can't show you at the moment cause I'm doing the laundry at the moment.

Plastic bags tend to - the carrier bags we bring the groceries home in are used as rubbish bags for – they hold rubbish that's put in the bin.

I Where do they live?

P We have a cupboard where the plastic bags go and also the largest bags go.

Very large bags are used for garden rubbish. Cardboard boxes, like the vanilla fudge box would be squashed down and that would probably go down to the

recovery place by the fire station – the foil box, the foil wraps would go in this bin. The plastic would go in the bin – we tend not to buy many plastic bottles. It is a lemonade bottle if it's anything, but they're not recoverable down there. Can's are, but we seldom buy cans, but predominantly unless it's paper – we recover paper, but we don't recover plastic or foils.

I So what do you do with your paper then?

P Well papers go with me – when I take the dog for a walk in the park which is just down there – it's just as easy for me to put the papers in the collection bin. There is a bin for cardboard, so as I say cardboard one's would go and things like Kellogg's packs and Shredded Wheat boxes – they get squashed and go. The wood one I would probably put in the dustbin if it were just the odd one. Erm – the other thing I do – we tend to buy big litre bottles of milk – but if we buy 4 litre ones - I will take that up the garden with me and use it to store plant food or... If I get a 2-litre lemonade bottle and it's clear – I'll use that as a bell cloche and I must have a least 40 of those up the allotment. That's why I don't tend to take many more up cause I've got as many as I want. But tins unless they are like the soft drink tin I don't put tins into the metal thing down there cause they tend to be contaminated, but we generally try to recover as much as we can. We do put well our dustbin goes out and it's basically full most weeks, it's mainly ex packaging and a little bit of course of gardening goes in there – things I know I can't compost – they will go in the bin.

I and you're quite a keen composter are you?

P I produce an average of 5 tonnes of compost a year. I use newspapers for compost as well.

I And how far is the allotment from here?

P It's ten minutes walk for me and I do go in the car this time of year when I'm bringing, when I'm harvesting – you go in the car cause you're bringing things back. But if I'm just going up there to water or do some digging I walk up. I have big green like woven nylon garden refuse bags and I've got a couple of those and I got them quite deliberately cause they're handy to carry small hand tools which I don't want to leave up there, plus anything I'm taking back up

there like kitchen waste – I didn't say that we save kitchen waste. That goes up there – we have a little container in here and then that goes up to the big compost bin in the garden.

I And how long does it take for the compost to be made?

P It varies – time of the year and the sort of material I'm using, but I'm getting quite good at it now and I've got a big pile where I put everything initially apart from kitchen waste that goes straight in. I have two what you call boxes and I have two currently in use although I've got three of them – I have two of the round typical compost bins from the city council. But the principle is like all the rough stuff I put in a big heap first and that decays very slowly and starts to decay. The problem is that you need the compost at a certain time of a year – you don't need it throughout the year. I tend to put my compost on in early spring so that all the compost I'm currently producing I save in these two big bins.

I So it doesn't go off or anything else?

P No – it doesn't go off at all – it actually gets better cause the worms gradually chew there way through it all the time. But in essence at the peak of the season, say July/ August time I can turn quite rotten down green and paper stuff into compost in the space of about 10-12 weeks. That's how I tend to do it - tend to fill these bins up with stuff that's already rotting down and you turn – cause half of the secret is ventilation to allow air to come through so it doesn't become stagnant. I turn mine once a week and that keeps the oxygen in the thing. You have to put covers over them to keep them dry – I use old carpets. There has to be moisture in there otherwise it won't rot – it's about the balance. If it's too wet I add more newspaper, you know a big mistake people make it grass cuttings – they put on grass cutting on their own and they've got to be mixed up with ordinary kitchen waste – some garden waste, newspaper. Grass cuttings are high in nutrition. They tend to be very wet anyway – grass cuttings used that way will rot down other vegetation very quickly, cos they're small they rot down very quickly.

I What about other gardeners on your allotment – do they compost?

P No, I would say there are 50 Gardeners up there, I would say it would be less than 20% make all their compost.

I And what makes some do it and some not – is there a certain type of gardener who does it?

P Yes, mainly organic Gardeners, people who believe they don't want to use chemicals and pesticides cause it's easier to use pesticides. Whereas it's a bit more hard to be a practicing organic. The other category of gardeners that will make a lot of their own compost are show Gardeners – cause they grow plant in their own medium – they don't like buying commercial medium because they don't trust it. They make it themselves and they add their own –they will add their own chemicals and fertilisers to it.

I What's the split – at the allotment – do organic gardeners tend to talk to other organic gardeners more?

P No, there's no division. For example I would say that most of the Gardeners up there are more likely to know the dangers of chemicals. Most people take an allotment on because they want to grow fresh vegetables and be in control and do it with the intention of having nice vegetables. Those that go in for showing – they tend to grow at home more than in an allotment – they've got better control over them.

I Are there any allotment holders that just grow flowers?

P Yes, well I don't know any that grow purely flowers – most of them grow vegetables. But I would say out of fifty on our site there's at least 6 of them who grow predominantly nothing but flowers – they specialise – they show flowers – they need the space that an allotment gives them so that they've got the ..cause what you don't realise is that when people show they don't sort of grow 6 flowers and expect them all to be perfect.

I How do you think you and your fellow gardeners view the garden from a point of view of the natural wild life?

P I find gardeners are more in tune with natural cycles than people who don't have gardens – I mean for example I don't put down slug pellets – I believe in

having a pond with frogs and toads. We can't keep livestock in our allotments but you'd be surprised at how many have a small pond for frogs. I mean I've got a toad on my garden which would now just about fit in the palm of my hand and I've seen him for about the last 6 years growing and I know he hibernates in the winter and I don't disturb him. This year I've quite consciously put him in with my carrots – cause he stops them damaging the carrots. That's common up here – I'd say most gardeners up there won't hurt – and most gardeners can identify beneficial insects – you know most gardeners won't touch a spider cause they know that they do more good than harm. And black beetles they all know that black beetles also eat slug eggs. So you don't touch a black beetle or a centipede for that reason.

I What do you think of the difference between the allotment being something functional as opposed to the garden being decorative?

P We will use sprays on the flowers if we're having a lot of green fly damage – we will spray. I do the spraying and I do it in the early evening when it's still – usually about half an hour before dusk – that way you've got the least bee/ butterfly activity and the sprays we tend to use are friendly. I would use slug pellets there because you get a lot of that – there's no what you call balanced environment in these gardens. It's like I grow marigolds and runner beans and with my tomatoes because they attract things like hover flies and they attack green fly. They also give aromas off which sort of - if you grow onions and carrots together the carrot fly doesn't like the onion fly and the onion fly doesn't like the carrot so it doesn't give you 100% protection but it reduces it. The other thing is that the difference in an allotment and your own private garden is in a private garden you want everything to look perfect – in an allotment you're not bothered – it's quite funny. You like everything to look nice but you know that every year you know that some years are good for one crop and a bad year for another and you waste more in an allotment than you do in your own garden – in other words you'll think nothing of like I say - apples – you'll only pick the good one's and let the others drop. You don't want apples to drop out there though and you don't want flowers to look tatty – so you are less eco friendly with your own garden because you're not going to eat the products.

Slugs and snails will eat plants and they will decimate - it's like caterpillars and green fly can and you don't want it.

But in the allotment I know I've got caterpillars but I also know I've got a very active bird population up there, but we don't have that here. We have birds and squirrels here, but the squirrels do more damage than good.

I Could you talk me through the same process with toiletries and bathroom goods.

P You're asking the totally wrong guy here – I struggle to buy my razor blades. I don't buy toiletries – I don't use them at all. I don't use any form of deodorant - I shower typically twice a day – I wash my hair and use toothpaste – end of story. They get put away when the groceries get put away. Barbara tends to keep nearly all the toiletries in a cupboard in the bedroom and if I want some toothpaste I just go in there. In fairness I'm like most men – Barbara will just put it in the bathroom. It's very rare that I go looking for toiletries.

I Do you have a bathroom/ medicine cabinet?

P Yes, we have both.

I forever have arguments with Barbara that it has a sell by date of a year not three days – she just throws everything out.

I Do you have a sewing box/ kit?

P I'm trying to think of the best one to show you – there's a basket here that Barbara uses regularly, but it's got all of her – she does a lot of embroidery. There you go, have a look in there. She's got sewing stuff – lets go and have a word with Barbara.

I Do you have a shoe cleaning kit?

P Yes, that box has come all the way from New Zealand with us believe it or not. But these I don't know if you can see it – but these are my ex navel brushes.

I Are these current polishes?

P Yes, and they're only black and brown – there's two brown's in there. There's nothing that I don't use – old laces I tend to save as I say I tend not to throw anything away, cause I never now when I'm going to tie something up.

I Do you have a garden shed?

P Well we've got a shed here if you want to have a look at it.

(Show's me the shed – end of interview)

### ***Interview D2, Dave Thompson, interviewed 21/09/02***

Dave is 37 and in full time employment.

He lives in Nottingham, is single with no children.

I Please study the following two pictures of styles of Miracle Grow packaging.

P Urm interesting. I've used this one which is the standard box one and I don't find it very usable at all in the fact that I think the 1kg one the food comes in two little plastic bags and if left open for any period of time it turns to a bit of a mush.

Not very easy to dispense at all, cause it does seem to – the crystals are obviously water absorbent so it does get manky.

However believe it's a good product and I buy it – it's reasonably priced and so I like that, but I don't like the packaging.

This on the other hand – for some reason whilst it's probably very well designed I have a problem with it in the fact that one is slightly kind of more organic for me – cardboardy and I expect things in the garden to be cardboardy.

Whilst it's probably very attractive to maybe the naïve shopper, I actually wouldn't buy it because it's plastic. It's - I know that designing it the way you done it with the vent in the bottom you want people to reuse it as a little greenhouse for seedlings and all that but I'm not sure of its ecological soundness.

That has kind of like an organic feel to it, alright I know it's only cardboard, but whatever.

I It has a plastic bag in it as well.

P True, but you don't know that until you've opened the box when you've got it home. No I just think for me buying plastic containers in the garden – see I try to be an organic gardener. I don't like chemicals in the garden, but I will use chemicals to feed the plants and all that. I won't use the pellets cause I just let the slugs eat anything that they come across.

I wouldn't buy it probably, even though I don't like it with all its faults I'd go for the cardboard box.

I Would you pay more for either of them?

P No, not really – if it got to a case of price being an issue then I'd probably look at Wilkinsons own brand or something if that was the case, but if the two products were side by side – one in a plastic box and one in a cardboard box and they were the same price, I'd probably take the cardboard box.

I Please study the following two pictures of the styles of hanging blister packs

P I mean with the traditional blister we're all guilty of buying it but I must admit seeing that I recycle plastic now – I've got a box in the kitchen for all plastics that I empty at Sainsbury's once a week you actually do realise – Jesus Christ!, packaging is actually supplied with stuff you buy these days. Very often my - I might not condone excessive packaging, but basically you very rarely have the choice to actually buy products in a different format or simply in whatever so you buy it and just go – well I'll recycle it and do my little bit for the environment. Moving on to the reusable blister packs – whatever – I don't think I'd particularly reuse it for that purpose – it's been thought of as garden edging. The problem is with blister packs is very often they're not actually marked with the recycling symbols. I still don't know what they mean but I still look for the three arrows and the triangle and basically think I can throw that in Sainsbury's, and even if it hasn't got it, I'll still probably throw it in Sainsbury's and let someone else sort it out.

I've not got a lot to say about these really.

I Which one do you prefer?

P If there was a preference it would be a physical judgement on which is using the less plastic. That would be my only – if one has got massively excess as it's using space or plastic to take up more display area whereas if one was quite

compactly designed, but basically the same – I'd choose the one with the less plastic.

I Please put these items of packaging in a line in the order that you like them.

P I'm trying to think in my own brain now my own criteria.

In terms of packaging preference, in terms of I'd be quite happy to buy them because...

Something like that...

The one's down to the right are functional, I suppose all the containers are functional so that's no criteria – that I can't recycle – I don't like it its' not nice. I mean I use them everyday, but I don't particularly think they add any value to a product.

The aerosol spray can men's deodorant whatever – I wouldn't be certain if I could recycle that – I do throw them into recycling bins, but I don't think I should.

Oh – it's got an arrow on it anyway – oh maybe I can.

I Well the arrow really means nothing on it – all the two green arrows mean is that the levy has been paid on it. It doesn't mean anything to do with recycling.

P Ok – that's poor then.

I It's more about the material identification, like that's saying it's aluminium, so say there was an aluminium recycling place you could..

P Anyway I would throw it in anyway and let somebody else sort it out. But again there's lots of plastic there and I don't think it's – I don't like aerosols - I try not to use them anyway. So I don't particularly - for what it does I think it's massively over-engineered as most deodorants are but hey ho!

The plastic pop bottles I'm not particularly bothered about – I wouldn't buy bottled water – I always carry it around if I'm going anywhere but at least they're recyclable and I've got no problem with that. They're middle of the road – they're not offensive to me but they don't endear themselves either to me.

If you look at the middle three or four the glass containers I think yeah glass to me is nice – it's you know. I always have problems with plastic with food even with cheese and all that. I still think there's a health scare out there waiting to come on. I think plastics do leach into food, like into cheese and all that stuff.

So if I had the choice, maybe I ought to start buying it from the deli counter rather than pre-wrapped.

Glass, I like glass – the glass – that is just attractiveness – really, novelty.

I don't particularly use that one but I know what it is. This one I've never seen before and I think this olive oil thingy is quite attractive. It's actually physically attractive in its own right, mainly cause it's made out of glass and you can see the contents, so that is very nice.

Glass for water? I think you'd only get this in restaurants wouldn't you really.

You wouldn't buy that in the shop – it wouldn't be aimed at corner shops – it's too heavy. Clear glass yes you can see the product – fantastic – I mean talking about that, that is quite attractive though I mean if I was served that at a dining table I'd be quite happy to drink it. So yes, actually I would have problems with that because I wouldn't be able to recycle it – I've never seen a blue glass container.

I I think it goes in with the green.

P Glass is fine.

Moving on to the tin, which is for chocolate – I've never seen anything like this before. Obviously it's designed to be a gift – I think it would have a lot of – if you didn't like it I suppose you could eat the contents and hopefully recycle it, cause there's an awful lot of metal there for what goes in it. I think most people would keep it and reuse it somewhere. I don't know how I'd reuse it but I wouldn't throw it out until I'd probably found a use for it. I'd certainly find a use for it somewhere.

So whilst the cost of the container is probably more than what was in it - I'd imagine – you'd have to say the container is going to have an extremely long life so you don't mind, and obviously trying to resemble a milk churn, so yes I'd find that quite attractive actually. Maybe slightly over-engineered – it's got a certain niceness to it. The Camembert wooden container – yes, you showed me this last time and I've seen this in a cheese shop or something and saw hundreds of wooden containers and I thought that is fantastic they used wood an awful lot for those containers and it's... I'm struggling to think of a product that I've bought that's actually packaged in wood.

I like it because it's tactile – maybe it's traditional to make, maybe they've always been wrapped in wood. The way the box is made – it's incredibly simple

and gives the... If I had two pieces of Camembert at the same price, one wrapped in plastic and one wrapped in wood – you'd have to go for this. This is where the packaging adds to the experience of the product. You don't particularly want the packaging but it adds to the experience – I think this Camembert is going to taste tastier than some wrapped in plastic. You also don't have problems if it goes to landfill cause I know it would degrade. I might keep a few spices in there – whatever – no I still like it; I think it has a very tactile feel. I have no problems seeing wood go a lot further than – you can see the way I've arranged the products in the fact that I do think about what – obviously I want the right product, but I am, I'm aware of my green credentials or try to be a lot greener than I used to be, so if I do have a choice - and it's not very often that I do – I'll choose the one with the least packaging and the least effect on the environment.

Which leads to the Thorntons vanilla fudge box which I think is slightly over glossy, cause I always associate fudge with a matt finish, so I would like to see this box maybe in matt. Its intentions are good I think in the fact that obviously it's very well engineered, and it's trying to give the idea that it's a traditional product.

I think they were caught between two stools wanting to make it look traditional but also making it a gift product.

I wouldn't buy the Ribena drink cause it is just so much plastic for so little drink, but erm, you'd have to say that there is not much difference between my top three - the milk churn, the camembert and the fudge in terms of they are all reasonably well engineered or well designed containers for the products that they are.

I Could you talk me through the life of your groceries/ kitchen goods – from when you bring the food into the house, un pack it, use it and throw it away.

P As a non- car owner, I shop at my local Sainsbury which is about a 7 or 8 minute walk away, so I shop there about once a week and it's basically I can only carry so much back so I have a big holdall and inside there are a couple more reusable bags. The Sainsbury's ten pence recycling bags cause I hate people taking carrier bags – if you want me to ramble on I want Britain to introduce the same carrier bag thing as in Ireland - that's fantastic – great idea.

Anyway so I always go to Sainsburys in the fact that I use Sainsbury's recycling centre, so I have two containers under the sink there – one labelled plastics and one labelled glass. So typically after every evening when I'm washing up – I sort the left over rubbish from my ready meals. When I go to Sainsburys I walk past the recycling stuff in the back of the car park and throw the stuff in there and then go into Sainsburys. I buy my goods – I'm a shopper with a list, so I'm not particularly attracted by end of aisle displays or 2 for 1 offers.

I'm aware of the weight of products even though I do use a trolley. I've got to carry the stuff back so typically I've stopped buying big heavy stuff. I used to buy big heavy washing up liquids and half litres of Persil automatic for your washing machine. They would near enough demand a shopping trip in their own right – I've started using greener products now.

So yes I bring them back – dump it down there on the kitchen floor, put them on the shelves, put the stuff in the fridge and the stuff in the freezer.

I So can you just talk me through when you – so you empty your bags onto..

P Onto the worktops and then a pile for the fridge a pile for the freezer and a pile of tins go into the storage cupboard. I buy milk regularly every day after work – that's my only daily food purchase. During the week I'll typically go to Sainsbury's on Sundays. I wash all the containers I've used, file them in the appropriate stuff and if I can't recycle it – it goes in the bin. That's maybe the packaging from a microwave meal – I have a bin in the kitchen.

I What happens to the stuff that goes in the bin?

P That will go in the general waste and I have a wheelie bin and depending whether I'm gardening or not, that wheelie bin will be emptied once a month or something like that, cause I don't like to put stuff in it.

I So you don't put it out other than once a month?

P Only when it's full, which can take me four or five weeks to fill. I'm a single bloke do I don't throw that much out. Any sort of paper for example gets recycled at work.

I So what about - ok you've got your food packaging – what about waste scraps of food – do you compost anything?

P No, if there is any food left over, it's very rare that there is then that would just go in the bin.

I Can you talk me through the same process with toiletries an bathroom goods.

P Well again I'm trying to become more green in that aspect as well – I refuse to buy aerosols nowadays and if there is a pump alternative in the Bodyshop then I've started buying more products from there.

I So you make a special journey to Bodyshop do you?

P Yes, I would – again as a single man I don't exactly rush to loads of toiletries, but again yes I look at the 'green' aspects of that – I want a product that uses a pump dispenser or – I've started using deodorants based on crystals, rock crystals – I read a paper that the aluminium they use in deodorants is very bad – so I've started using the sort that don't have any in them.

So I get my toiletries, like today for example I'm after a hand cream so I'll probably go to Lush in town. I like the approach of Lush – the products are very expensive and it's only if I'm feeling generous that I'll actually buy Lush products, but I do like them. They are hand made with minimal wrapping and also they list the ingredients and I can understand them. Even at the Bodyshop I look at the ingredients and I can't understand it.

I So they come into the house and they are mixed with the other groceries you would sort them and take them upstairs?

P I don't buy toiletries form Sainsburys though – it would be a separate shop. I bring them in and I've got a plastic container in the back bedroom there full of baby lotion and stocks maybe of like if there is a 2 for 1 offer then obviously one goes in for daily use and one goes in that box first for storage basically. They would then be brought down after use, washed and added to the daily list of things to be washed or recycled, filtered or sorted. Like if I don't see a symbol at the bottom they go in the bin and if I do see a symbol they'll go in the plastic recycling bin.

I Do you have a bathroom cabinet?

P Yes, I have one ox labelled. Two boxes actually Tupperware boxes labelled medicines so they'll contain Lemsips, paracetamol etc.

So there's two of those and another Tupperware box labelled first aid kit, which is Germolene and bandages and that kind of stuff. I made it when I first got the house so then there's this big plastic box in the wardrobe which is full of these 2 for 1 offers and deodorants and stuff I'm trying to get rid of. All unused they are – they haven't been opened.

I Would it be possible for me to have a look at it?

P Yes, shall I bring it down – I don't think there is anything embarrassing in there – no Doctors prescriptions etc.

You'll think I'm a right hypochondriac when you see this lot....

These are probably past their sell by date now – erm it doesn't look out of date. I think I put it together when I got the house cause I read DIY causes most injuries so I thought I'd better have something for when I actually do cut myself. This is my normal medicine box for winter - as you can see it's got normal cold stuff, yes, a bit too anal but whatever. I'm one of those people who treat the first symptoms. This is the box that now gets 2 for 1 offers, vitamins I dispense into these.. I don't particularly like the box on my dressing table in my bedroom to this is – I dispense them into a little glass container so it makes them look more attractive. It will probably make more sense if you see my dressing table. Cotton buds again I put those into a glass dispenser/ glass jar that a friend gave me.

I That's interesting that you dispense even thing like tablets and medicines into things that look more attractive.

P Yes, ok that is a product – I'm trying to get rid of these, again cause I've got a 2 for 1. I'm trying to get rid of these cause I don't like them.

Enter the Kitchen

P These are Eco balls – they cost about £30 for three but basically you don't have to use detergent again – these will last about 10 years. They contain oxygen releasing pellets inside so they wash on a 40 to 50 degree wash and basically the oxygen removes every single stain from your – so you don't use detergents anymore.

Those carrier bags get reused.

I Do you have a sewing kit?

P Yes, I do – now my Mother was a haberdasher and I'm a great sewer myself so that's my sewing kit. That 's what you'd expect – sewing needles etc. God I think that's when I used to decorate clothes when I was a student – you know studs and all that and this is probably the bits that you get with suits which are spare buttons and mending stuff.

That's clothing dye.

I Do you have a shoe polishing kit?

P This is the box really – I don't polish shoes very often but. Insoles – I use insoles in winter and for my smelly feet in the summer – the rest is what you'd expect.

I When was the last time you used this leather dye?

P A very long time ago probably – (laughs) It's probably all dried out.

I and what about this?

P Is that leather dye again? – suede dye – oh God! - what a hoarder!

I Do you have a garden shed?

P I have a garage, which houses the tools and lawnmower and all that sort of stuff.

Interview moves to garage and ends.

### ***Interview M2, Mary Kursa, interviewed 13/03/03***

Mariane is a student.

She lives in Nottingham, a single parent with 1 child.

- I Please study the following two pictures of styles of Miracle Grow Packaging.  
Which one do you prefer?
- P The plastic one.
- I Why do you prefer that one?
- P Urm, you can see the product quite well and its nicely embossed on the side – it's just more pleasing I suppose. It looks more hard wearing as well and it looks like you can obviously use it for something not just as the package.
- I Would you pay more for the preferred style of packaging?
- P Urm – it would depend on how much more – if it wasn't a great deal then yes, but if it was quite a big difference then probably no.
- I Have you got a garden at home?
- P Yes, very small though. Some of my plants have just died through frost and stuff so it probably would get used – it's not so unattractive as shoving plastic bags over your plants when its winter and things. If that's what it's for?
- I Is that what you do then?
- P Well tha't what my Dad has been telling me to do – just cover them up with anything cause quite a few have died.
- I Is he a good gardener?
- P Yes.
- I Please study the following two pictures of styles of hanging blister packs.
- P O right – urm, I don't know whether I'd really want plastic for the garden, looking at the picture compared to the brick. I don't know I prefer more sort of natural products in the garden. Urm I don't know..  
I don't think I'd use it.
- I So obviously as you wouldn't use it you wouldn't pay anymore for it?
- P No – maybe if it actually did something like put some fertiliser into the ground or something so it's not just sitting there. Maybe if it did something maybe the product could stay in it and..  
It just looks a bit too much like a sheet of plastic shoved in the ground.  
No I'd rather have more natural like wood or terracotta that sort of thing.

- I Please put these items of packaging in a line in the order that you like them.
- P Urm,, the Camembert is the preferred one. I buy this product quite a lot cause I like cheese a lot. It's one of my favourite products, but it's nice because it takes away the plasticky taste from cheese that you get – it's a bit more of a - you get more of a feeling of it being from France or something with it being in this – just a bit different.
- Thorntons probably just cause of the name – the product is good. I like that one. It's probably the brand, if it was just normal fudge then it would probably be further down the line. The same with this one (metal milk churn), I know that the company is quite good and the shape of it is quite nice – it's a bit more of a novelty one isn't it.
- I don't know why but I prefer that one more than those three (glass bottles)– I've bought that one quite often – it's a nice product. Not a great deal to say about that.
- (Harley Davidson aerosol) I think that's too masculine or me – I think that's why it's at the end. Even if I was buying it for a male for a present I don't think I would buy it. I don't know cuase its' got the Harley Davidson it just seems you're a bit – you shouldn't buy that cause you don't know anything about bikes – you know what I mean?
- And probably this one cause I've never heard of it (blue glass bottle).
- I Yes, but as the packaging itself – do you dislike this one?
- P Urm – I don't dislike the actual form of it, but I don't like the graphics though – it looks quite cheap even though it might not be. It depends where it is – if it was in quite a high profile shop then probably yes, but I don't know, if it was in a corner shop then I'd probably go for the Buxton one. It's a nice bottle, but as I say I'm not really familiar with the brand.
- I Could you talk me through the life of your groceries/ kitchen goods – from when you bring the food into the house, unpack it, use it and throw it away.
- P If I've done a good enough job in the supermarket they should all be in the right bags for where they should go in the home and then we get things out on the table and then it will be probably the things in the freezer the go first and then I

decide what needs to go in the freexer and what can go in the fridge. If it's a fresh product or something - I put it in the freezer. Things like bread, I'll probably buy more bread than I need and put it in the freezer. Then I get all the fresh products and put all those in the freezer and then pick out the things that need to go upstairs and put them on the stairs. I then put things got into two cupboards, the pantry cupboard and just another cupboard. So things will go in there and then there's under the sink type things. Just cleaning sorts of products you know washing powder and stuff like that. So they'll probably stay on the table until I can be bothered to put them away later. So it's all the fresh stuff and then I'll probably leave the fruit until nearer the end. There are all those plastic bags so I empty all of those out into the fruit bowl. The fruit bowl is either on the microwave or on the table.

I What about when the carrier bags are empty?

P They either stay for a while or they go in the bin. It depends, I normally do collect them but I get too many. Do you know when you've got about 100 plastic bags on the cupboard – sometimes I just throw them away – I know I shouldn't. Cause I have seen places now where you can go and take them to put them back, but sometimes its' just a lack of space and you forget to take them back to the shop. With the larger bags – the ones that you pay for, they'll get kept and if I remember taken back to the shop.

I How does it progress then?

P I'll just got straight to the wheelie bin. The in is next to the fridge and then we've got a wheelie bin and that all just goes out. Everything goes in the bin – since I've moved here – the dust bin men just leave bags and we don't get the green bags. Where I used to live we used to get green bags and black bags left so you could put plastic, newspapers and things like that into the recycle bag. But now everybody just seems to put anything – it's not just rubbish that goes into the wheelie bin. The men don't actually put them out, it's a truck that gets the wheelie bin and tips it in and you can get away with putting anything in there. People put gardening and anything in ther nowadays so..

It's mainly rubbish that I put in – I haven't really got much other stuff to go in. I have been quite good since I've been here I've been to the tip a couple of times.

I What about glass bottles, do they go in the bin?

P Yes, I don't really buy them – I don't really have glass bottles, but yes.

I Newspapers?

P Yes.

I What about the stuff in the bathroom?

P We've got a bin in the bathroom. With my son's products – they get kept for quite some time. He'll have Mamey bath stuff, so he'll play with the bottles after they've finished – they'll be kept as bath toys. But erm, all of my things go straight in the bin upstairs and when that's full they get taken downstairs and then straight outside to the bin.

I Do you have a bathroom/ medicine cabinet?

P We've got a medicine cabinet: it's in the kitchen. Paracetamols, lots of different paracetamol I seem to have collected loads over the past year. Just odds and ends, there are quite a lot of things from when my son was younger, like E45 cream and just odds and ends – creams and stuff.

I Is it all stuff that you still use?

P Urm..I'd say the majority of it is used especially around winter. I've loads of things for like coughs and colds and that sort of thing. So maybe towards the summer it might need looking at. I'm not a hoarder.

I Do you have a sewing box kit?

P A very small one. Just pins and needles and threads, that's probably about it. Basically the only things that I sew are when buttons come off and that sort of thing.

I And when did you first have your sewing kit?

P When I first moved out of home.

I Do you have shoe polishing kit?

P I've got a little bit, urm – I've just got black and blue shoe polish. The cloth and brush for it – that's about it.

I Do you have a garden shed?

P Yes, there's a watering can, a brush, a trowel, and a couple of my son's toys – a bike. That's about it. Nothing much in there. I've got gardening products but they're all kept in the house – you know they're in here - the bit before the cellar.

I Can we just go back to when you were talking about plastic bags and that you only store so many – what prevents you from collecting glass and paper etc?

P I think because I haven't got a car it makes it harder to carry things and I'm quite a control freak about cleaning. I don't like having things cluttering up anywhere, so I think that's probably one of the main things. If there was a space for things like that to go then it would probably get kept but I don't think there would be any room for big piles of papers and things like that unless it went in the garden shed I suppose. I think if I had a separate bin outside or something then I'd perhaps do that.

I You say you are interested in gardening – do you save any kitchen scraps for composting?

P No – cause it's too small really – it's just a little back yard really and I've got quite a large flowerbed, but no it's not really big enough to bother with anything like that.

I If you had a bigger garden would you be interested in things like that?

P Yes, probably I've always – I've seen wormeries as well and I've always thought it's a good idea but again I wouldn't be able to cope with one of those in the kitchen. If there was enough room outside then maybe there could be one outside, but the garden is too small.

I Can you think of any areas in your house where – I know you're not a hoarder, but here things remain for quite a while – well beyond their life?

- P Ummm – I can't think of any product – I can't think of anything.
- I Do you buy second hand things at all?
- P No, not very often.
- I Would you describe yourself as having a green ethic?
- P Probably not, probably would want to be a bit more, but I'm not. I take to charity shops though I don't buy from them. I've just taken 8 bin liners full of stuff.
- I Is that after you've had a clear out?
- P Yes, I clear out quite often.  
I keep things that are nice, things like the Thorntons box and stuff like that.
- I Do you use them for anything else?
- P No I just keep the odd one. Before I moved I had quite a collection. I suppose that's the only thing that I collect.
- I What was it you collected?
- P Just a few interesting items.
- I Where do you keep them?
- P They were in my kitchen where I used to live, but like I say I'm not one for hoarding so I don't keep them for very long.
- I So it's a very selected few thing that you just keep for a short while?
- P The only thing I've kept for a long time is chinese take away packaging, they have these plastic things that they come in now and they're quite good for things – you know if you've cooked some meat or something – instead of putting them on a plate with foil.  
Urm the Jean Paul Gaultier perfume – Fragile. I kept that for nearly three years now because it's more ornamental than anything else even though it's finished with noe, so I put it away somewhere but I've still kept it. But before it was always out on display cause.. I think it's in – I've got a large wardrobe like a walk in wardrobe and there's a box in there with the odd few things that I keep and I think it's in there at the moment.
- I Did someone buy you that perfume?
- P Yes, it was for my birthday.
- I Is it important who bought it for you as to why you keep it or is it purely the packaging?

P I suppose so – I suppose a bit of both, but mainly because it's a nice piece of packaging – it's the dome – the one with the little women in it – the snowshaker.

I So what other things are in where that packaging is?

P Urm – I'm trying to think now, quite a lot of photographs are in there that I haven't sorted out yet. Odds and ends – I went on a hen night last year and there are odds and ends from that hen night in there – sort of things that you don't – not necessarily going to use again, but they're sentimental things – probably a sentimental box.

I And will it be taken out and thrown away?

P I don't think I'll ever throw it away – it just seems too nice, it's probably cause I know it was expensive as well. Cause it was quite a lot that one – it's probably the most expensive perfume I've ever been bought, so I think that probably had something to do with it, but I just liked it so that will probably stay.

## Appendix 7. Examples of the categorisation and naming booklet responses



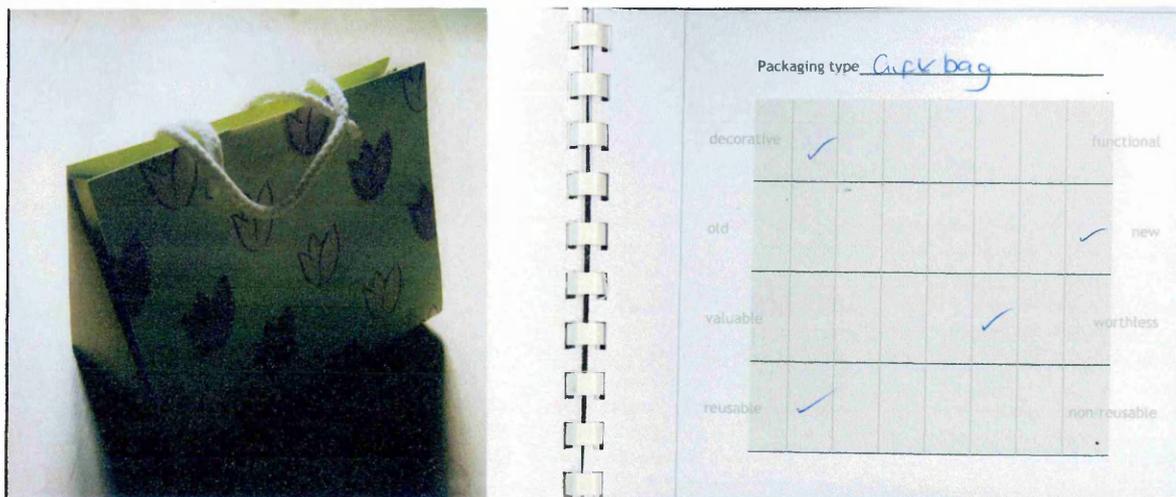
Packaging type SHOE BOX

decorative	<input checked="" type="checkbox"/>				functional
old		<input checked="" type="checkbox"/>			new
valuable				<input checked="" type="checkbox"/>	worthless
reusable		<input checked="" type="checkbox"/>			non-reusable



Packaging type WOODEN BOX

decorative		<input checked="" type="checkbox"/>			functional
old		<input checked="" type="checkbox"/>			new
valuable		<input checked="" type="checkbox"/>			worthless
reusable	<input checked="" type="checkbox"/>				non-reusable



**The responses to the naming booklet**

Oxo plastic box – utilitarian, plastic box, plastic cube, storage box, plastic carton

Decorative	1	Functional	111111
Old	11	New	111111
Valuable	11	Worthless	111111
Reusable	11111111	Non reusable	

Kilner Jar – cosmetic, resealable jar, glass jar, air-tight jar, classic jar

Decorative	111	Functional	1111
Old	111111	New	11
Valuable	11111	Worthless	111
Reusable	111111111	Non reusable	

Card Gift bag – gift/ fashion, carrier bag, Gift bag, paper carrier, bag, present type

Decorative	111111	Functional	
Old		New	11111111
Valuable	111	Worthless	11111
Reusable	111111111	Non reusable	1

Camember wooden pack – food/ gourmet, wooden box, cheese box (traditional), cheese box, round cardboard carton, box, traditional French

Decorative	111111	Functional	1111
Old	11111111	New	111
Valuable	1	Worthless	1111111111
Reusable	111	Non reusable	111111

Purdy's glass bottle: drinks bottle, ready to drink bottle, water bottle, bottle –screw cap, plastic bottle, alcopop

Decorative	1111	Functional	11111
Old	1	New	11111111
Valuable		Worthless	1111111111
Reusable	11111	Non reusable	11111

Malteser plastic tub: food snack, plastic bucket, chocolate drum, sweet box, plastic tub, plastic bucket, plastic container, cheap bargain bucket

Decorative	1	Functional	111111
Old	1	New	11111111
Valuable		Worthless	1111111111
Reusable	11111111	Non reusable	11

Paper AVEDA bag: carrier bag, brown paper bag, shop bag, paper carrier, classy carrier bag

Decorative	1111	Functional	1111
Old	1	New	11111111
Valuable	1	Worthless	11111111
Reusable	11111111	Non reusable	1

Tango drinks bottle: drinks bottle, one serve bottle, drinks bottle, plastic bottle

Decorative	11	Functional	111111
Old		New	11111111
Valuable		Worthless	11111111
Reusable	1111	Non reusable	1111

Jigsaw Shoe box – shoe box, cardboard box, box, posh shoe box

Decorative	1111	Functional	11
Old		New	11111111
Valuable	1	Worthless	11111111
Reusable	111111	Non reusable	11

Aerosol Can – branded deoderant, perfume, metal container, aerosol, spray can

Decorative	1111	Functional	111
Old	1111	New	111
Valuable		Worthless	11111111
Reusable		Non reusable	1111111

**Appendix 8: Table explaining primary reason for packaging reuse**

Reused packaging	Front stage	Back stage	Function	Nostalgia	Design/ Shape	Brandng	Prestige
Shoe box							
Cement tub							
Metal biscuit tin							
Metal toffee tin							
Ice-cream tub							
Spirits metal tin							
Decorative metal tin							
Large glass jar							
Small glass jar							
Coffee jars							
Blue wine bottle							
Large plastic bottle							
Carte Dior container							
Plastic trays							
Plastic biscuit box							
Wooden packing case							
Plastic drinks bottle							
Pasta sauce container							
Cardboard boxes							
Carrier bags							
Old metal tins							
Plastic bottle							
Washing tablet bag							
Glass jar							
Malteser tub							
Wine bottles							

## Appendix 8: Processing Diagram

