

# EXPLORING THE REFLECTIVE AND UTILITARIAN BENEFITS OF PRODUCT ATTACHMENT

Mary Maclachlan<sup>1</sup>, Prof. David Harrison<sup>2</sup> and Bruce Wood<sup>3</sup>

(1) Glasgow Caledonian University

## ABSTRACT

With heightened environmental concern and the recent global economic crisis a new challenge has emerged for design; to take a more responsible role and tackle sustainability more innovatively. Not only do designers of the future need to be aware of common sustainable design thinking they should also be aware of more innovative approaches, such as, how to emotionally connect with the consumer and design products that consumers want to take care of, cherish, and repair instead of replace.

This paper describes a workshop, which was developed to introduce undergraduate product design students to the area of emotional design and sustainability with particular emphasis on product attachment. The concept of product attachment was introduced by encouraging the students to become more aware of their emotions by discussing how they felt about three personal products: Favourite childhood product, favourite product that they currently own and the product they most desire to own. These products and the benefits that they offered were then discussed in order to identify how design can encourage product attachment.

*Keywords: Product attachment, sustainability, emotional design, utilitarian benefits, reflective benefits.*

## 1 INTRODUCTION

Research in the area of emotional design has increased over the last 20 years and a significant number of tools and methods have been developed to assist the integration of affective aspects such as emotions and consumer perceptions into the product development lifecycle. Despite this growth in research, many designers are still unsure of how to influence or control the emotions elicited by products. This is due to the idiosyncratic nature of the emotion phenomena and mainly that emotions are personal and therefore two individuals could experience different emotions to the same product. Research by Lazarus [1] however, suggests that there are universal conditions that underlie and evoke an emotion and that each distinct emotion is brought about by a unique pattern of eliciting conditions. This means that although consumers may experience different emotions from one another towards a product, the emotions that they do experience result from a universal pattern of eliciting conditions. One area of emotional design where universal patterns can be easily identified is product attachment. Research has reported patterns of nostalgia, sentiment, status and enjoyment as the main factors influencing why consumers become attached to products [2],[3] & [4]. By considering these factors in the design process, designers could encourage product attachment, which could contribute to sustainability by reducing the number of consumer products destined for landfill.

## 2 EMOTIONAL DESIGN

Emotions enrich virtually all of our waking moments [5] and given that a substantial portion of these emotions are in response to cultural products such as art, clothing and consumer products [6] designers could benefit from considering the emotional impact of their products during the design process. Furthermore, in today's highly competitive consumer market it has become increasingly difficult to distinguish products on the basis of their price, quality and technology (e.g. [7], [8], [9], [10]). For example, consider the mobile phone market, each of the handsets shown in Figure 1 offer similar functionality, similar quality and compete at similar prices. How then, do consumers make purchase decisions?



*Figure 1 Mobile phone handsets as examples of products which offer similar functionality, similar quality and compete at similar prices a. Nokia 5500, b. Samsung E530, c. Sony Ericsson W600, d. Nokia 6170, e. Motorola RAZRV3*

Desmet [11] offers an answer to this question by proposing that ‘Emotional responses can incite customers to select a particular artefact from a row of similar products and may therefore have a considerable influence on purchase decisions’. This view, that the emotions elicited by products can influence purchase decisions, has led producers to challenge designers to manipulate the emotional impact of their products.

Cognitive scientist Donald Norman [12] concurs with this theory and uses emotional design to explain why consumers sometimes have an irrational desire to buy a product for which they have no use or that does not function well. The Phillippe Starck Juicy Salif lemon squeezer, manufactured by Alessi, [13] shown in Figure 2, is a common example cited to demonstrate this [12]&[14]. The lemon squeezer, despite its obvious functionality flaws, remains a highly sought after product often described as ‘seductive’, luring consumers to the checkout almost before they even know what it is, or what it costs.



*Figure 2 The Juicy Salif*

The success of the Juicy Salif challenges the common view amongst design professionals that form follows function, so much so that the anniversary gold edition bears a warning that the product would become damaged if it were to come into contact with anything acidic. Starck is also rumoured to have said, ‘My juicer is not meant to squeeze lemons; it is meant to start conversations’ [14]. Despite the vast success, the juicy salif is also a highly criticised product, by designers and users alike. The main criticism being that the product lacks basic functionality [15]. This product represents a growing

occurrence where the designer fails to act in the best interest of the consumer and sacrifices basic product functionality for visual amusement. An increasing demand for 'art objects', which act as fashionable and expensive status symbols, drives this trend [16]. This contributes further to the complexity of consumer choice.

### **3 CONSUMER CHOICE**

Swartz [17] describes the excessive choice of consumer products as paradoxical. He explains that whilst choice may improve the quality of our lives by providing independence it can become detrimental when the choice becomes too great. Often when there are many options to choose from consumers are left with feelings of regret, missed opportunities and raised expectations. This is a major concern as the excessive consumption of today's wasteful society is driving companies to produce more and more similar products in a competitive economy. Designers could therefore be, unintentionally, contributing to consumer dissatisfaction as opposed to satisfaction by providing endless options and choices. Furthermore, with the rate at which technology is advancing, consumers are constantly faced with the additional choice to upgrade their products. Rarely do consumer products break beyond repair anymore, they simply become obsolete. This obsolescence manifests in two ways; planned and perceived. Planned obsolescence being where the product has intentionally been designed so that when it breaks it is difficult to repair and perceived obsolescence, where the product remains fully functional but is no longer perceived to be stylish or appropriate [18]. The mobile phone industry is an example of where planned and perceived obsolescence encourages users to upgrade their products unnecessarily. The average mobile phone user will change their handset every 12-18 months and in most cases the handset is either fully functional or could be easily repaired. By limiting product choice, not only could customer satisfaction be improved by easing the decision making process for the consumer, but enhanced product compatibility could also be achieved, thus allowing easier repair and servicing of consumer goods [19].

### **4 EMOTIONALLY DURABLE DESIGN**

Excessive product consumption has led to increased landfill and as a result the environment has become a key focus in the design industry, however, far too often the focus is on what will happen to the product at the end of life, for example, design for recycling. Producers now have to take responsibility for the products they produce and must adhere to numerous legislations such as the WEEE directive, battery directive and end-of-vehicle life directive [20]. However, more focus should be directed at designing products that can change consumer behaviour. There is a great opportunity for designers to influence more sustainable consumer behaviour by making the link between consumer behaviour and the direct impact on the environment more explicit. There is also potential for designers to develop intelligent products that mitigate user decisions, for example, products that have been designed to include automatic standby options reduce the users decisions regarding energy consumption.

Chapman [21] argues a similar case for responsible design but from an emotional point of view. He reiterates that current sustainable design methodologies adopt symptom focused strategies rather than focusing on the causes, and describes today's restless culture as fascinated by all things new as the underpinning for enhanced human product consumption and increased product waste. He believes that consumers discard products once their empathy for them expires and suggests that if we can sustain our emotional relationship with a product we will cherish it and want to keep it. He proposes that more emotionally durable products would reduce the need for consumers to be constantly looking to replace their perfectly functioning products. This is a view that has long been shared by Philips [22] and in a project to explore life and technology in the future they suggested that designers should focus on creating the cherish-ability quality so that products are treasured and kept for a long period of time because of their symbolic or sentimental value. The concept of emotionally durable design will be discussed further through the exploration of product attachment.

### **5 PRODUCT ATTACHMENT**

Product attachment is an important and growing area of research and presents an opportunity for designers to design products that users are likely to handle with more care, repair when it breaks,

postpone its replacement for as long as possible and thus keep and use products for longer periods of time.

A study conducted by Schifferstein et al, [4] studied what factors contributed and influenced product attachment. The study, which focused on cars, clocks, lamps and ornaments, concluded that in the case of new products, enjoyment was the most influential factor and in the case of older products it was memories that had the strongest influence. The study identified that, in order to achieve product attachment, designers must present ways that consumers can form associations with products, particularly associations relating to memories, or build in an element of enjoyment. The difficulty in attempting to associate products to memories is that memories are personal and can therefore be different for each person unless you try to form association with a shared experience. Examples of, association through shared experience, can be found in souvenirs and other nostalgic products.

Building in an element of enjoyment can be achieved by focusing the design on sensory and aesthetic pleasure. The salt and pepper shakers shown in Figure 3, designed by Georg Jensen, are an excellent example of this.



Figure 3. Georg Jensen Salt and Pepper shakers.

The products effectively perform the required function of dispensing salt and pepper and communicate clearly through colour association which product is for dispensing salt and which for pepper. These are common features amongst salt and pepper dispensers, but in addition, they also provide enjoyment as they have been designed with a weighted base so that when the user gently nudges them they will wobble but never fall over, similar to the successful Weeble toys, shown in Figure 5, designed by Hasbro in the early seventies.



Figure 4. Weeble toys designed by Hasbro

## 6 PRODUCT ATTACHMENT WORKSHOP

The workshop was developed to introduce students to the concept of product attachment and to explore how design can encourage product attachment and potentially contribute to more responsible and sustainable design. 39 product design students participated in the workshop, 20 male students and 19 female. In preparation for the workshop students were asked to identify three products:

1. Favourite product from their childhood
2. Favourite product they currently own
3. Product they most desire to own

The students were also asked to give detailed reasoning for their decisions. The rationale for why each of the products was selected was then discussed in order to illustrate the differences between utilitarian and reflective benefits. Utilitarian benefits are those that fulfil basic product function i.e. another similar product may achieve the same satisfaction and therefore it is the function that achieves most satisfaction and not necessarily the product itself. Reflective benefits are those that offer additional unique benefits and which are linked to memories and self-image. Product attachment stems from reflective benefits where the consumer is attached to the product for reasons in addition to its function.

### 6.1 Favourite childhood product

The products identified under the 'favourite childhood product' category were grouped under four headings and can be seen in Table 1.

Table 1. Favourite childhood product

Product	No. Of Students
Soft Toys	19
Action Figures	9
Building blocks & Games	4
Other	7

49% of students reported that their favourite childhood product was a soft toy. The second most popular choice was action figures, at 23%. Action figures included heroic characters such as 'Action Man' as well as more feminine figures such as 'Barbie'. The remaining 28% preferred games, puzzles and other toys. Interestingly, of the 49 students whose favourite product was a soft toy, 89% of them still have, and still cherish their soft toy. Examples of these soft toys are shown in Figure 5. None of the students selecting the products from the other categories were still in possession of their favourite product.



Figure 5. Example of soft toys as favourite products

In most cases the soft toys had great sentimental value, often being given to them at an early age by a close relative. The main reason cited for why they became attached to these products was that they provided great sensory pleasure i.e. many students discussed the feel of the material and the smell of the toy. These pleasures were comforting and provided constant familiarity to them as children. The soft toys were all animal figures and many of them had sad facial expressions. Some of the students described these vulnerable expressions as one of the reasons they became so attached, as they felt compelled to care for the soft toy. This is similar to Csikszentmihalyi's [3] findings about why children become attached to baby dolls. He discusses how the association between the product form of a doll and the affection required for a baby, is obvious and intuitive. Children respond easily to the behaviour required to care for dolls and often become very attached as a result. Animals, like babies, require a lot of care and attention whilst also providing playful companionship.

The main reason cited for students selecting the action figures and other toys, as their favourite childhood product was fun and enjoyment. Few of these students expressed any real product attachment to these toys. This was evident in the fact that none of them still have these products in their possession.

In this product category, the products demonstrating mainly reflective benefits were the soft toys, which related to memories. However, in some cases the action figures also represented reflective benefits but in the form of self-image. Particular action figures were fashionable and desirable toys at that time and owning a large collection of action figures was seen as a symbol of status, even at a young age. For example, this is an account of why one student favoured her collection of Barbie dolls. "I had more Barbie doll toys than anyone else in my class at school, everyone was really jealous and always wanted to come to my house and play with them."

Examples of products representing utilitarian benefits were games and toy cars. The benefit described was purely fun and the students would have quite happily exchanged these toys for other products that also engaged them in fun activity.

## 6.2 Favourite product that they own now

The products identified under the 'favourite product that the students currently own' category were grouped under four headings and can be seen in Table 2.

*Table 2. Favourite product they currently own*

Product	No. Of Students
Computer/Games console/Television	14
Music player/Camera/Mobile phone	12
Fashion/Jewellery	6
Other	7

67% of students reported that their favourite product that they currently own was an entertainment or communication device (computer, games console, television, music player, camera or mobile phone). 15% claimed their favourite product was an item of fashion or jewellery. 18% of students selected a variety of other products. All of the products selected under the category of fashion and jewellery represented reflective benefits and all related to status. One student's response to why her Channel handbag was her favourite possession was "It is limited edition so not many people have it, it was really expensive and I would be really upset if I lost it. I have seen a few celebrities in magazines with it but have never seen anybody on the street with it."

There was a mix of reflective and utilitarian benefits identified within the entertainment and communication devices. For example, music players were a popular choice but some students reported functional benefits such as "it allows me to listen to my music where ever I am" whilst others stated benefits relating to self-image such as "I love my iPod, it's so cool, I bring it with me everywhere." The student reporting functional benefits would be happy with any portable music player and so demonstrates utilitarian benefits whereas the student describing their iPod demonstrates reflective

benefits. Of the 67% students identifying products from this category, 69% of them identified reflective benefits and in most cases, demonstrated strong brand loyalty. Examples of products selected in this category are shown in Figure 6.



Figure 6. Examples of favourite products that the students currently own

### 6.3 Product they would most like to own

The products identified under the ‘product that the students most desire to own’ category were grouped under four headings and can be seen in Table 3.

Table 3. Products they most desire to own

Product	No. Of Students
Car/Motorbike	22
Fashion/Jewellery	6
Computer/Mobile Phone	6
Other	5

56% of students desired to own a car or motorbike. All of these students identified reflective benefits. In one case these benefits were related to memories however, the remaining were all related to self-image. In the case relating to memories, the student desired to own a VW Beetle as her grandmother used to have one. An example of a self-image reflective benefit given by a student who selected a Ferrari F430 is “It’s so expensive and flash, if I owned a car like this it would mean that I was successful and had a lot of money.” The remaining students selected a mix of products (fashion, jewellery, computer, mobile phone and other) also, all of these students reported reflective benefits and mainly those relating to self-image. Examples of products that the students desire to own are shown in Figure 7.





*Figure 7. Examples of products that the students desire to own*

## **7 CONCLUSION**

The workshop was successful in providing an opportunity for students to review their personal product choices and product attachments. Objectively discussing the rationale for these attachments and choices in a group gave insight into common trends and provided clear objectives for more responsible design.

Students were able to identify sensory and aesthetic product qualities by reflecting on personal consumer behaviour and were able to link this design attention to significantly contributing to product attachment. In addition, the benefits identified through association with memories introduced both the value and the difficulty in achieving this. It was discussed that although it would be difficult to achieve an association with memories perhaps one way of achieving it would be to design products which could be given as gifts, as it was often products that were given by loved ones that created this sentimental behaviour.

The reflective benefits relating to self-image were discussed and identified as occurring most frequently in products that appeared expensive or popular, however, as the global economic crisis grows, consumer behaviour is changing and conspicuous consumption declining. The possibility of designing simpler and more honest products was identified as a design opportunity and a more responsible solution. Students also recognised that as the population becomes more environmentally concerned, products that are visibly more environmentally friendly could achieve self-image reflective benefits.

Based on their new understanding of product attachment, the students undertook a project, which required them to design a sustainable packaging solution that encouraged reuse as opposed to recycle. The project was based on a design competition sponsored by a leading packaging company and the challenge was to design packaging for stationary items that consumers would desire and could easily reuse as a desk tidy. This project provided the students with a clear context to experiment with designing for product attachment. Two of the students' designs can be seen in figure 8.



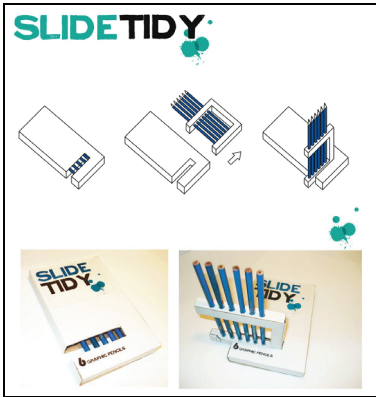


Figure 8. Students' designs of stationary packaging, which can be reused as a desk tidy

The role of the designer is becoming more and more important in today's society and it is important that design students realise their potential in contributing to a more sustainable future. Product attachment is an innovative approach to sustainable design thinking and should be embraced by design education.

## REFERENCES

- [1] Lazarus R.S. *Emotion and adaption*, 1991 (Oxford University Press)
- [2] Ahde P. Power Jewellery: Mediating powers through jewellery. In *6<sup>th</sup> Design and Emotion Conference*, Hong Kong, October 2008, (The Hong Kong Polytechnic University)
- [3] Csikszentmihalyi M. & Halton E. *The meaning of things: Domestic symbols of the self*, 2008 (Cambridge University Press)
- [4] Schifferstein, H.N.J, Mugge R. & Hekkert P. *Designing consumer product attachment. In Design and Emotion: The experience of everyday things*, pp. 327-331, 1999 (Taylor & Francis)
- [5] Desmet, P.M.A. A multilayered model of product emotions. *The Design Journal*, 2003, 6(2), 4-13
- [6] Oatley, K. & Duncan, E. *Structured diaries for emotions in daily life. In K.T. Strongman (Eds) International review of studies in emotion*, 2, pp. 250-293, 1992 (Chichester: Wiley)
- [7] Berkowitz, M. Product shape as a Design Innovation Strategy. *Journal of Product Innovation Management*, 1987, 4, pp.274-83
- [8] Dumain, B. Design that sells and sells and... after years of ferocious competition on price and quality, many companies believe superior design will be the key to winning customers in the Nineties. *Fortune Magazine*, 1991, March 11, pp 86-94
- [9] Jordan P.W. *Designing pleasurable products, an introduction to the new human factors*. 2000 (London: Taylor & Francis)
- [10] Thackara, J. *Winners! How successful companies innovate by Design*. 1997 (Gower publishing Ltd)
- [11] Desmet P.M.A. From disgust to desire: How products elicit emotions In *Hekkert., P, McDonagh, D.C. Van Erp, J. (Eds) Proceedings of the third international conference Design & Emotion*, 2003
- [12] Norman, D. *Emotional Design*, 2005 (Basic Books)
- [13] Alessi, 2008. [online] Available at: [www.alessi.com](http://www.alessi.com) [Accessed 10/08/08]
- [14] Russo, B., DeMoraes A. The lack of usability in Design Icons An affective case study about Juicy Salif., *DPPI'03*, 2003. Pittsburg, Pennsylvania, USA.
- [15] Alessi Juicy Salif: *What do you think of this product?* [Online] Available at : [www.deconstructingproductdesign.com](http://www.deconstructingproductdesign.com) [Accessed 12/01/09]
- [16] Papanek V. *Design for the real world*. 1985 (Thames & Hudson)
- [17] Swartz B. *The Paradox of choice*. 2005 (Harper Perennial)

- [18] Leonard A, *The story of stuff* 2008 [online] Available at [www.storyofstuff.com](http://www.storyofstuff.com) [Accessed 12/01/09]
- [19] Stokes A. Mend and make do. *New Design*, 2008, 65, pp. 48-50
- [20] Defra, Producer responsibility, 2008, [Online] Available at: <http://www.defra.gov.uk/environment/waste/topics/producer-responsibility.htm> [Accessed 06/01/09]
- [21] Chapman J. *Emotionally durable design*. 2005 (Cromwell Press)
- [22] Philips Corporate Design. *Visions of the future*. 1996 (V&K publishing)